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# SenPsi

# Senψ

## SenPsi

### Digital Phenotyping Platform

#### Description:

Our increasing usage of smartphones and the Internet (particularly social media/networking) over the last couple of decades has increased what can be termed our 'digital footprint' or our 'digital exhaust'. An individual's digital footprint is basically the data records they create resulting from their interactions with the Internet and personal digital devices such as smartphones. The fact that an individual's digital footprint could be used to infer their behaviours, preferences and mental states opens the possibility of using such a process to gain insights into their mental health, insights of clinical value that could be used to anticipate mental ill-health and also inform treatment. At the intersection of the computing, data and behavioural sciences, this process of learning about an individual's psychology from their digital footprint has been termed 'digital phenotyping'.

The aim of this software development project is to develop a web dashboard platform, which presents to users, via graphical visualization or other means, information from a range of data streams generated by individuals. The two data stream categories to be focused on are:

- Social media feeds from popular social networking sites such as Facebook and Twitter. Collecting the content generated by users on these sites, analysing this content, and presenting the results to the dashboard user.
- Smartphone sensing data generated by the AWARE smartphone sensing app (<https://awareframework.com> (Links to an external site.)), which has been developed by an international consortium including members from the School of Computing and Information Systems at The University of Melbourne. Data collected by AWARE is stored in a MySQL database and information that it tracks includes GPS/geolocation, accelerometer, application usage, amount and daily periods of smartphone use, call and SMS quantities, and screen touch patterns.

The platform developed in this project will be used in digital phenotyping research being conducted at The University of Melbourne (for an example see <https://cis.unimelb.edu.au/hci/projects/personal-sensing/> (Links to an external site.)). This work could also lead to such a platform being used one day by psychologists/psychiatrists in a clinical setting, so that clinicians can gain patient insights that inform their treatment.

## Stakeholders



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# Requirements

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[Client Vision & Blueprint](#)

[Motivational Model](#)

[Product Backlog](#)

[User Stories](#)

[Acceptance Criteria](#)

# Background

## Purpose

This file is the background description of the Digital Phenotyping Platform project. The key point is to describe different aspects of the project, what is the Digital Phenotyping Platform, the purpose of the design, the current status of the project, the problems it is facing, and the required system. The project background is a document that introduces the project to stakeholders.

## About the Client

Simon D'Alfonso

Dr. Simon D'Alfonso is a Lecturer in Digital Health at the University of Melbourne School of Computing and Information Systems. His work focuses on the application of digital technology, ubiquitous computing, and artificial intelligence to mental health and psychology more generally. In 2021, he proposed a project called Smartphone and Internet Usage that Could Provide Insights Into Behaviour and Mental Health. He believes the idea that texts from sources such as patient records and people's social media posts have been analyzed using computers' natural language processing to detect mental health, based on the language we use to provide us with a window into our minds. Features of language disorders, such as poor vocabulary, semantic incoherence, and reduced syntactic complexity, may be indicators of mental illness. For example, one research project used measures of consistency and complexity in patients' report cards to predict episodes of psychosis. Newsfeeds and forums on services such as Facebook, Twitter, and Reddit also provide a rich source of material for mental health testing. In one study, for example, Facebook posts from a cohort of patients analyzed to predict depression recorded in their electronic medical records roughly matched the accuracy of screening surveys. Hostile language, negative emotions, and rumination or preoccupation with the self detected in language use were found to be predictors of depression. In his view, the function of objectively and continuously assessing mental health by analyzing the data patterns individuals create in their daily lives offers a transformative alternative to traditional methods, which often rely on unreliable or inconsistent self-reports and subjective analyses. Digital phenotypes are likely to be a revolutionary digital tool for mental health care in the future.

## SenPsi (Digital Phenotyping Platform)

Today, people are increasingly using smartphones and the Internet for social networking, shopping, and other activities, which increases the "digital footprint" or "digital exhaust". A person's digital footprint can be used to infer their behavior, preferences, and state of mind. The project, the Digital Phenotyping Platform, is designed to use this process to gain insight into people's mental health, offering the possibility of clinical value that can be used to predict mental illness and inform treatment. At the intersection of computing, data, and behavioral sciences, this process of learning about an individual's psychology from their digital footprint is known as "digital phenotyping." This work could also lead to such a platform being used one day by psychologists /psychiatrists in a clinical setting so that clinicians can gain patient insights that inform their treatment.

## System

The preference is for this platform to be developed using Python and the Django web development framework. Python has a templating system for frontend generation. **Alternatively, you can use Python to just handle the API, and then use a client-side framework such as React for the frontend.** For the backend database, the development team uses MySQL as a starting point. The data from the AWARE smartphone sensing app will come in the form of a set of MySQL tables.

The development team focuses on two data streams, which fall into the following categories:

- Social media feeds from popular social networking sites such as Facebook and Twitter. Collecting the content generated by users on these sites, analyzing this content, and presenting the results to the dashboard user.
- Smartphone sensing data generated by the AWARE smartphone sensing app (<https://awareframework.com>), which has been developed by an international consortium including members from the School of Computing and Information Systems at The University of Melbourne. Data collected by AWARE is stored in a MySQL database and information that it tracks includes GPS/geolocation, accelerometer, application usage, amount, and daily periods of smartphone use, call and SMS quantities, and screen touch patterns.

# Project Outline

## Software Development Project - Digital Phenotyping Platform

Our increasing usage of smartphones and the Internet (particularly social media/networking) over the last couple of decades has increased what can be termed our 'digital footprint' or our 'digital exhaust'. An individual's digital footprint is basically the data records they create resulting from their interactions with the Internet and personal digital devices such as smartphones. The fact that an individual's digital footprint could be used to infer their behaviours, preferences and mental states opens the possibility of using such a process to gain insights into their mental health, insights of clinical value that could be used to anticipate mental ill-health and also inform treatment. At the intersection of the computing, data and behavioural sciences, this process of learning about an individual's psychology from their digital footprint has been termed 'digital phenotyping'.

The aim of this software development project is to develop a web dashboard platform, which presents to users, via graphical visualization or other means, information from a range of data streams generated by individuals. The two data stream categories to be focused on are:

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## Design and Development Points

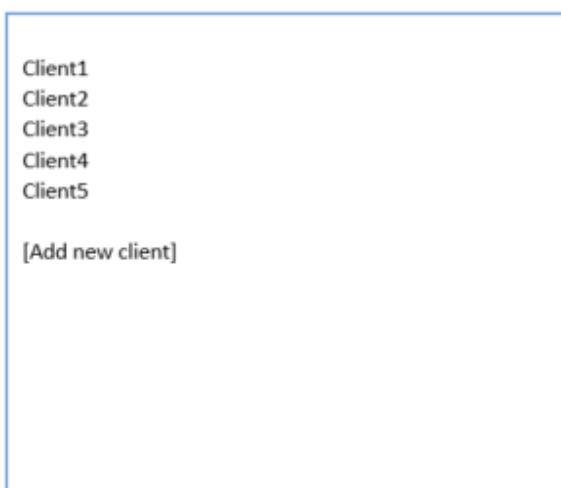
The preference is for this platform to be developed using Python and the Django web development framework. Python has a templating system for frontend generation. Alternatively, you can use Python to just handle the API, and then use a client-side framework such as React for the frontend (e.g., <https://www.digitalocean.com/community/tutorials/build-a-to-do-application-using-django-and-react>). Very happy to chat about this. Another possibility to consider is to select an existing Django dashboard setup, such as one these: <https://medium.com/@appseed.us/django-dashboards-open-source-and-free-projects-1d8e64919e6d>

For the backend database, I suggest using MySQL as a starting point. The data from the AWARE smartphone sensing app will come in the form of a set of MySQL tables.

## User Management

Django comes with an inbuilt user management system, starting with the 'admin' user that is created at setup time. Further to this admin user that has complete system privileges, there will, to begin with, need to be a 'clinician' user. Clinician users are created by the admin user, and each clinician user can then log in once they are added. Clinician users can then add client users, client users being the patients that they see. While it will be possible further on for client users to log in to see their own data, for now we don't need to give client users login access.

When a clinician logs in, they will be presented with a homepage where they can see a list of their clients, and where they can add new clients.



Clicking 'Add new client' presents an information insertion page where basic client details/profile info are entered:

## Add New Client

Client Title  
FirstName  
LastName  
Date of birth  
Text Notes  
Twitter ID  
Facebook ID  
AWARE device ID

[Save client]

When a clinician clicks on a client on the homepage, they are taken to that client's details page. The top of the client details page shows all the basic profile information, and below that is a list of all the digital footprint sources for the client. Below is a sample illustration, with some of the sensors.

## Client details

Client Title: Dr  
FirstName: Simon  
LastName: D'Alfonso  
Date of birth: 30/11/1981  
Text Notes: Is involved in SWEN90013  
Twitter ID: @sjdalf  
Facebook ID: simon.dalfonso  
AWARE device ID: cf62dfa9-e22d-426f-b5a6-e4f2d72fc66a

## AWARE information



## Social Media Information



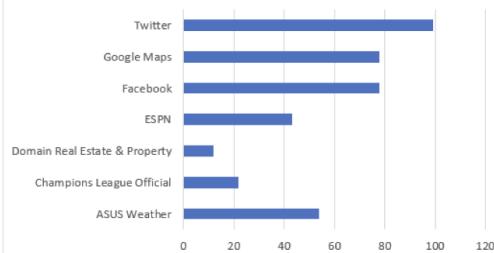
Clicking on one of the AWARE or Social Media Information tiles takes the clinician to a page where they can see the selected client's information for that sensor/social media account in detail. Below are sketches of the information that will be displayed for each AWARE sensor or Social Media stream.

## AWARE Application usage for Client1

Date Filter: From [ ] – To [ ]

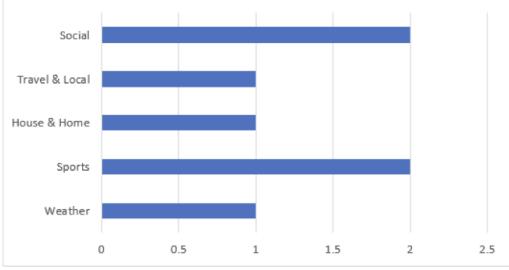
### App usage count

Times Used



### Apps used categories (Note: This can be extracted from Google Play)

Category count

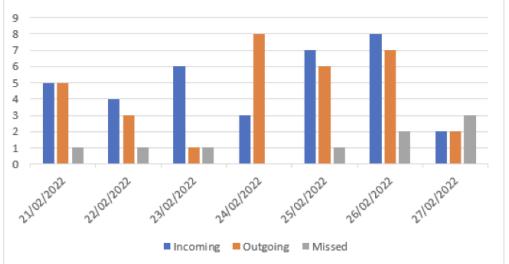


## AWARE Communication usage for Client1

Date Filter: From [ ] – To [ ]

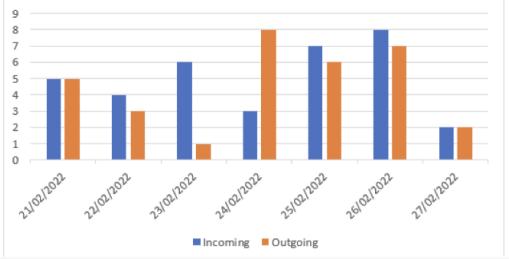
### Phone Calls (Total)

Calls

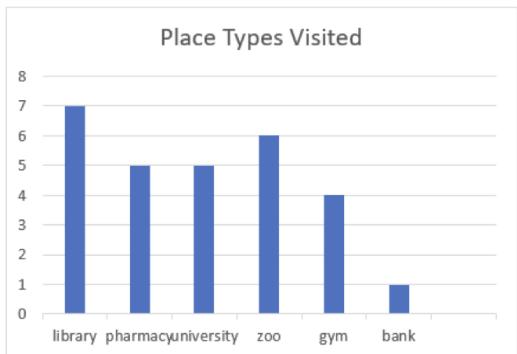
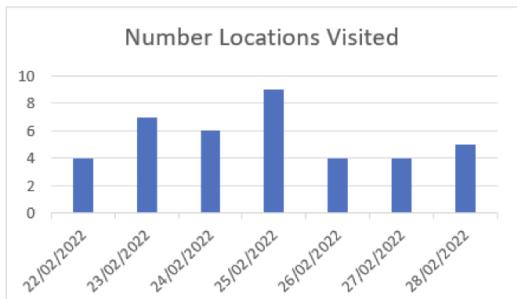


### SMSs (Total)

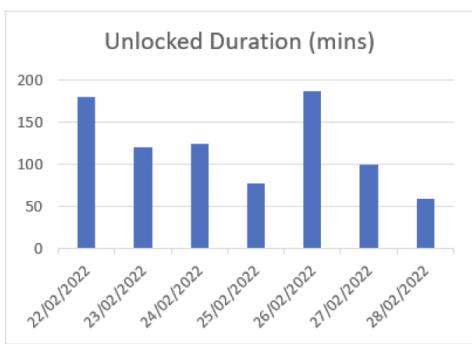
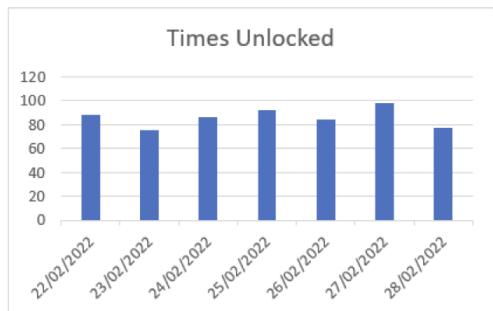
SMSs



### AWARE Locations data for Client1



### AWARE Screen usage for Client1



## AWARE Twitter usage for Client1

Date Filter: From [ ] – To [ ]

### Keywords in posts



Total posts: 14

# **Client Vision & Blueprint**

## **client vision of product**

The project's aim is to help a clinician analyze their patient in a better way through the information gathered from the patient's daily activity. For now, the project already has a data collection interface called AWARE, which could collect the daily information of every patient who access to it. And the project needs a visualization system to process and show such data to the clinician, which could help the clinician to analyze their patient in a more objective way instead of analyzing the report given by the patient themselves.

The visualize system should contain several fundamental functions:

1. A pre-created admin account which can create account and profile for the clinician and can administrate all the data such as clinician information and patient data.
2. Once the clinicians have their own account, they can create their patients' profile accompanied with the auto-created patients' accounts. Also, clinicians could view and administrate their patients' information, and then clinicians could analyze the data of patient.
3. The patient could only see their own account and information and cannot modify it.

## **blueprint**

The concept of this system is based on the thought of improving the analysis performance of the patient. By gathering and analyzing the daily behavior and moving track of patient to give a more suitable healing strategy to patient. For now, this system has already collected several dimensions of data, such as the usage of phone, the usage of specific application, the instant location of patient, etc. In the future, more well-rounded aspects of data will be collected and analyzed in a more comprehensive way, in order to get the best analysis to help patient. Also, unlike the traditional way of healing such patient, this system could help the clinician to analyze their patient anywhere and anytime in any aspect, so well-rounded and convenient. For patients, what they only need to do is to register their device into the system, and the system would collect the data automatically. In this case, both clinician and patient could get a better experience during the healing time.

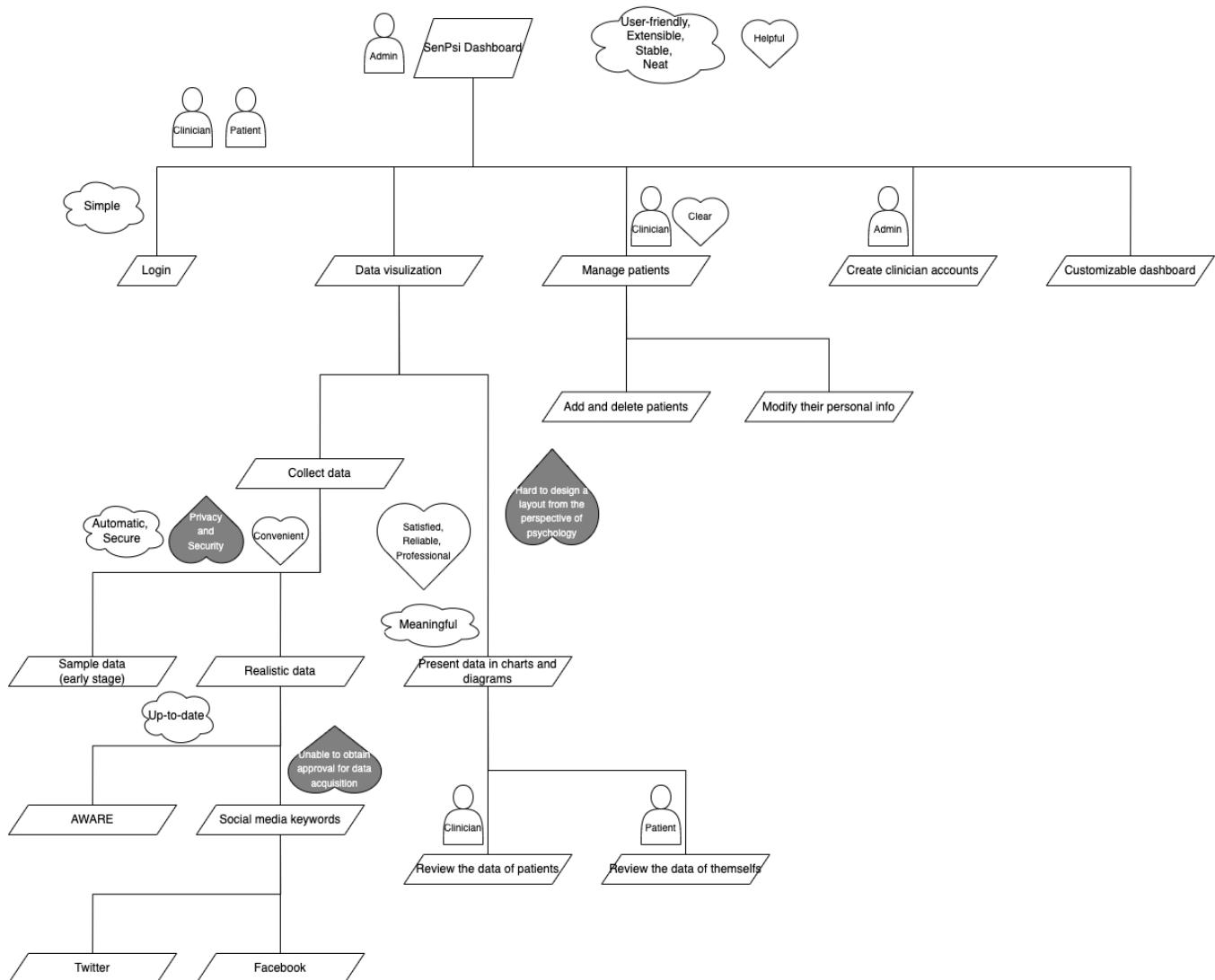
# Motivational Model

## Do-Be-Feel-Who List

Overall goal: Visualize the patient's digital phenotyping data so that clinicians can analyze and monitor the patient's psychological state.

Who	Do	Be	Feel	Concerns
<ul style="list-style-type: none"> <li>Clinician</li> <li>Client (Patient)</li> <li>Administrator (Django default account)</li> </ul>	<ul style="list-style-type: none"> <li>Login the website</li> <li>Collect data from AWARE <ul style="list-style-type: none"> <li>Start with the sample data set provided by Simon</li> <li>Mobile usage</li> <li>Application usage</li> <li>Location</li> <li>Time/screen usage</li> <li>Calls and SMS</li> </ul> </li> <li>Visualize data and present data to clinicians in the form of charts and diagrams</li> <li>Regular access to data from patient social software (Twitter &amp; Facebook). Analyze data and present the result on the dashboard <ul style="list-style-type: none"> <li>Apply for a Facebook API after we have an operable product</li> </ul> </li> <li>Add clients and manage the profile of patients (personal information only) by clinicians</li> <li>Review their own data and report by patients</li> <li>Register clinician accounts by administrator</li> <li>Customizable dashboard</li> </ul>	<ul style="list-style-type: none"> <li>A ut o m at ic</li> <li>N e at</li> <li>S i m ple</li> <li>U p - d ate</li> <li>E xt e n si ble</li> <li>S e c u re</li> <li>U s e r- fr ie n dly</li> <li>M e a ni n gf ul</li> <li>S ta ble</li> </ul>	<ul style="list-style-type: none"> <li>H el pf ul</li> <li>C o n v e</li> <li>n i e nt</li> <li>S at is fi ed</li> <li>R el ia ble</li> <li>P ro fe ss i o n al</li> <li>C l e ar</li> </ul>	<ul style="list-style-type: none"> <li>Privacy and security</li> <li>Unable to obtain approval for data acquisition</li> <li>It is difficult to design a chart layout from the perspective of psychology professionals (Would ask for some professional suggestions from clinicians after we can present the dashboard)</li> </ul>

## Goal Model



# Product Backlog

[Jira product backlog](#)

# User Stories

## Version 3.0

User Story id	As a _____	I want to _____	So that _____
US001	Clinician	Know clients' usage time of each app and clients' usage of different apps' categories	I can analyze the psychological state of clients based on this data
US002	Clinician	Know the number of incoming, outgoing and missed Calls and incoming, outgoing SMSs	I can analyze the psychological state of clients based on this data
US003	Clinician	Know when and where this client visited	I can analyze the psychological state of clients based on this data
US004	Clinician	Know when this client used the phone and for how long	I can analyze the psychological state of clients based on this data
US005	Clinician	Know the number of tweets the client tweets and the frequency of the keywords in it	I can analyze the psychological state of clients based on this data
US006	Clinician	Know the number of Facebook posts the client posts and the frequency of keywords in it	I can analyze the psychological state of clients based on this data
US007	Clinician	Check the data for the time period I want to see	I can analyze the psychological state of clients in a certain period of time based on this data
US008	Clinician	Manage my clients on the digital phenotyping platform	I can easily keep track of multiple clients digital phenotypes using the dashboard.
US009	Patient	Be guaranteed of the privacy and security of my data is maintained	my personal data is protected, especially given the very personal and private nature of the data being shared to the platform.
US010	Administrator	Create accounts for clinicians	Clinicians can have accounts to log in and use this platform
US011	Clinician	Login my account	I can use the platform
US012	Clinician	The system can connect to AWARE and get data from AWARE	I can get up-to-date information of clients and analyze them
US013	Clinician	Customisable dashboard	I can easily visualise how my clients phone usage or social media activity is changing

US013 will be done in future, reason in:[2022-03-25 Client Meeting notes](#) Client's feedback 6-b.

## Version 2.0

User Story id	As a _____	I want to _____	So that _____
US001	Clinician	Know clients' usage time of each app and clients' usage of different apps' categories	I can analyze the psychological state of clients based on this data
US002	Clinician	Know the number of incoming, outgoing and missed Calls and incoming, outgoing SMSs	I can analyze the psychological state of clients based on this data
US003	Clinician	Know when and where this client visited	I can analyze the psychological state of clients based on this data
US004	Clinician	Know when this client used the phone and for how long	I can analyze the psychological state of clients based on this data
US005	Clinician	Know the number of tweets the client tweets and the frequency of the keywords in it	I can analyze the psychological state of clients based on this data
US006	Clinician	Know the number of Facebook posts the client posts and the frequency of keywords in it	I can analyze the psychological state of clients based on this data
US007	Clinician	Check the data for the time period I want to see	I can analyze the psychological state of clients in a certain period of time based on this data
US008	Clinician	Add my clients to the digital phenotyping platform	I can easily keep track of multiple clients digital phenotypes using the dashboard.
US009	Patient	Be guaranteed of the privacy and security of my data is maintained	my personal data is protected, especially given the very personal and private nature of the data being shared to the platform.
US010	Administrator	Create accounts for clinicians	Clinicians can have accounts to log in and use this platform
US011	Clinician	Login my account	I can use the platform
US012	Clinician	Connect to AWARE	I will be able to tell immediately whether a client's mental health is in danger
US013	Clinician	Customisable dashboard	I can easily visualise how my clients phone usage or social media activity is changing

US013 will be done in future, reason in:[2022-03-25 Client Meeting notes](#) Client's feedback 6-b.

## Version 1.0

User Story id	As a _____	I want to _____	So that _____
US001	Clinician	Use the digital phenotyping to analyse my patients phone usage and social media activity	I can gain insight into their mental health and inform treatment
US001	Clinician	Click on the <b>AWARE Application usage</b> of one of my clients	I can know the usage time of each app and the usage of different apps' categories
US002	Clinician	Click on the <b>AWARE Communication usage</b> of one of my clients	I can know the number of incoming, outgoing and missed Calls and incoming, outgoing SMSs
US003	Clinician	Click on the <b>AWARE Locations data</b> of one of my clients	I can know when and where this client visited
US004	Clinician	Click on the <b>AWARE Screen usage</b> of one of my clients	I can know when this client used the phone and for how long
US005	Clinician	Click on the <b>AWARE Twitter usage</b> of one of my clients	I can know the number of tweets the client tweets and the frequency of the keywords in it
US006	Clinician	Click on the <b>Facebook usage</b> of one of my clients	I can know the number of Facebook posts the client posts and the frequency of keywords in it
US007	Clinician	Change the <b>Date filter</b>	I can see the data for the time period I want to see
US008	Clinician	Add my clients to the digital phenotyping platform	I can easily keep track of multiple clients digital phenotypes using the dashboard.
US009	Patient	Allow the digital phenotyping platform to access data about my individual phone usage  Do not need us to consider	My clinician can build an understanding of my current mental health based on my phone usage
US010	Patient	Allow the digital phenotyping platform to access my social media data	My clinician can build a profile of my mental health based on my social media usage
US011	Clinician	Have meaningful graphs and other visualisations provided by the digital phenotyping platform	I can easily visualise how my clients phone usage or social media activity is changing
US012	Clinician	Easily identify if my clients social media activity or phone usage has changed	I will be able to tell immediately whether a clients mental health is in danger
US013	Patient	Be guaranteed of the privacy and security of my data is maintained	my personal data is protected, especially given the very personal and private nature of the data being shared to the platform.
US014	Administrator	Create accounts for clinicians	Clinicians can have accounts to log in and use this platform
US015	Clinician	Enter my account and password and then click <b>Login</b>	I can login my account and use the platform
US017*	Administrator	Review submissions from applicant who want to work as a clinician in the platform  Clinicians will communicate with Administrator offline	I can decide whether this applicant is eligible to use the platform as a clinician
US018*	Clinician	Submit my profile to administrator	Administrator can review my submissions and create an account for me

\* means this user story might be unnecessary or wrong

# Acceptance Criteria

Version 2.0

Acceptance Criteria id	User Story id	Scenario	Given	When	Then
AC001	US001	The clinician wants to learn about the clients' Application usage information.	Clinician	The clinician clicks on the AWARE Application usage button	The usage time of each app and the usage of different apps' categories are displayed
AC002	US002	The clinician wants to learn about Communication usage information.	Clinician	The clinician clicks on the AWARE Communication usage button	The number of incoming, outgoing and missed calls and incoming, outgoing SMSs are displayed
AC003	US003	The clinician wants to learn about Geolocation data.	Clinician	The clinician clicks on the AWARE Locations data button	The data of when and where this client visited are displayed
AC004	US004	The clinician wants to learn about Screen usage information.	Clinician	The clinician clicks on the AWARE Screen usage button	The data of when and how long this client used the phone are displayed
AC005	US005	The clinician wants to learn about Twitter usage information.	Clinician	The clinician clicks on the Twitter usage button	The number of tweets the client tweets and the frequency of the keywords in it are displayed
AC006	US006	The clinician wants to learn about Facebook usage information.	Clinician	The clinician clicks on the Facebook usage button	The number of Facebook posts the client posts and the frequency of keywords in it are displayed
AC007	US007	The clinician wants to change the Date filter	Clinician	The clinician clicks on the Date filter and selects which time period the clinician wants to check then click the Confirm button	Only the usage data for this time period will be displayed
AC008	US008	The clinician wants to manage their patients to the digital phenotyping platform	Clinician	The clinician clicks on the Add new client button and types in the client's information then click Confirm button	The patient will be added to the digital phenotyping platform
AC009				The clinician clicks on the Delete Client button and clicks Confirm button	The patient will be deleted, and the profile will be removed from database
AC010				The clinician clicks the Sorted button on the homepage of the dashboard	A sorted client name list will be presented
AC011				The clinician clicks the name of the client	The personal data diagrams and basic information will be presented according to the client chosen
AC012				The clinician enters the name of the client he/she wants to search for	A fuzzy query will present the similar clients list of the name entered
AC013				The clinician enters the personal information page of the client	Client's new information could be updated
AC014	US009	The patient wants the privacy and security of their data to be guaranteed	Patient	Other clinicians/patients try to access their detailed usage data	Their access attempt should be denied
AC015	US010	The administrator wants to manage accounts for clinicians.	Administrator	The administrator attempts to manage clinician accounts with Django	A clinician account could be created, deleted, viewed
AC016				The administrator attempts to manage clients accounts with Django	The clients' list is presented to the administrator. Client's account can be created if necessary.
AC017	US011	The clinician wants to login into their account	Clinician	The clinician enters their account information and password then clicks the login button (*)	The clinician will be redirected to an app homepage.
AC018				Once the clinician logs in the website with his/her credential	The dashboard will be organized according to his/her authentication
AC019	US012	The clinician wants to connect to AWARE	Clinician	The client's mental health is in critical condition. (*)	The clinician should be aware of this situation (need to be notified when a keyword is triggered ?) (shouldn't the clinician be the one to assess the client's mental health condition?)
AC020				The clinicians are viewing the website	All of the data should be fetched from the backend and should be up-to-date
AC021	US013	The clinician wants to have a customisable dashboard	Clinician	The clinician tries to analyze how the clients' phone usage or social media activity is changing by visualization.	The clinician should not have any difficulties visualizing them

\*Edited after user story V3.1 update

(\*): needs review

## Version 1.0

User Story id	Scenario	Given	When	Then
US001	The clinician wants to learn about <b>App usage</b> information.	Clinician	The clinician clicks on the <b>AWARE Application usage</b> button	The usage time of each app and the usage of different apps' categories are displayed
US002	The clinician wants to learn about <b>Communication usage</b> information.	Clinician	The clinician clicks on the <b>AWARE Communication usage</b> button	The number of incoming, outgoing and missed calls and incoming, outgoing SMSs are displayed
US003	The clinician wants to learn about <b>Locations data</b> .	Clinician	The clinician clicks on the <b>AWARE Locations data</b> button	The data of when and where this client visited are displayed
US004	The clinician wants to learn about <b>Screen usage</b> information.	Clinician	The clinician clicks on the <b>AWARE Screen usage</b> button	The data of when this client used the phone and for how long are displayed
US005	The clinician wants to learn about <b>Twitter usage</b> information.	Clinician	The clinician clicks on the <b>Twitter usage</b> button	The number of tweets the client tweets and the frequency of the keywords in it are displayed
US006	The clinician wants to learn about <b>Facebook usage</b> information.	Clinician	The clinician clicks on the <b>Facebook usage</b> button	The number of Facebook posts the client posts and the frequency of keywords in it are displayed
US007	The clinician wants to change the <b>Date filter</b>	Clinician	The clinician clicks on the <b>Date filter</b> and selects which time period the clinician wants to check the button	Only show data for this time period
US008	The clinician wants to add patients to the platform	Clinician	The clinician clicks on the <b>Add new client</b> button and types the client's information then click <b>Confirm</b> button	The patient will be added to the platform
US009	The patient wants to allow the platform to access their <b>individual phone usage data</b>	Patient	The system asks for access to <b>individual phone usage data</b>	The system should be granted access
US010	The patient wants to allow the platform to access their <b>social media data</b>	Patient	The system asks for access to social <b>media data</b>	The system should be granted access
US011	The clinician wants the platform to provide visualized data & graphs	Clinician	The clinician clicks on the <b>View</b> button under a patient	The clinician will be redirected to an app usage page, where the system visualizes the data as graphs.
US012	The clinician wants to be able to identify changes in social media activity or phone usage (?)	Clinician	<u>Approach 1:</u> The clinician clicks on the <b>Compare</b> button on the app usage page <u>Approach 2:</u> The clinician clicks on the <b>history data</b> button on the app usage page	<u>Approach 1:</u> The clinician will be shown a comparison graph, visualizing changes in social media since the last update <u>Approach 2:</u> The clinician will be shown all historical data, visualized as graphs.
US013	The patient wants the privacy and security of their data to be guaranteed	Patient	Other clinicians/patients try to access their detailed usage data	their access should be denied
US014	The administrator wants to create accounts for clinicians	Administrator	The administrator clicks on the <b>Create Clinician</b> button and types a clinician's profile then clicks <b>Confirm</b> button and sends the account to that clinician	The account has been activated, and the clinician can use this account to log in
US015	The clinician wants to log in to the platform	Clinician	Enter my account and password and then click the <b>Login</b> button	The clinician can log in to his/her account and use the platform
US017*				
US018*				



# **Product**

# **Design**

# API Design

Heroku link: <https://digital-phenotyping.herokuapp.com/>

## 1. Application usage:

URL	Method
/appForeground/	POST

### Request:

Name	Type	Description	Example	JSON Example
uid	number	user id	6	
startDate	number	start date in timestamp	1641634738549	
endDate	number	end date in timestamp	1641901876549	{ "uid": 6, "startDate": 1641634738549, "endDate": 1641901876549 }

### Response:

Name	Type	Description	Info	Example
array1	string []	app name array	item type: string	
array2	number []	usage data array	item type: number	1 [ 2 [     "Phone", 3     "AWARE", 4     "Messages", 5     "Calendar", 6     "Gmail", 7     "Pushover", 8     "Android System", 9     "YouTube", 10    "One UI Home" 11  ], 12 [     0.0005, 13     0.0089, 14     99.888, 15     0.0004 16 ] ]

## 2. SMS (Modified):

URL	Method
/sms/	POST

### Request:

Name	Type	Description	Example	JSON Example
uid	number	user id	6	
startDate	number	start date in timestamp	1641634738549	
endDate	number	end date in timestamp	1641901876549	{ "uid": 6, "startDate": 1641634738549, "endDate": 1641901876549 }

### Response:

Name	Type	Description	Info	Example
array1	number []	received number array	item type: number	
array2	number []	sent number array	item type: number	
array3	string []	date array	item type: string	

### 3. Calls (Modified)

URL	Method
/dataServer/calls	POST

#### Request:

Name	Type	Description	Example	JSON Example
uid	number	user id	999	
startDate	number	start date in timestamp	1641634738549	
endDate	number	end date in timestamp	1641901876549	{ "uid": 999, "startDate": 1641634738549, "endDate": 1641901876549 }

#### Return:

Name	Type	Description	Info	Example
success	boolean	True or False	item type: boolean	
data	object		item type: object	
• array1	number []	incoming number array	item type: number	
• array2	number []	outgoing number array	item type: number	
• array3	number []	missed number array	item type: number	
• array4	string []	date array	item type: string	

### 4. Locations (Modified)

URL	Method
/locationServer/NumbersOfLocation	POST

#### Request:

Name	Type	Description	Example	JSON Example
uid	number	user id	996	<pre>{     "uid": 996,     "startDate": 1642608000000,     "endDate": 1644249600000 }</pre>
startDate	number	start date in timestamp	1642608000000	
endDate	number	end date in timestamp	1644249600000	

## Return:

Name	Type	Description	Info	Example
Date	string	example:2022-01-20 00:00:00	item type: string	
total num	number	example:2	item type: number	
array1	string []	visit type array	item type: string	
array2	number []	num for each type of visit array	item type: number	<pre> 1 [ 2   [ 3     "2022-01-20 00:00:00", 4     2, 5     [ 6       [ 7         "premise", 8         "train_station", 9         "street_address", 10        "cemetery", 11        "establishment", 12        "plus_code", 13        "transit_station", 14        "gym" 15      ], 16      [ 17        1, 18        1, 19        0, 20        0, 21        0, 22        0, 23        0 24      ], 25    ] ]</pre>

## 5. Screen (Modified)

### 5.1

URL	Method
/screenServer/ScreenUnlocked	POST

## Request:

Name	Type	Description	Example	JSON Example
uid	number	user id	999	
startDate	number	start date in timestamp	1645509600000	
endDate	number	end date in timestamp	1646409600000	<pre>{     "uid": 999,     "startDate": 1645509600000,     "endDate": 1646409600000 }</pre>

## Return:

Name	Type	Description	Info	Example
array1	string []	Date array	item type: string	<div><p>Body Cookies Headers (10) Test Results</p><p>Pretty Raw Preview Visualize</p><pre>[{"2022-02-22 00:00:00","2022-02-23 00:00:00","2022-02-24 00:00:00","2022-02-25 00:00:00","2022-02-26 00:00:00","2022-02-27 00:00:00","2022-02-28 00:00:00","2022-03-01 00:00:00","2022-03-02 00:00:00","2022-03-03 00:00:00","2022-03-04 00:00:00","2022-03-05 00:00:00"],[0,0,0,14,3,1,0,1,0,2,10],[0,0,0,0,0,0,0,356,7,3,5,2,0,0,0,0,7,0,0,6,1,240,1]]</pre></div>
array2	number []	unlocked times array	item type: number	
array3	number []	unlocked duration array	item type: number	

5.2

URL	Method
/screenServer/NumberOfScreen	POST

## **Request:**

Name	Type	Description	Example	JSON Example
uid	number	user id	6	{ "uid": 6 }
startDate	number	start date in timestamp	1642035999999	{ "startDate": 1642035999999 }
endDate	number	end date in timestamp	1641030000000	{ "endDate": 1641030000000 }

## **Return:**

## 6. Login

URL	Method
/login/	POST

## Request:

Name	Type	Description	Example	JSON Example
username	string	input user name	matilda@gmail.com	

password	string	input password	P@ssword2	<pre>{     "username": "matilda@gmail.com",     "password": "P@ssword2" }</pre>
----------	--------	----------------	-----------	---

## Return:

Name	Type	Description	Info	Example
refresh	string	a normal token	item type: string	
access	string	a normal token	item type: string	
user_info	object		item type: object	
• id	number	example: 2	item type: number	
• username	string	example: testuser	item type: string	
• first_name	string	example: test	item type: string	
• last_name	string	example: user	item type: string	
• email	string	example: 1577158@qq.com	item type: string	
• is_staff	number	0-patient;1-clinician	item type: number	



The screenshot shows a JSON viewer interface with tabs for 'JSON' and 'Text'. The JSON structure is as follows:

```

{
    "refresh": "eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.
    eyJ0b2tlbl90eXB1IjoiYmcmVmcmVzaC1sImV4cCI6MTY10TY4MTc2MCwiaw
    IsInVzZXJfaWQiOjJ9.u7KC0prTf2xYj_Ss_8TAzpn3zbUVMyPe7nf0e5m
    "access": "eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.
    eyJ0b2tlbl90eXB1IjoiYWNjZXNzIiwidXhwIjoxNjU5NjgxNzYwLCJpYX
    widXNlcl9pZCI6Mn0.h7001HXKwLDm2535Kgz0TRKhI_m0s-Giv026dsJ
    "clinician_info": {
        "id": 2,
        "username": "testuser",
        "first_name": "test",
        "last_name": "user",
        "email": "1577158@qq.com"
    }
}

```

## 7. Add Client

URL	Method
/userServer/AddClient	POST

## Request:

Name	Type	Description	Example	JSON Example
clinicianId	number	clinician id	example: 1	
clientTitle	string	client title	example: 1	
firstName	string	input first name	example: b	
lastName	string	input last name	example: b	
dateOfBirth	string	input date of birth	example: 1998-04-20	
textNotes	string	text notes	example: a	
twitterId	string	input twitter id	example: 1	
facebookId	string	input facebook id	example: 1	
awareDeviceId	string	aware device id	example: a	<pre>{     "clinicianId": 1,     "clientTitle": "1",     "firstName": "b",     "lastName": "b",     "dateOfBirth": "1998-04-20",     "textNotes": "a",     "twitterId": "1",     "facebookId": "1",     "awareDeviceId": "a" }</pre>

## Return:

Response 200 when success

## 8. Client Info List

URL	Method
/userServer/ClientInfoList	POST

### Request:

Name	Type	Description	Example	JSON Example
id	number	input id number	example: 1	<pre>{     "id": 1, }</pre>

### Return:

Name	Type	Description	Info	Example
	object []			<div style="border: 1px solid #ccc; padding: 10px;"> <p>Pretty    Raw    Preview    Visualize    JSON ▾    ⌂</p> <pre> 1   [ 2     { 3       "uid": 996, 4       "clinician_id": "1", 5       "client_title": "Smoker", 6       "first_name": "Chain", 7       "last_name": "Smoker", 8       "date_of_birth": "1977-06-01", 9       "age": 45, 10      "text_notes": null, 11      "status": "Normal", 12      "twitter_id": null, 13      "facebook_id": null, 14      "aware_device_id": "b48bfcac-d616-4b0b-98bd-ee5e85a7dbdc", 15      "last_update": "2022-08-17T15:15:26Z" 16    }, 17    { 18      "uid": 997, 19      "clinician_id": "1", 20      "client_title": "Jerry", 21      "first_name": "Jerry", 22      "last_name": "Tom", 23      "date_of_birth": "1967-06-01", </pre> </div>
• uid	number	user id	item type: number	
• clinician_id	string	clinician id	item type: string	
• client_title	string	client title	item type: string	
• first_name	string	first name	item type: string	
• last_name	string	last name	item type: string	
• date_of_birth	string	date of birth	item type: string	
• age	number	age	item type: number	
• text_notes	string	text notes	item type: string	
• status	string	status	item type: string	

• twit ter _id	string	Twitter account id	item type: string
• fac ebo ok_ _id	string	Facebook account id	item type: string
• aw are _de vic e_id	string	aware device id	item type: string
• last _up date	string	last update	item type: string
• twit ter _id _int	nullstring	the id stored in Twitter database	item type: nullstring

## 9. Update Client Profile

URL	Method
/userServer/UpdateClientProfile	POST

### Request:

Name	Type	Description	Example	JSON Example
uid	integer	user id	example: 18	
clinicianId	string	clinician id	example: 1	
clientTitle	string	client title	example: Mr	
firstName	string	input first name	example: Ryan	
lastName	string	input last name	example: Davis	
dateOfBirth	string	input date of birth	example: 1987-06-05	
textNotes	string	text notes	example: some new text notes	
status	string	input twitter id	example: Normal	
twitterId	string	input twitter id	example: PlayStation	
facebookId	string	input facebook id	example: asdf	
awareDeviceId	string	aware device id	example: asdas-asfagasf-asdasdes-adsas	
hasTwitterIdChanged	boolean	true or false	example: true	

### Return:

success: 200

Body Cookies Headers (10) Test Results

Pretty Raw Preview Visualize JSON ↴

1 200

## 10. Google map

URL	Method
/locationServer/MapCoordinate	POST

### Request:

Name	Type	Description	Example	JSON Example
uid	number	user id	6	{ "uid": 6 }
startDate	number	start date in timestamp	1641634738549	{ "uid": 6, "startDate": 1641634738549 }
endDate	number	end date in timestamp	1641901876549	{ "uid": 6, "startDate": 1641634738549, "endDate": 1641901876549 }

### Return:

Name	Type	Description	Info	Example
key	string	key string	item type: string	
data	object []	contain id, address, locType, and position	item type: object	
• id	number	id number	item type: number	
• address	string	address	item type: string	
• locType	string	location type	item type: string	
• position	object	contain lat and lng	item type: object	
>lat	number	belong to position	item type: number	
>lng	number	belong to position	item type: number	

Body Cookies Headers (12) Test Results

Pretty Raw Preview Visualize JSON ↴

```

1   "key": "1",
2   "data": [
3     {
4       "id": 3,
5       "address": "3-5 Union St, Brunswick VIC 3056, Australia",
6       "locType": "street_address",
7       "position": {
8         "lat": -37.77420770935547,
9         "lng": 144.96026625576388
10      }
11    },
12    {
13      "id": 4,
14      "address": "720 Swanston St, Carlton VIC 3053, Australia",
15      "locType": "university",
16    }
  ]

```

## 11. Client Twitter Word Cloud

URL	Method
/twitterDataServer/twitterWordCloud	POST

## Request:

Name	Type	Description	Example	JSON Example
uid	number	input uid number	example: 6	<pre>{     "uid": 6, }</pre>

## Return:

Name	Type	Description	Info	Example
success	boolean	true or false	item type: boolean	<p>Body Cookies Headers (9) Test Results</p> <p>Pretty Raw Preview Visualize JSON</p> <pre> 1  { 2      "success": true, 3      "data": { 4          "caideuom": 4, 5          "phd": 5, 6          "scholarships": 1, 7          "unimelbmdhs": 1, 8          "tonywirthphd": 1, 9          "cisunimelb": 1, 10         "hiring": 2, 11         "theoretical": 1, 12         "computer": 2, 13         "science": 4, 14         "academic": 1, 15         "aka": 1, 16         "faculty": 1, 17         "member": 1, } </pre>
data	object	data	item type: object	
• cai deu om	number	belong to data	item type: number	
• phd	number	belong to data	item type: number	
• sch olar shi ps	number	belong to data	item type: number	
• uni mel bmd hs	number	belong to data	item type: number	
• ton ywi rth phd	number	belong to data	item type: number	
• cis uni melb	number	belong to data	item type: number	
• hiri ng	number	belong to data	item type: number	
• the ore tical	number	belong to data	item type: number	
• co mp uter	number	belong to data	item type: number	
• sci ence	number	belong to data	item type: number	

• academic	number	belong to data	item type: number
• aka	number	belong to data	item type: number
• faculty	number	belong to data	item type: number
• member	number	belong to data	item type: number

## 12. Client Twitter Hashtag

URL	Method
/twitterDataServer/twitterHashtag	POST

### Request:

Name	Type	Description	Example	JSON Example
uid	number	input uid number	example: 13	<pre>{     "uid": 13, }</pre>

### Return:

Name	Type	Description	Info	Example
success	boolean	true or false	item type: boolean	
data	object	data	item type: object	
• bigdata	number	belong to data	item type: number	
• melbourne designweek	number	belong to data	item type: number	
• hiring	number	belong to data	item type: number	
• robotics	number	belong to data	item type: number	
• humanrobotinteraction	number	belong to data	item type: number	

• acad emicr esear ch	number	belong to data	item type: nu mber
• phdp osition	number	belong to data	item type: nu mber
• digital	number	belong to data	item type: nu mber
• ment alhea lth	number	belong to data	item type: nu mber
• psyc hology	number	belong to data	item type: nu mber
• digita lover diagno sis	number	belong to data	item type: nu mber
• chatb ots	number	belong to data	item type: nu mber
• chi20 22	number	belong to data	item type: nu mber
• emoti on	number	belong to data	item type: nu mber
• huma ncom puteri ntera ction	number	belong to data	item type: nu mber

```

1  {
2      "success": true,
3      "data": {
4          "bigdata": 2,
5          "melbournedesignweek": 2,
6          "hiring": 1,
7          "robotics": 1,
8          "humanrobotinteraction": 1,
9          "academicresearch": 1,
10         "phdposition": 1,
11         "digital": 1,
12         "mentalhealth": 1,
13         "psychology": 1,
14         "digitaloverdiagnosis": 1,
15         "chatbots": 1,
16         "chi2022": 1,
17         "emotion": 1,
18         "humancomputerinteraction": 1
19     }
20 }
```

Twitterresponse.json

### 13. Client Twitter Topics

URL	Method
/twitterDataServer/twitterTopics	POST

**Request:**

Name	Type	Description	Example	JSON Example
uid	number	input uid number	example: 13	<pre>{     "uid": 13, }</pre>

**Return:**

Name	Type	Description	Info	Example
------	------	-------------	------	---------

success	boolean	true or false	item type: boolean
data	object	data	item type: object
• University of Melbourne	number	belong to data	item type: number
• Education	number	belong to data	item type: number
• Graduate school	number	belong to data	item type: number
• Technology	number	belong to data	item type: number
• Services	number	belong to data	item type: number
• Google Innovation	number	belong to data	item type: number
• Jimi Hendrix	number	belong to data	item type: number
• Rock	number	belong to data	item type: number
• Psychology	number	belong to data	item type: number
• Halloween	number	belong to data	item type: number
• Music	number	belong to data	item type: number
• Careers	number	belong to data	item type: number

Body Cookies Headers (9) Test Results

Pretty Raw Preview Visualize JSON

```

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
  "success": true,
  "data": {
    "University of Melbourne": 12,
    "Education": 9,
    "Graduate school": 8,
    "Technology": 8,
    "Services": 7,
    "Google Innovation": 5,
    "Jimi Hendrix": 3,
    "Rock": 3,
    "Psychology": 3,
    "Helloween": 3,
    "Music": 2,
    "Careers": 2,
    "Recruitment": 2,
    "Robotics": 2,
    "Science": 2,
  }

```

Twitterresponse.json

• Recruitme nt	number	belong to data	item type: number	
• Robotics	number	belong to data	item type: number	
• Science	number	belong to data	item type: number	

## 14. App Category

URL	Method
/appForeground/AppCategory	POST

### Request:

Name	Type	Description	Example	JSON Example
uid	number	user id	6	
startDate	number	start date in timestamp	1641634738549	
endDate	number	end date in timestamp	1641901876549	{ "uid": 6, "startDate": 1641634738549, "endDate": 1641901876549 }

### Return:

Name	Type	Description	Info	Example
category	string []	category name array	item type: string	
count	number []	category count array	item type: number	

## 15. SMS trace

URL	Method
/sms/smsTrace	POST

### Request:

Name	Type	Description	Example	JSON Example
uid	number	user id	6	
startDate	number	start date in timestamp	1641634738549	
endDate	number	end date in timestamp	1641901876549	{ "uid": 6, "startDate": 1641634738549, "endDate": 1641901876549 }

### Return:

Name	Type	Description	Info	Example
trace	string []	message trace array	item type: string	
count	number []	count number	item type: number	

## 16. Calls trace

URL	Method
/callServer/callsTrace	POST

### Request:

Name	Type	Description	Example	JSON Example
uid	number	user id	6	
startDate	number	start date in timestamp	1641634738549	
endDate	number	end date in timestamp	1641901876549	<pre>{     "uid": 6,     "startDate": 1641634738549,     "endDate": 1641901876549 }</pre>

### Return:

Name	Type	Description	Info	Example
trace	string []	calls trace array	item type: string	
count	number []	count number	item type: number	

# Database structure

Displaying the table structure design in database:

[swen90013\\_db\\_init.sql](#)

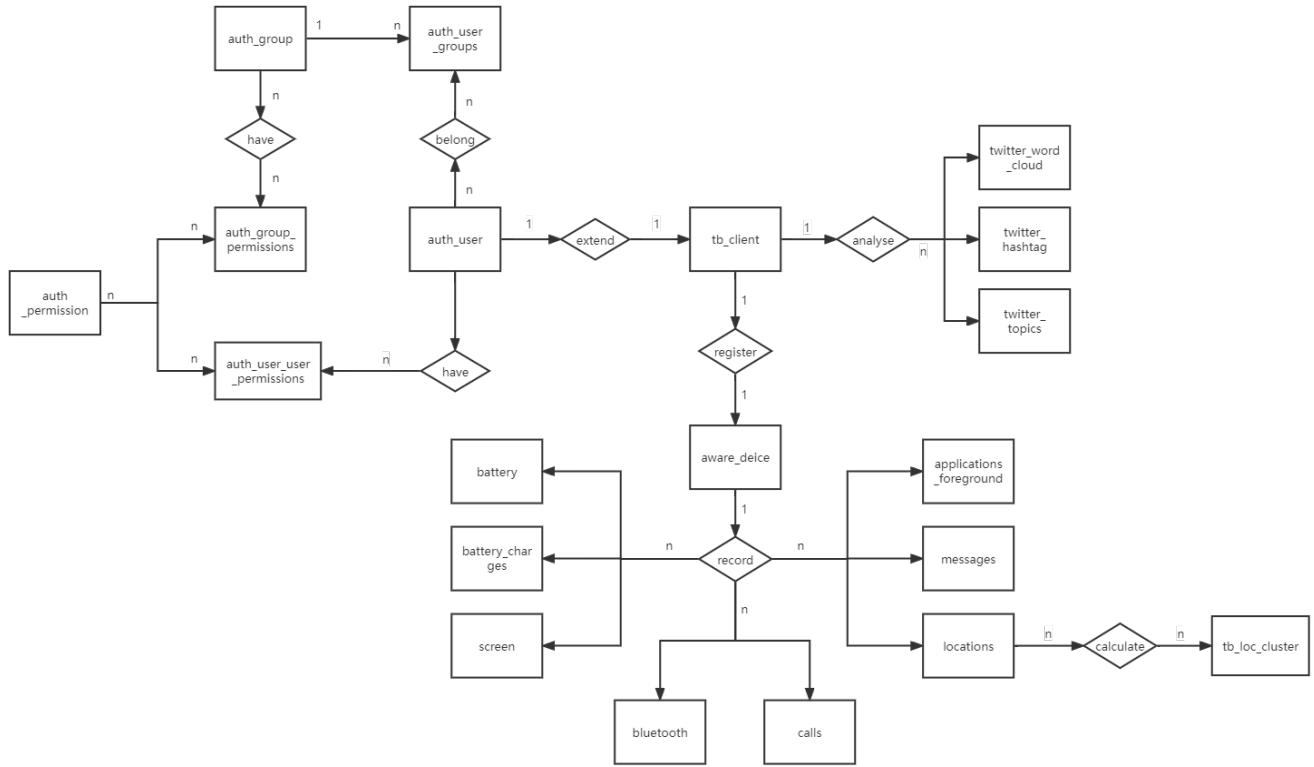
SQL dump file for database and table structure only.

[swen90013\\_db\\_init\\_data.sql](#)

SQL dump file for development data only

	Table Name	Comment
Authority table	auth_group	authority group created by administrator
	auth_group_permissions	permissions that groups have
	auth_permission	authority permissions
	auth_user	the user of system
	auth_user_groups	groups that users belong to
	auth_user_user_permissions	permissions that user have
AWARE table	applications_foreground	data for app usage
	aware_device	device info
	battery	data for battery status
	battery_charges	data for battery charges info
	battery_discharges	data for battery discharges info
	bluetooth	bluetooth usage
	calls	calls info
	locations	locations record
	messages	messages info
	screen	screen status
project table	tb_client	patient profile
	tb_loc_cluster	calculate the centroid of location cluster
	twitter_word_cloud	analysis data for twitter word cloud
	twitter_hashtag	analysis data for twitter hashtag
	twitter_topics	analysis data for twitter topics

The relationship among every tables shows below:



# Digital Prototype

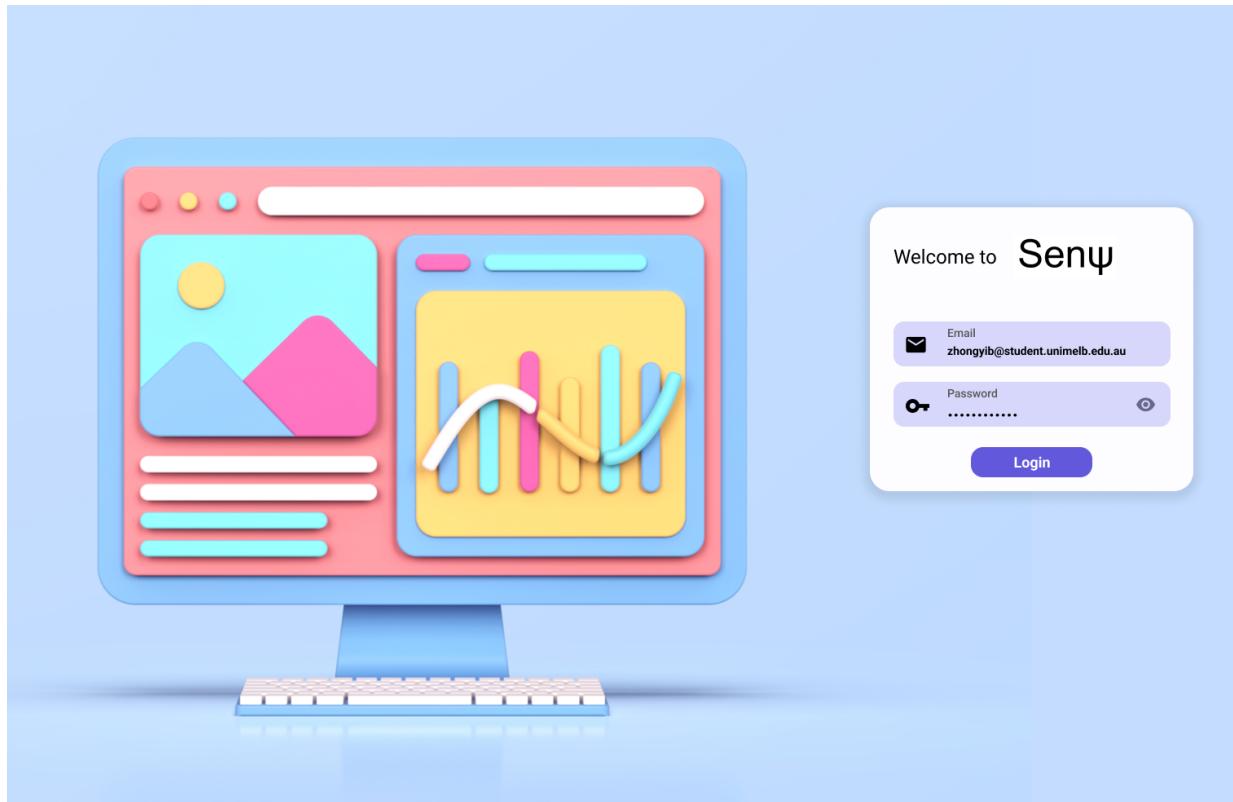
Version	Published	Changed By	Comment
<b>CURRENT (v. 6)</b>	29 Mar, 2022 13:57	 Zhongyi Bai	Version 1.3 Update Login logo
v. 5	29 Mar, 2022 13:52	 Zhongyi Bai	Version 1.2 Updated Logo
v. 4	21 Mar, 2022 19:08	 Zhongyi Bai	

[Go to Page History](#)

Figma file

Prototype

**Login page**



**Homepage**

Senψ Client Management Search ⚡ Marvin

Total Clients \*\*\*  
27 people + 0,7% ↑

Unique visitors \*\*\*  
69 people - 1,7% ↓

Social Media Apps \*\*\*  
Facebook Twitter

Clients 31/01/2020 – 06/02/2020 Add Client

Name ▾	Title ▾	Age ▾	Status ▾	Last update ▾
Marvin Bai	Dr	23	Normal	2022-03-13
Marvin Bai	Dr	23	Normal	2022-03-13
Marvin Bai	Dr	23	Normal	2022-03-13
Marvin Bai	Dr	23	Normal	2022-03-13
Marvin Bai	Dr	23	Normal	2022-03-13

View View View View View

This dashboard provides an overview of client management. It shows 27 total clients (+0.7% increase), 69 unique visitors (-1.7% decrease), and links to social media apps. A main table lists 5 clients named Marvin Bai, each with a Dr title, age 23, normal status, and last updated on 2022-03-13. Each row has a 'View' button.

### Add new client page

Senψ ← Add New Client Search ⚡ Marvin

Client Title

First Name Last Name

Date of Birth

Text Notes

Twitter ID

Facebook ID

AWARE device ID

Save Client

This form allows adding a new client. It includes fields for Client Title, First Name, Last Name, Date of Birth, Text Notes, Twitter ID, Facebook ID, and AWARE device ID. A 'Save Client' button at the bottom right is highlighted in red.

### App usage page

Senψ

[← Client Details](#)

Search (bell icon)

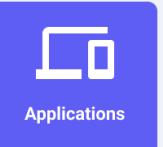
Marvin 

### Application Usage for Marvin

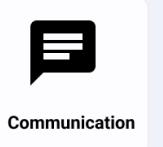
App usage count Date from 2022-3-12 to 2022-3-14

App	Usage Count
Twitter	100
Google Maps	77
Facebook	78
ESPN	43
Domain Real Estate & Propre...	10
Champions League Official	22
ASUS Weather	53

AWARE Information



Applications



Communication

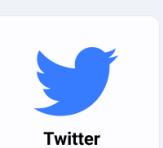


Locations

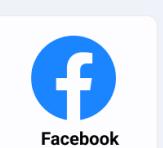


Screen

Social Media Information



Twitter



Facebook

## Client info page

Senψ

[← Client Details](#)

Search (bell icon)

Marvin 

### Client Title

Dr

### First Name

Simon

### Last Name

D' Alfonso

### Date of Birth

30/11/1981

### Text Notes

Is involved in SWEN90013

### Twitter ID

@sjdalf

### Facebook ID

simon.dalfonso

### AWARE device ID

cf212jf-12da-faw2-fjee-jfoajwihfu3ww

Save

AWARE Information



Applications



Communication



Locations

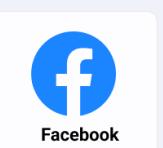


Screen

Social Media Information



Twitter



Facebook

# Mood Board



WEBSITE DESIGN  
SENPSI



# SENPSI



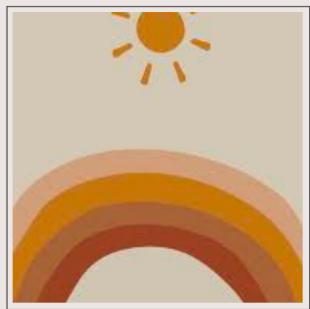
1. RELAXING



2. FRESH



3. UNLIMITED



4. CHEER



5. TENDERNESS



6. NATURE

SENPSI | DIGITAL PHNOTYPING PLATFORM



# Personas

Administrator:

NAME	TYPE
James Mayert	Rational
	<b>Background</b> <p>James Mayert is a former employee of Telstra. During his tenure, he took an interest in his own health and that of those around him. Then, he left Telstra to set up his own company. Because his company's products are widely acclaimed, the University of Melbourne decided to cooperate with him to complete the design of the Digital Phenotyping Platform, and he served as the administrator.</p>
<b>Demographic</b> <p>Male 35 years Melbourne, VIC, Australia Married Programmer, Project Manager \$8000</p>	<b>Goals</b> <ul style="list-style-type: none"><li>Familiar with the project development process</li><li>Understand the needs of medical dashboard design</li><li>Strengthen his own and the company's project experience</li></ul> <b>Motivations</b> <p>To get professional feedback based on user activities. Familiar with medical application development requirements.</p> <b>Frustrations</b> <p>Unable to process user feedback timely due to busy work. System bugs cannot be fixed in a short time.</p> <b>Technology</b> <p>Smartphone, Tablet, Laptop, Desktop, Apple, Android, Windows, Linux</p> <p><b>Quote</b> <i>“Where there is a will there is a way”</i></p>

Clinician:

NAME <b>Matilda Taylor</b>	TYPE <b>Guardian</b>
	<p><b>Background</b></p> <p>When she was still in junior high school, a close friend of hers dropped out of school because of a serious mental illness. She had tried helping her friend with little success. So, she took psychologist as her future career plan and worked hard to learn related knowledge.</p> <p>Nowadays, she holds a BS, MS and PhD in Psychology from Harvard University. And she works as a psychologist for a few years.</p> <p>One day, she heard that a web platform, which is used to collect and analyze people's data to determine who has a mental illness, would be implemented. Matilda is really interested in this program.</p>
<p><b>Demographic</b></p> <p> <span style="color: orange;">♀</span> Female      34 years       </p> <p> <span style="color: orange;">📍</span> Australia       </p> <p>Married</p> <p>Psychologist</p> <p>AUD 95,000 / y</p>	<p><b>Goals</b></p> <ul style="list-style-type: none"> <li>Help more people alleviate the distress of mental illness</li> <li>Hone her skills</li> </ul> <p><b>Motivations</b></p> <ul style="list-style-type: none"> <li>Easier access to more patients</li> <li>Be able to get some details that ordinary patients won't say</li> <li>Data visualization allows her to better analyze patients</li> </ul> <p><b>Frustrations</b></p> <ul style="list-style-type: none"> <li>Online communication does not meet her needs, such as micro-expression analysis, and more in-depth face-to-face conversations</li> </ul> <p><b>Technology</b></p> 
<p><b>UXPRESSIA</b></p> <p>This persona was built in <a href="#">uxpressia.com</a></p>	<p><b>Quote</b></p> <p>“Only you can control your future !”</p>

NAME	TYPE
<b>Abdul Bakshi</b>	<b>Rational</b>
	<p><b>Goals</b></p> <ul style="list-style-type: none"> <li>• To help more people recover from both physical and mental trauma</li> <li>• To have more experience in the online inquiry</li> </ul> <p><b>Background</b></p> <p>As an experienced clinician, Abdul holds a PhD in physiotherapy and is a self-taught psychologist. Initially, Abdul aimed to be a top-tier physiotherapist but he soon realised that mental therapy is just as vital as physical treatment when it comes to mending a patient. Since then, he has immersed himself in psychology and obtained his psychologist licence through self-education. However, he is unfamiliar with these new technologies and is still struggling to do physiotherapy over the internet.</p>
<p><b>Demographic</b></p> <p>Male      55 years</p> <p>Melbourne</p> <p>Physiotherapist &amp; psychologist</p>	<p><b>Motivations</b></p> <ul style="list-style-type: none"> <li>• Getting feedback from his patients</li> <li>• To know more colleagues with similar background</li> </ul> <p><b>Frustrations</b></p> <ul style="list-style-type: none"> <li>• lost contact with his patients</li> <li>• online inquiry can not really utilize his strengths as a physiotherapist</li> </ul>
<p><b>Technology</b></p> 	

**UXPRESSIA**  
This persona was built in uexpressia.com

Patients:

NAME	TYPE
<b>Tom Garcia</b>	<b>Idealist</b>
	<p><b>Background</b></p> <p>He is a truck driver and makes money by delivering goods. Tom has a kind wife and three smart children. Although he can't be with his family often because of work, he buys gifts for his family every time he comes home. His family has a delicious life.</p> <p>But one day, because of tired driving, he took a nap while driving. As a result, the truck rushed out of the road and turned over to the side of the road. He lost his right leg, but at least no one else was injured.</p> <p>After that traffic accident, Tom not only lost his right leg, but also his job.</p> <p>Since then, Tom has been in a state of desperation. He had low self-esteem because of his disability, and he locked himself in his own room and refused to contact outsiders. Besides, he lost his job which means all the burden of the family fell on his wife. Seeing her tired appearance, he became more depressed and wanted to end his own life for a time. He occasionally tweets negative remarks and regularly browses content related to death and suicide.</p>
<p><b>Demographic</b></p> <p><input checked="" type="radio"/> Male      36 years</p> <p><input checked="" type="radio"/> London, UK</p> <p>Married</p> <p>Unemployed person</p> <p>£0</p>	<p><b>Goals</b></p> <ul style="list-style-type: none"> <li>Rekindled confidence for the future life</li> </ul> <p><b>Motivations</b></p> <ul style="list-style-type: none"> <li>This platform can help him out of his current psychological predicament</li> </ul>
<p><b>Technology</b></p> 	<p><b>Frustrations</b></p> <ul style="list-style-type: none"> <li>Lose the right leg makes it difficult to find a suitable job</li> <li>Feel sorry for his wife and children</li> </ul>

**UXPRESSIA**

This persona was built in [uxpressia.com](http://uxpressia.com)

NAME	TYPE
Anakin Skywalker	Ambitious
	
<b>Demographic</b>	<b>Goals</b>
Male 55 years	To recover from serious mental trauma
Melbourne	<b>Background</b>
Physiotherapist	Anakin suffers from serious mental trauma as a result of losing his beloved one medical malpractice, and the loss of his lower limbs and one arm in an accident. He is also disturbed by his own commitment to his career since he has put a lot of effort into his career yet has been encountering bottlenecks for the past few years.  His mental condition is exceedingly unstable, and he has frequent emotional outbursts. He frequently vents his frustrations on those around him and afterwards regrets his actions.  He has a family history of schizophrenia, thus he's most likely suffering from it.  He lacks parental care because he grew up as an orphan, without his parent's companionship.
<b>Technology</b>	<b>Motivations</b>
	<ul style="list-style-type: none"> <li>Getting mental support from professional clinicians.</li> <li>Being encouraged by those who suffer from similar issues.</li> </ul>
	<b>Frustrations</b>
	<ul style="list-style-type: none"> <li>His situation keeps bothering him, deteriorating his mental condition, the existing product may not be able to keep track of his status in a timely manner.</li> <li>Prefer face-to-face communication over the online inquiry.</li> </ul>

**UXPRESSIA**  
This persona was built in [uxpressia.com](http://uxpressia.com)

# Tools In Use

Frontend - React (frameworks - Reactstrap, Bootstrap, Redux, MUI), yarn v1.22.18

- bundling: webpack
- Visualisation: react-apexcharts

Communication - SWGI, Django Rest Framework, HTTPS

Backend - Django DB, PM2, Django Simple JWT, Django Apscheduler, Tweepy, Google-api, sklearn.

Database - Mysql

Server - EC2

# UI Patterns

Main guidelines: [Material Design](#)

React Material Design UI Library: [MUI](#)

MUI Theme Creator: <https://bareynol.github.io/mui-theme-creator/>

## Data formats

Different types of numeric and linguistic data are represented using data formats.

- **Date and time**

values may be formatted to depict ranges, time zones, abbreviations, and more, as appropriate to the context.

- **Data redaction and truncation**

guidelines describe how to represent truncated numbers and disguise sensitive data.

- **Formats represented**

Time

Month, day, year

Approximating time

Absolute time

Time zones

Abbreviations

Rounded numbers

## Date & time

- If the time or date is the current one
- Whether you are using the 12-hour or 24-hour clock
- How specific do you need to be

Time	Within the current day, display the time using uppercase AM or PM, without periods. If you are using the 24-hour clock, display the time without AM/PM.  Many non-English languages use lowercase am and pm.	2:00 PM 14:00
Month, day, and year	Within the current calendar year, display the date without the year. Otherwise, display the date and year.	January 14 14 January 2012
Approximate time	Approximate time rounds down to the largest and most recent date or time unit.	In 5 minutes 3 days ago
Absolute time	When approximate time isn't appropriate, display the specific date and/or time.	Today, 10:00 AM

## Data redaction and truncation

- Redacting numbers

Midline ellipses [• • •] are bulleted characters that partially hide sensitive data. They indicate when a number, such as a credit card, password or Social Security number, is not entirely visible.

### Using 3 ellipses

To redact most numbers, like Social Security numbers, use three midline ellipses [• • •].

You may use this format across typefaces and platforms:

1. Place two regular spaces before the first midline ellipse
2. Then add a thin space between each midline ellipse and after the final one

Or, use the Unicode string instead: U0020,U0020,U2022,U2006,U2022,U2006,U2022,U2006

SSN · · · 5678

Do.

# Project Scope

The scope is based on the project fundamental functions and requirements.

## In scope:

- The visualization system process and display the data collected by AWARE.
- Pre-creating the admin account in database.
- Admin account administrate all the accounts and data in the system.
- Clinician profiles are only created by admin account.
- Clinician profiles only administrate their own patient information and data.
- Patient accounts are only created when clinician add their information to system.
- Patient accounts only review their own information.

## Out of scope:

- The visualization system use the data out of AWARE.
- Clinicians create and modify profile by themselves.
- Clinicians modify the information of patient who belongs to other clinicians.
- Clinicians setup an empty account for patients.
- Patients create account by themselves.
- Patients have access to modify their data.

# Development

## GitHub

### Repository

<https://github.com/bingx1/digital-phenotyping>

### Overview

```
development
main
feature branches
```

We have a main branch (production), a development branch (development + testing) and feature branches for individual tickets being worked on by the team.

### Workflow

1. Pick-up a ticket from JIRA.
  2. Create a new feature branch on GitHub corresponding to the ticket's name
  3. Complete the ticket
  4. Push the changes to GitHub and open up a pull request to the `development` branch using the GitHub UI.
  5. Request a review from **2 other teammates**. [OPTIONAL: Send a message on Slack to get their attention]
  6. Merge to development
  7. Post an update on **Slack** and notify the team of your changes. Make sure to use the following template:
    - A link to the JIRA ticket
    - A description of the ticket
    - A link to the PR
    - Changes made in the PR
- **Example**
    - **Ticket:** <https://jira.cis.unimelb.edu.au:8444/browse/SWEN900132022PZ-72>
    - **Description:** Adding testing to our project
    - **PR:** <https://github.com/bingx1/digital-phenotyping/pull/4>
    - **Changes:** I implemented a CI pipeline using GitHub actions. It will build both the Django and React projects separately and execute the test suites.

### Merge policy

A pull request will only be merged when:

- The CI testing passes with the new changes
- At least one reviewer has approved the pull request on GitHub and the author has made any changes raised on the GitHub PR conversation.

### CI/CD Pipeline

Implemented using GitHub Actions. Continuous integration testing is triggered any time a pull request to either the `development` or the `main` branch is opened.

### Django

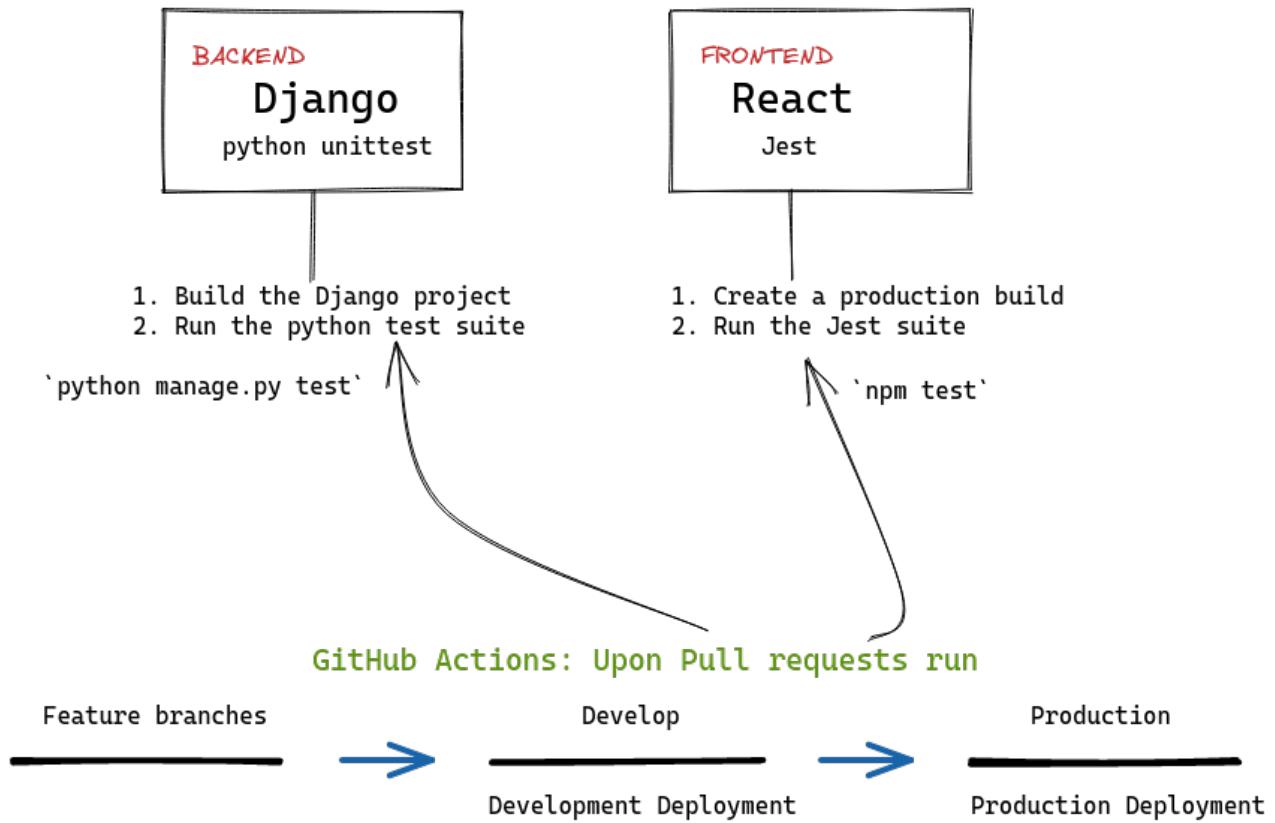
The pipeline will first install the python dependencies, and then execute the tests using the `'python manage.py test'` command as defined in [Django's testing documentation](#).

Tests are implemented using the Python (and Django) [unittest](#) framework.

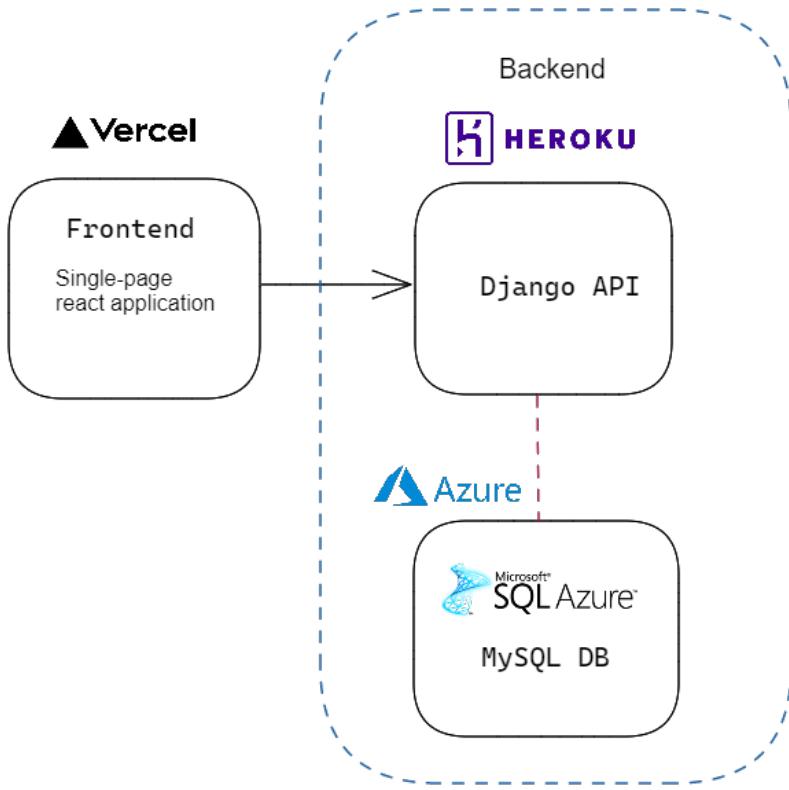
### React

The pipeline will first install the Node.js dependencies, build using `npm run build` and then execute the tests using the `npm test` command. Tests are implemented using the Jest framework.

# CI/CD Pipeline



# Development Deployment



Our application is currently deployed across a number of cloud deployment services. These cloud providers support both our development and production environment.

However, the advantage of the current infrastructure is how easily scalable it is, its production readiness and the features of the various PaaS we are using.

Finally - our application is currently using the free tier of each of these services, which is enough to support the client's business needs.

Eventually, we will dockerize the application into a multi-container app and run it on a single EC2 instance.

## Frontend

### Vercel

The front-end, consisting of a single page Create React App, is deployed using Vercel. Vercel features rich continuous integration support via a GitHub bot.

As a PaaS provider, Vercel takes care of domain names, SSL certificates and allows us to easily deploy a production ready application.

Deployment is easy via Vercel:

1. Create an account on Vercel
2. Connect Vercel to your GitHub account
3. Deploy the /frontend folder in the repository

## Backend

The back-end consists of a Django API and a MySQL database.

### Heroku

The Django API is deployed on Heroku. Heroku provides certificates and enables us to secure our API using HTTPS instead of HTTP.

In addition, Heroku enables rich CI/CD support with their Heroku Pipelines. It enables us to use GitHub integration. The Heroku bot can be attached to our GitHub repository and re-deploy our application when certain branches are pushed to.

## Database

The Django backend requires a MySQL database in order to run. This can be hosted in any number of places, however we have elected to use Azure MySQL, the database-as-a-service provided by Microsoft Azure. This enables us to easily scale the database up and down and also ensure availability. By using a separate service for the database we are also able to decouple various components of our architecture and this isolation allows for better control over the deployment.

# Production Deployment

In production, the entire application is deployed on a single EC2 instance. It is deployed in the following way:

- Django: Gunicorn & NGINX
- React: Served with NGINX
- MySQL: Running in the background locally on the EC2 server
- Certbot: Used to automatically obtain https certificates

## EC2 deployment guide

This guide details step-by-step deployment on an Ubuntu 20.04 (or any LTS release) server instance. The application is already up and running on the client's EC2 instance but this guide details how to do a deployment from scratch. Furthermore, it offers explanation as to what each component in the deployment is for future reference.

### Getting the repository and setting up

1. Navigate to the home directory on the server. This can be done with the following command:  
`cd ~`
2. Clone the repository into the home directory  
`git clone https://github.com/bingx1/digital-phenotyping`
3. Confirm you have correctly cloned the repository.  
`ls ~`

### Database setup (MySQL)

We use a MySQL database for our Django application.

A MySQL database has already been setup on the production EC2 instance, with the name `swen90013`.

This is a traditional MySQL database with no special settings. A user has been created with read and write privileges on the `swen90013` database and these credentials will be passed to Django. If deploying the app from scratch, then the SQL dump file may need to be imported as the Django migrations are not configured properly. It is better to import the `.sql` dump file as the migrations will not create the necessary tables.

#### Database user credentials

**User:** bing

**Password:** password

### Python backend (Django)

The python backend is deployed using Gunicorn (a python WSGI web server) with NGINX in front of it.

1. Navigate to the directory containing the Python API /backend . Create a virtual environment in this folder with the following command. This will create a subdirectory called /venv that will contain the virtual environment.  
`python3 -m venv venv`
2. Activate the virtual environment. From the /backend folder, enter the following command. This will now activate the virtual environment - all packages will now be installed in the /venv directory rather than globally  
`source venv/bin/activate`
3. Install the project's python dependencies in the virtual environment. From the /backend directory, run the following command:  
`pip install -r requirements.txt`
4. Now, add a text file named `.env` in the /backend/django\_site directory. This will contain our environment variables needed for the Django application to run. The production `.env` file can be found on the EC2 server in the `~/digital-phenotyping/backend/django_site/` directory. The environment file needs to contain the following lines:

```

# Database connection info

DATABASE_HOST
DATABASE_PASSWORD
DATABASE_NAME
DATABASE_USER

# Google map information extraction
GOOGLE_API_KEY

# Twitter information extraction
access_token
access_token_secret
bearer_token
consumer_key
consumer_secret

# CRON Job interval scheduling. There are three schedules tasks. These will run automatically on system
startup.

CATEGORY_SCHEDULE
LOCATION_SCHEDULE
TWITTER_SCHEDULE

```

5. Following the previous step, everything is ready for deployment. Now the next step is to setup `gunicorn`. First, ensure that `gunicorn` has been installed in the virtual environment. With the virtual environment active, type the following command. You should see `gunicorn` in the list of installed packages.

```
pip list
```

6. Next, we need to setup `gunicorn`. We will use Linux's `systemd` and configure `gunicorn` as a `systemd` service.  
 7. Create a file named `gunicorn.service` in the `/etc/systemd/system` directory. This will point to the `gunicorn` installation in our project's python virtual environment. It should contain the following lines:

```

[Unit]
Description=gunicorn daemon
Requires=gunicorn.socket
After=network.target

[Service]
User=ubuntu
Group=www-data
WorkingDirectory=/home/ubuntu/digital-phenotyping/backend/django_site/
ExecStart=/home/ubuntu/digital-phenotyping/backend/venv/bin/gunicorn \
          --access-logfile - \
          --workers 3 \
          --bind unix:/run/gunicorn.sock \
          src.wsgi:application

[Install]
WantedBy=multi-user.target

```

8. Create another file named `gunicorn.socket` in the same `/etc/systemd/system` directory. It should contain the following:

```

[Unit]
Description=gunicorn socket

[Socket]
ListenStream=/run/gunicorn.sock

[Install]
WantedBy=sockets.target

```

9. Start `gunicorn`. Run the following command: `sudo systemctl gunicorn start`  
 10. Done! Now we need to configure NGINX to forward requests to `gunicorn`.

## React app

Deployment of the react frontend is simple. One thing to note is the build step requires extensive compute resources and so building the react application on the EC2 instance itself is not recommended. Building on EC2 will likely cause the server to crash.

Therefore, it is better to build the react application on your local machine (via running `yarn install` and `yarn run build`) to create the production build and then using `scp` to transfer the build to the EC2 instance.

This can be done in the following way on a linux/macOS machine:

1. `cd frontend | yarn run build` will create a `/build` directory in the frontend folder
2. `scp -i path-to-sshkey -r build ubuntu@ipaddress:~` will transfer the build to the home directory on the ec2 instance

Ensure that the `/build` folder containing the react build lives in the home directory (`~`) on the ec2 server; otherwise the following NGINX configuration will not work.

## NGINX

NGINX is used to serve both the React build and the Django API. Add the following files to `/etc/nginx/sites-available`

1. Create a file named `backend` in the `/etc/nginx/sites-available` directory. This will hold our server block for the Django API. The URL is <http://backend.senpsi.net> and this can be used to access the Django admin page. Add the following lines.

```
server {
    server_name backend.senpsi.net;

    location = /favicon.ico { access_log off; log_not_found off; }
    location /static/ {
        root /home/ubuntu/digital-phenotyping/backend/django_site/;
    }

    location / {
        include proxy_params;
        proxy_pass http://unix:/run/gunicorn.sock;
    }

}
```

2. Create a file named `react` in the `/etc/nginx/sites-available` directory. This will hold our server block for the react frontend. The URL is <http://dev.senpsi.net>. Add the following lines.

```
server {

    root /home/ubuntu/build;
    index index.html index.htm;

    server_name dev.senpsi.net;

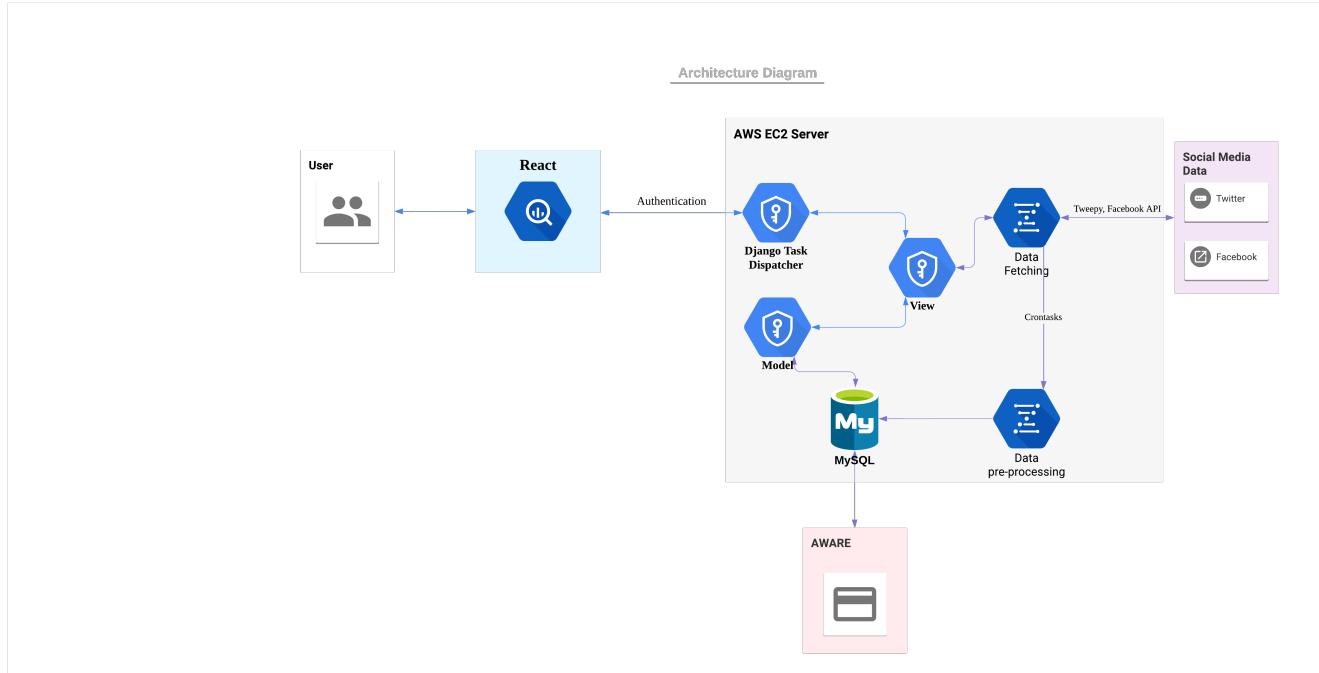
    location / {
        try_files $uri /index.html =404;
    }

}
```

# **Architecture**

# Architecture Design

## Architecture Graph



## Architecture Explanation

Our system follows the **Django MTV** structure, it belongs to Client-Server Structure.

Frontend: User Interactions are perceived and handled through **react + typescripts**. The graphical demonstration is executed with **Apex chart**.

The Client - Server communication composed of three procedures:

- Authentication - **Django Simple JWT** Authentication library which provides a unique sessional token for each user when they logged in. Requests to backend will be considered valid only if tokens are attached.
- Communication - the communication entities are restricted suing **CSRF tokens** technologies. The CSRF tokens stores unique classifierfor a small range of IP addresses that are allowed to make communications in our system.
- We expose the project's APIs using **Django Dispatcher** and specified using **SWGI**. They are guidelines and format rules for the communication entities.

Backend: The structure follows **Django MTV model** and **Django Rest Framework** - The requests are received and authenticated through Django Validators which is integrated in Django Dispatcher. The server then performs subsequent transctions in the view section. In this section, the server takes validated data from **Mysql** and assemble the correct response back to the client browser. Database connection communication: **Django database API** - handles the communications with suitable solutions to problems such as concurrent requests / SQL statements regulation and auto-enhancement. The server also performs daily crontasks to reads necessary informations from external applications such as Google Map, Facebook and Twitter.

Database: The data crawled in the data crawler component will be automatically stored in the **Mysql** database for future use. The aware data provided by the client is also put in it.

# Design Notebook

## Introduction

Software design is essential to a system. An adequate software design can improve the system's reusability, scalability, fault-tolerance, security, and performance.

This page lists the context of the software design and reasons for the choices in the front end, back end, and the collaboration way.

## The Context for Design

### The Task at Hand

This project is going to develop a web dashboard platform that will help clinicians monitor their patients' status based on the data from several aspects. Clinicians should be able to log in to this application by using their account name and password. Initially, only the administrator can create an account for clinicians, the clinician cannot sign up by itself. Apart from that, clinicians are able to check patients' data displayed on the screen. Those data are collected from two data streams:

- Social media feeds from popular social networking sites (e.g. Facebook and Twitter).
- Smartphone sensing data from the [AWARE](#) app.

The data should be visualized in a user-friendly, meaningful, and decent manner. Different types of charts and diagrams will be used to help clinicians understand each patient's condition better.

As a web application, it is significant to make the app as adaptive as possible since it is impossible to ask clinicians to only use one supported browser. There are several popular browsers, such as Chrome, Safari, Edge, Brave, Firefox, and so on. Additionally, different users may have different sizes of screens, responsive layouts are also vital for a good web application.

### What We Have Out of the Box

There are heaps of sample data from the AWARE app that can be used to develop and test this web dashboard. The AWARE app is developed by an international consortium including members from the School of Computing and Information Systems at The University of Melbourne. Data collected by AWARE is stored in a MySQL database and information that it tracks includes GPS/geolocation, accelerometer, application usage, amount and daily periods of smartphone use, call and SMS quantities, and screen touch patterns.

In addition, there exists a few scripts, provided by [@Simon D'Alfonso](#), for fetching data from Twiter public API, which makes the data collection process easier.

## Choosing Appropriate Technologies

### A Way to Collaborate

As a team project, it is essential to have a version control system (VCS). There are many platforms that support VCS, such as GitHub, GitLab, and Gitee. GitHub and GitLab are more popular in western countries, Gitee is more popular in China. Based on our team members' past experience, we decided to use GitHub as our repository manager. GitHub has a "Action" feature to help CI/CD which is useful in the development and deployment. In our repository, there will be three main branches, dev, stage, and production.

### Front-end Framework

There are a few famous front-end frameworks, Angular, React, and Vue. Angular is supported by Google and React is supported by Facebook (Meta). Although there is no big company behind Vue, it still gains popularity among front-end developers.

After the discussion, we decided to use React as our front-end framework. There are several reasons:

1. React is more popular in Australia, it is easier to hand over this project to the client in the future.
2. Our team is more familiar with React than Vue and Angular. None of us experienced with Angular before.
3. If we use React to develop this web dashboard, it is also easier to develop a mobile app with React Native in the future. React Native and React are almost identical, but some tags are different. For instance, in React the `<div></div>` can wrap a block, but in React Native, it is replaced by `<view></view>`.
4. React has abundant open-sourced libraries for data visualization, such as eCharts and Apex. Additionally, there are many UI libraries as well, Material UI components, Bootstrap, Grommet and so on.

### Back-end Framework

There are many back-end frameworks no matter which programming languages you are using. In this project, we chose Django as our back-end framework. Django framework is written by Python, a popular programming language in many fields, such as Artificial Intelligence, Machine Learning, and Data Mining. We decided to use Django not only because the Client is interested in this powerful framework, but because Django offers a few out-of-the-box tools. For instance, Django has a build-in admin dashboard that is helpful for the admins to manage users and users' permission by simply clicking several buttons. Additionally, in this project, it might require some data analysis in the future, so getting familiar with Python is beneficial for us.

MySQL will be used as our database, the reasons are:

1. The data generated from the AWARE application is stored in MySQL, so it is easier to migrate the sample data from the AWARE to our database.
2. MySQL has a community version that is free for commercial or non-commercial use.
3. There are many useful tutorials, videos, documents about MySQL on the internet, which we can easily find a solution when facing a problem.

## Initiating Development

### A Deployment Platform

The system will be deployed on a CIS cloud server. The domain name of the application will be "[senspi-dev.cis.unimelb.edu.au](http://senspi-dev.cis.unimelb.edu.au)".

# View Model

This page shows the architectural blueprints of our project. We use the "4+1" view model to show details of our software architecture.

The views are used to describe the system from the viewpoint of different stakeholders, such as end-users, developers and project managers.

## Our "4+1" View Model

### Logical/Design View

The logical view is directed at end-users and considers functional requirements or what the system should provide in terms of services to its users. It shows the components of the system as well as their interactions or relationships.

Our system takes a low hierarchy approach, therefore it is faster, easier to read and code and test.

The High-Level Architecture Diagram link: [High-Level Architecture Diagram Link](#)

The Class Diagram link: [Class Diagram](#)

### Implementation/Development View

The development view caters for programmers and software managers, by considering the software module organisation such as the hierarchy of layers, software management, reuse, and constraints of tools. It displays a building block of the system.

The Wireframe Diagram link: [Wireframe Diagram](#)

### Process View

The process view caters for integrators and considers non-functional requirements like concurrency, performance, and scalability. This view shows the processes or workflow rules of a system, and how the corresponding processes communicate with each other.

Procedures are straightforwards there simple to generify and further extends.

The Sequence Diagram link: [Sequence Diagram](#)

### Deployment/Physical View

This view is directed at system engineers and considers the non-functional requirements regarding underlying hardware like topology and communication. It displays the system's execution environment.

The Deployment Diagram link: [Deployment Diagram](#)

### Scenario/Use Case View

The scenario view puts it all together for evaluators and all users of other views by considering system consistency and validity. This view illustrates the design is complete by validation and is redundant with a complete set of other views.

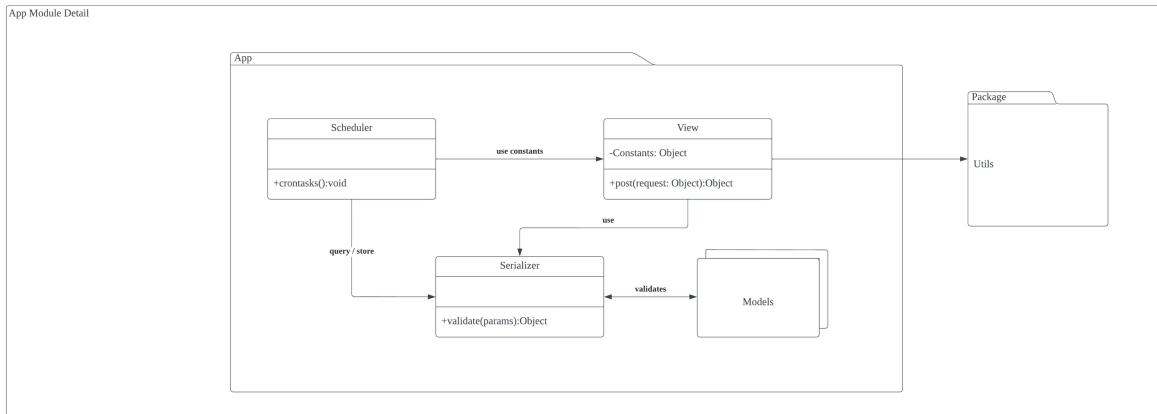
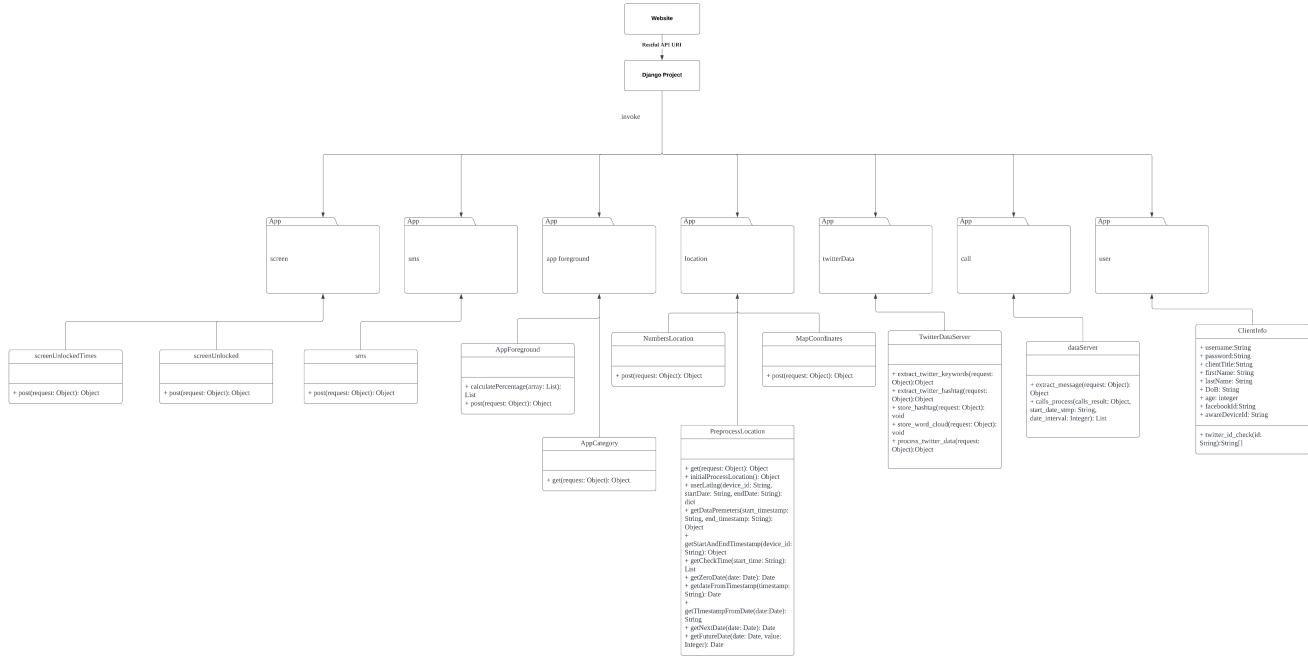
The Use-case Diagram link: [Use-Case Diagram](#)

## References

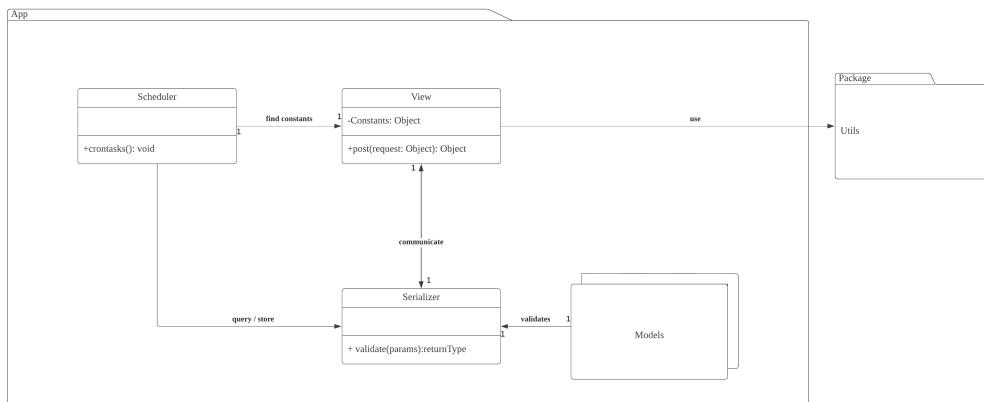
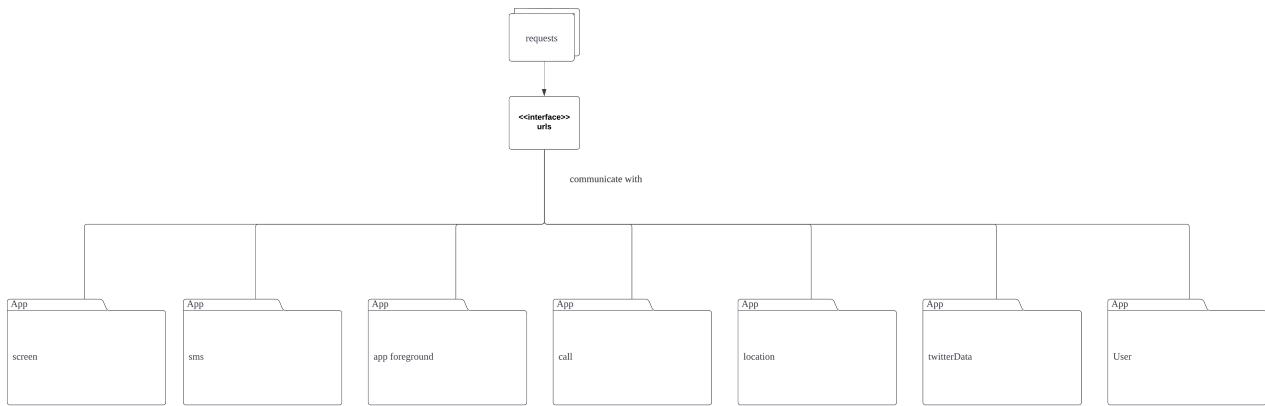
1. D. Garlan & M. Shaw, "An Introduction to Software Architecture," Advances in Software Engineering and Knowledge Engineering, Vol. 1, World Scientific Publishing Co. (1993).

# Class Diagram

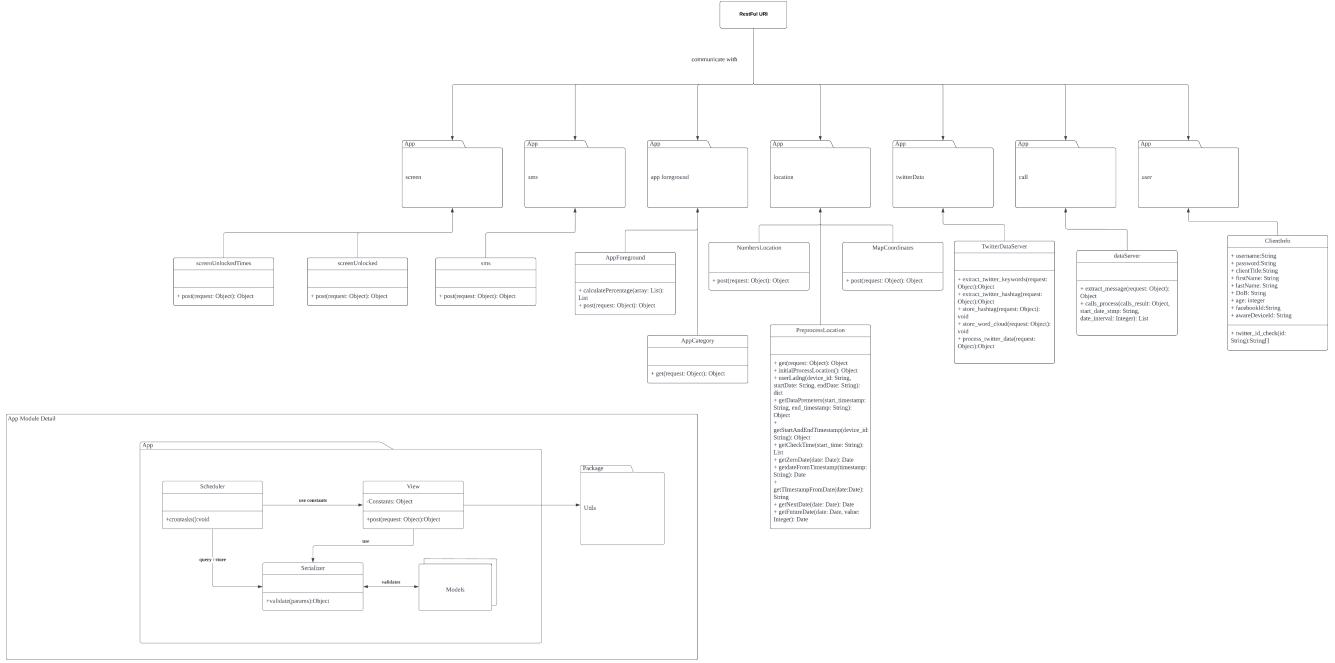
## Version 3.0



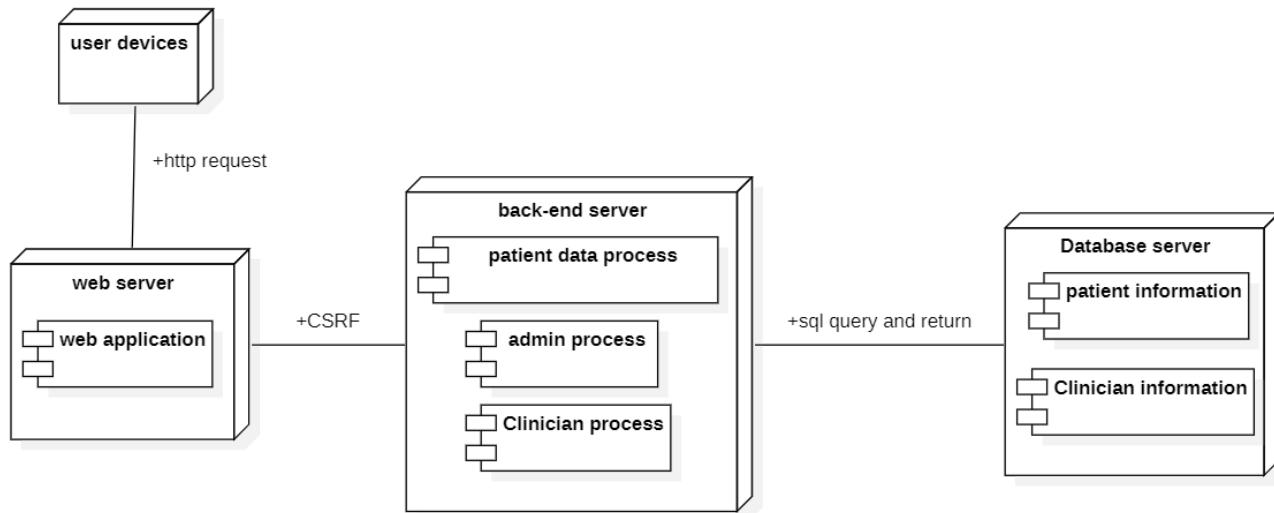
## Version 2.0



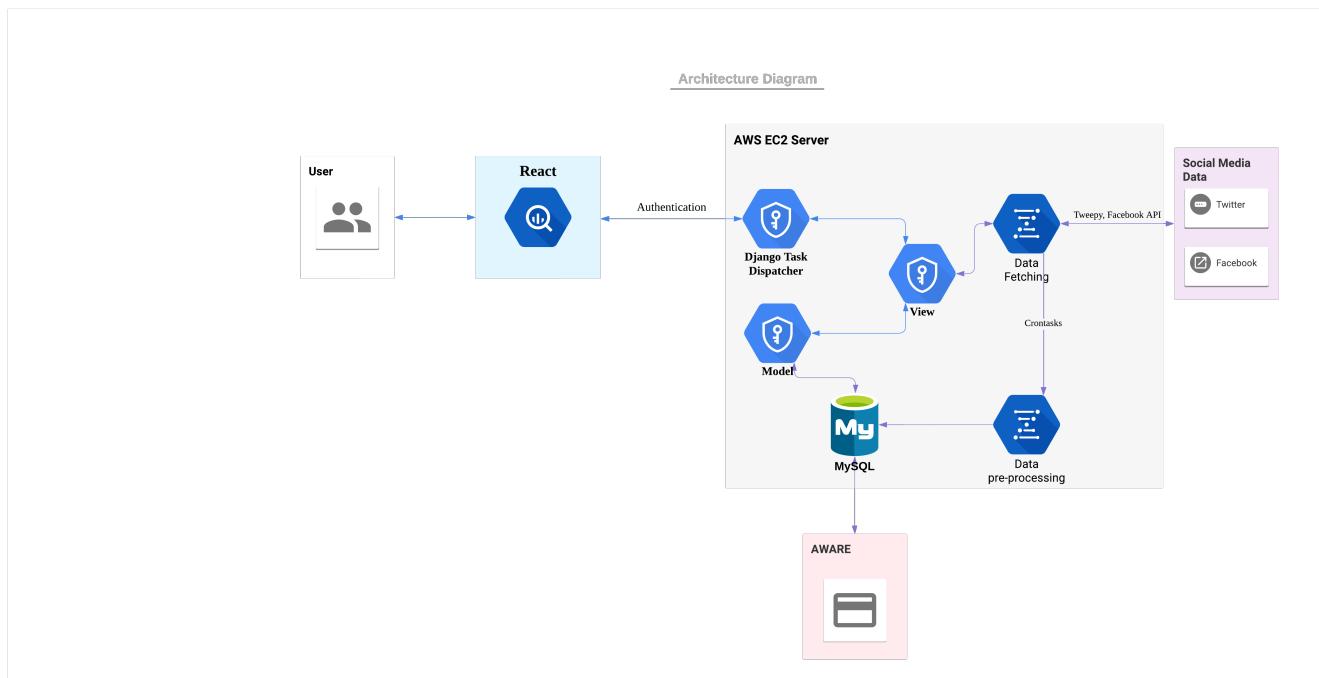
Version 1.0



# Deployment Diagram



# High Level Architecture Diagram



# Sequence Diagram

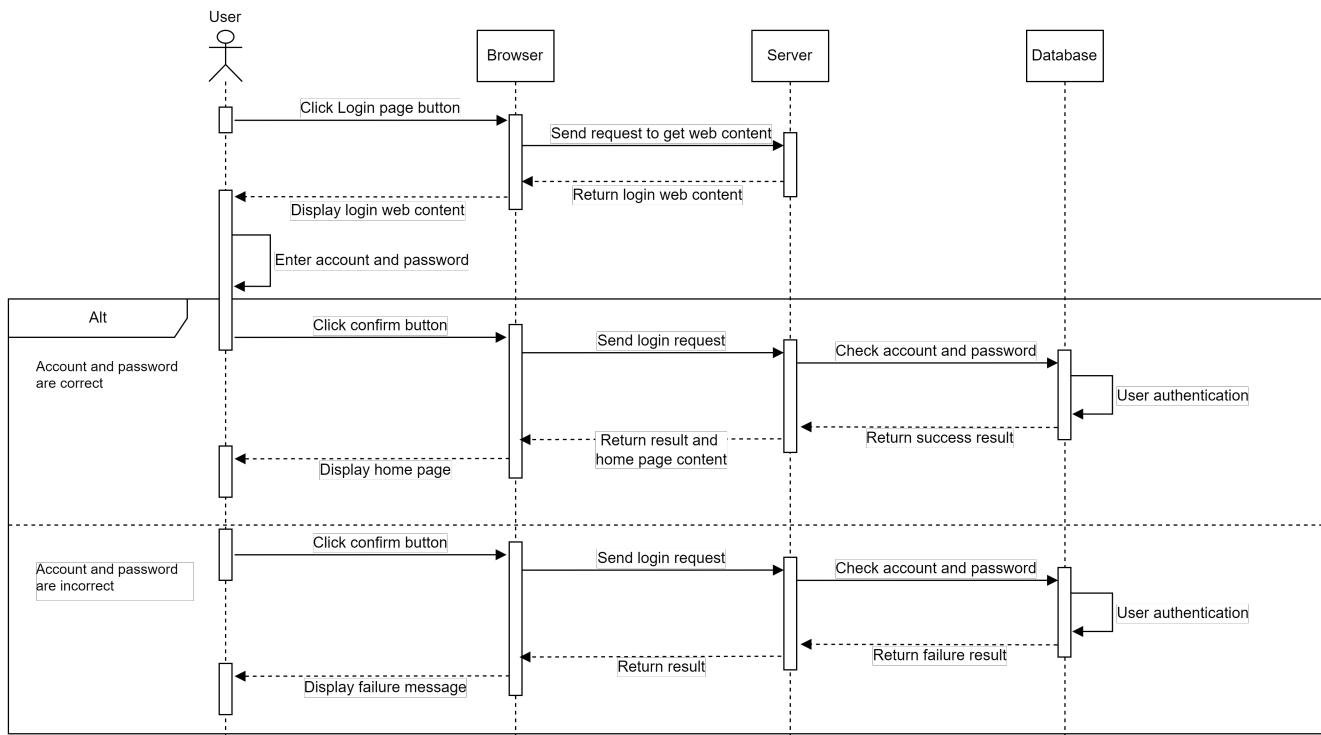


Figure 1.1 User Login

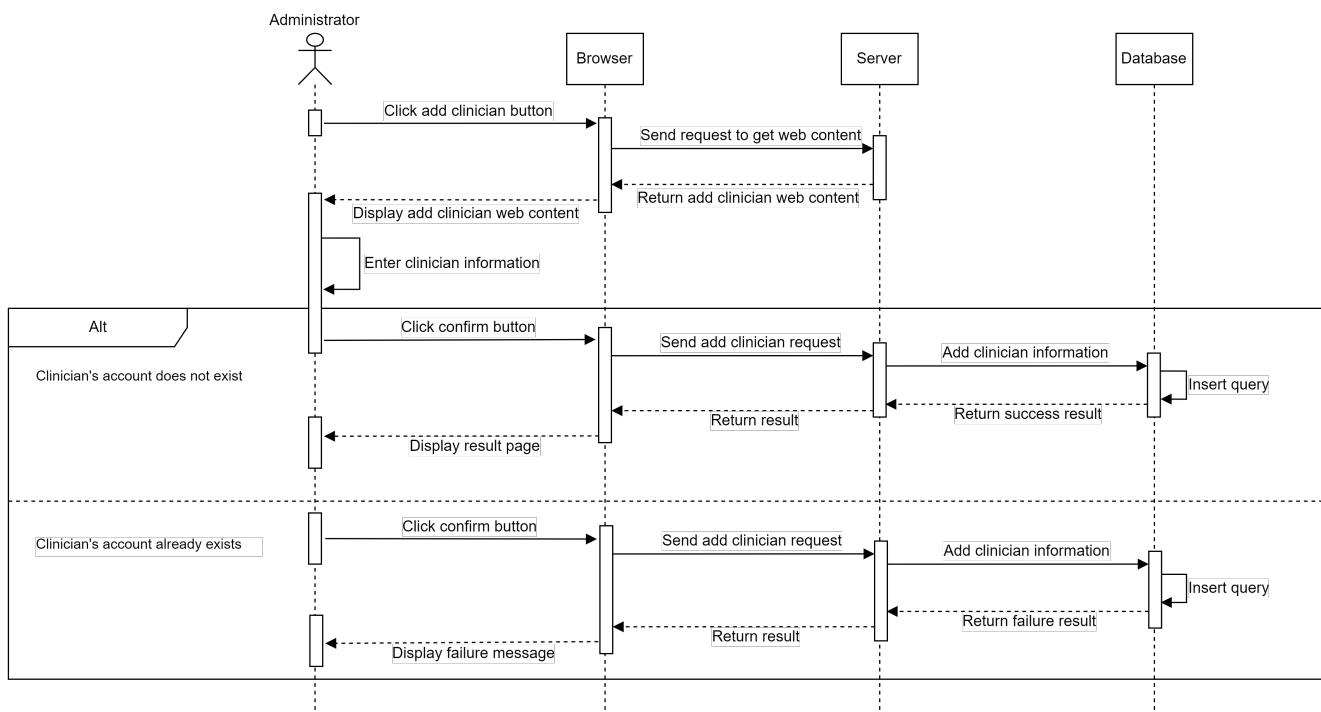


Figure 1.2 Admin add clinician

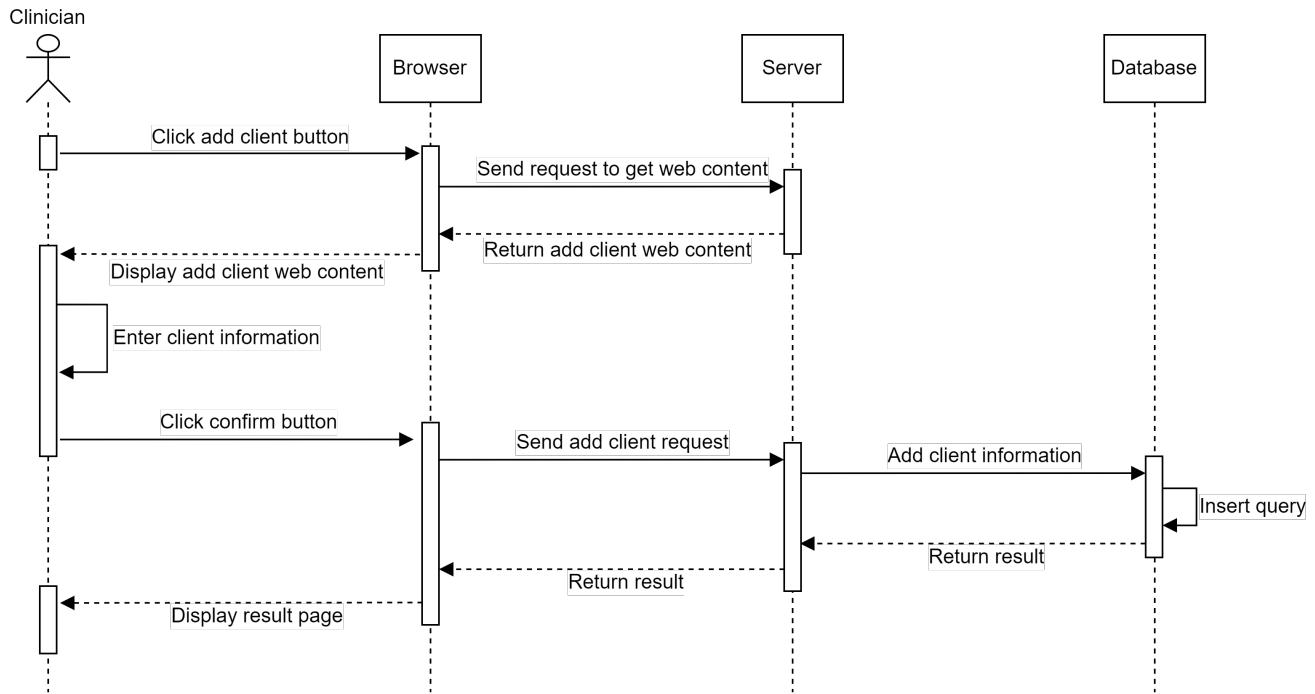


Figure 1.3 Clinician Add Client

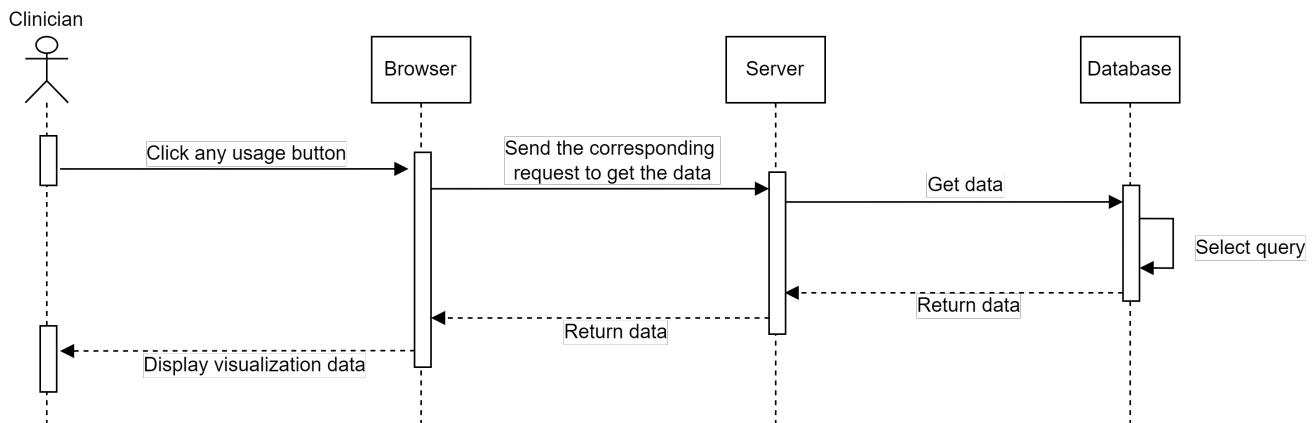


Figure 1.4 Clinician view data

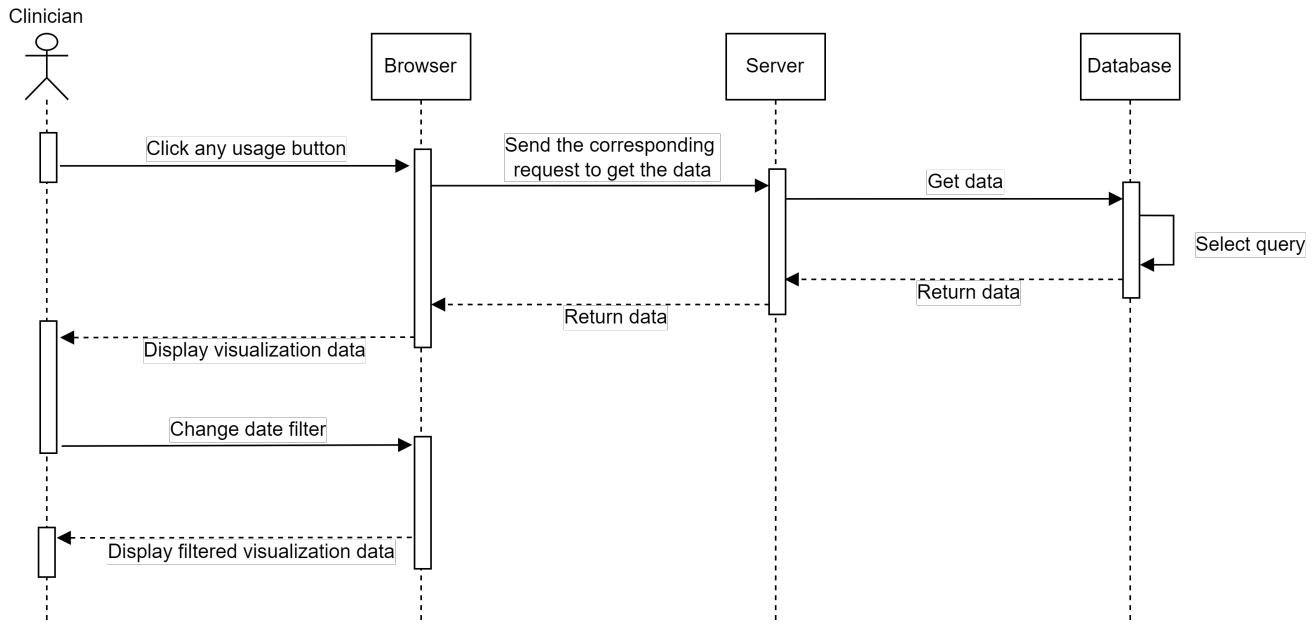


Figure 1.5 Change the date filter

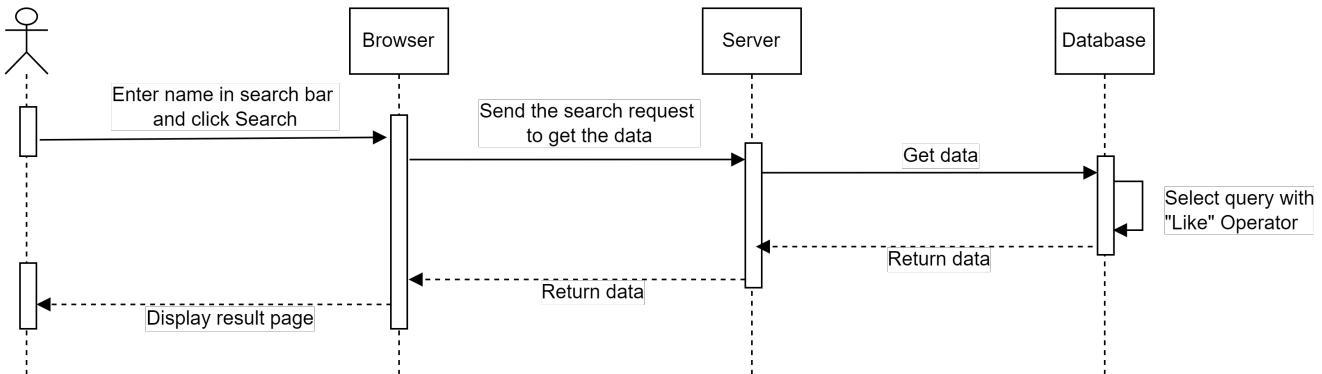


Figure 1.6 Search User

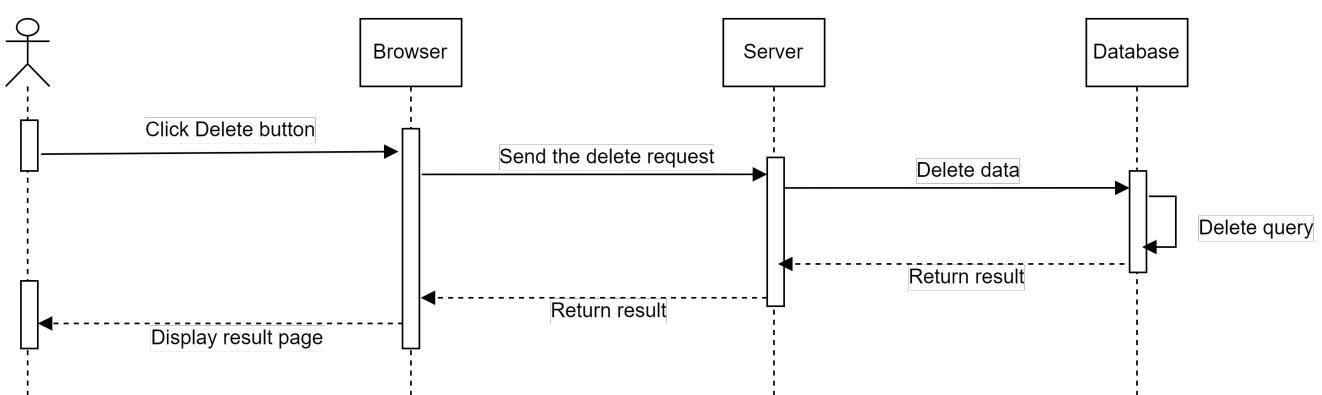


Figure 1.7 Delete User

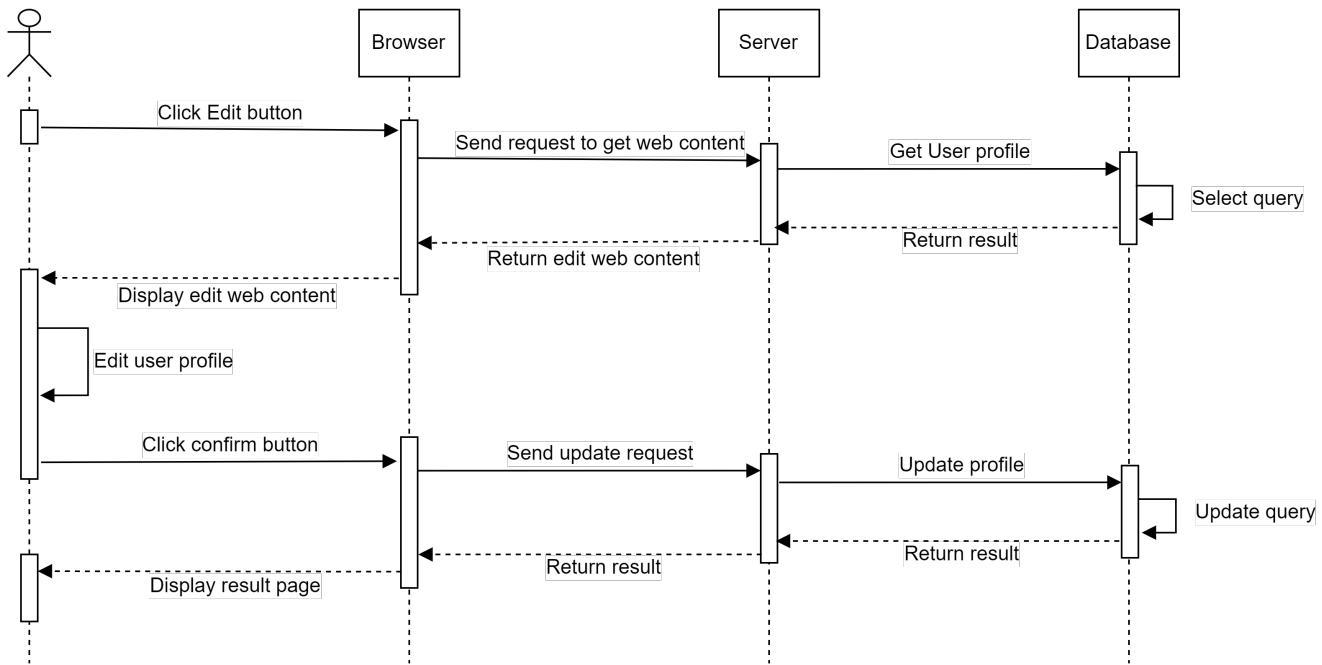
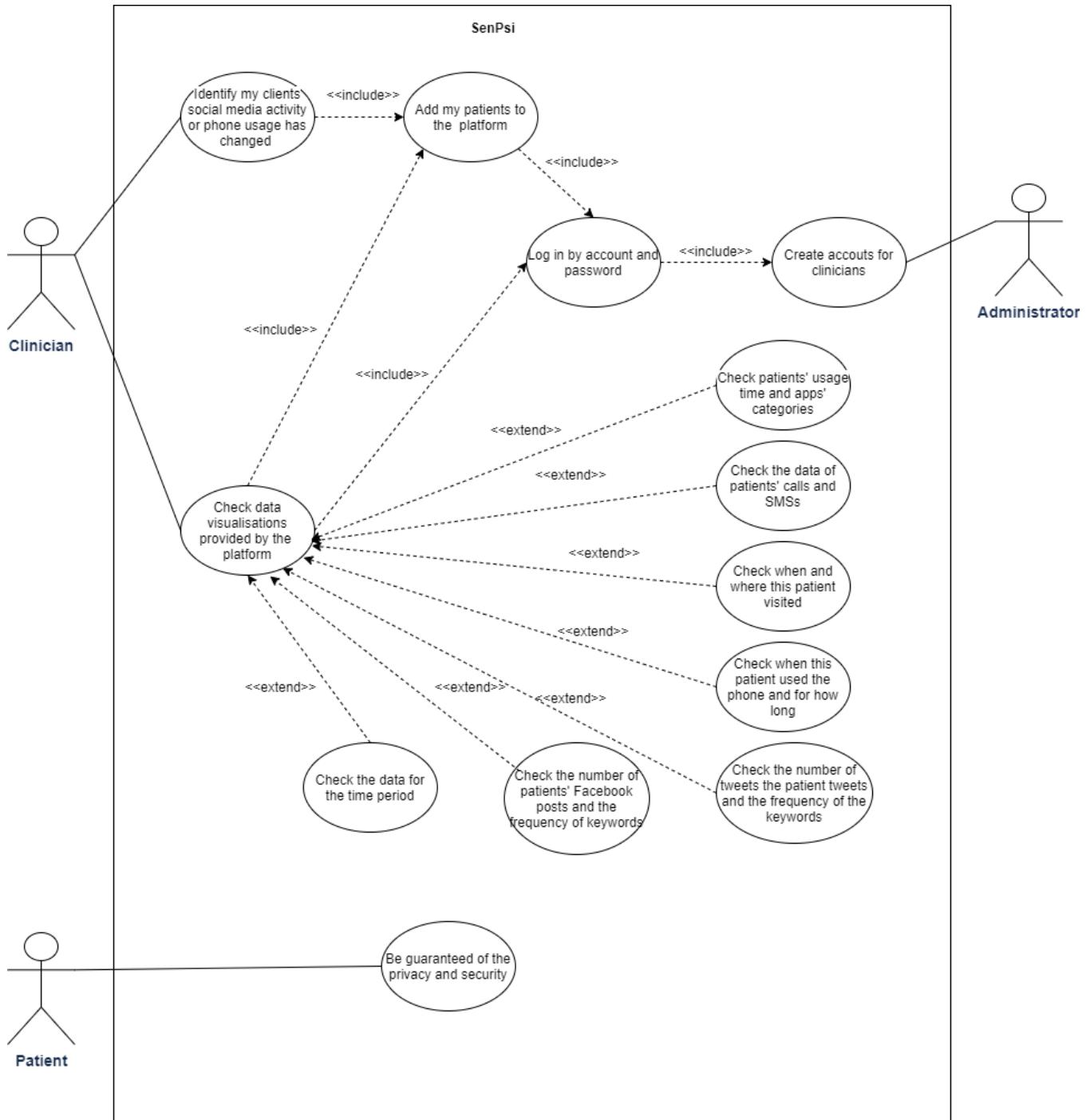


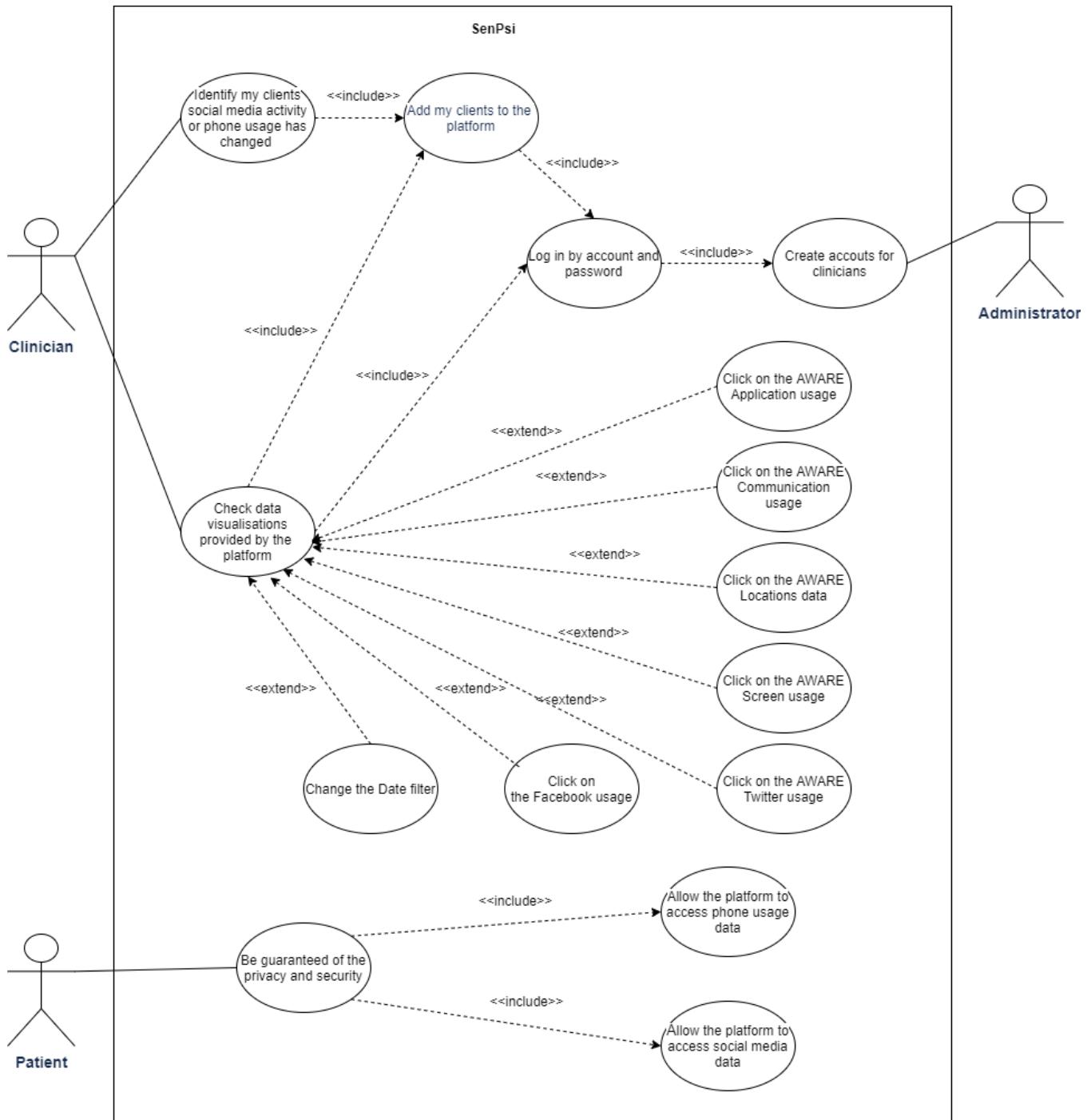
Figure 1.8 Update Profile

# Use-Case Diagram

Version 2.0

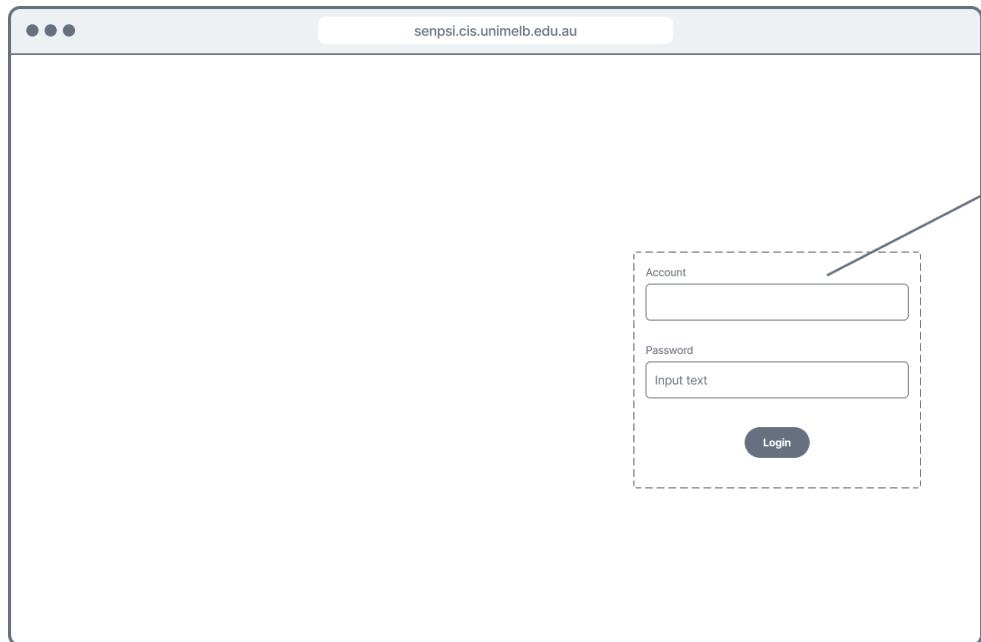


Version 1.0



# Wireframe Diagram

## Login page



The wireframe shows a login form with a dashed border. It contains fields for 'Account' (input text) and 'Password' (input text), and a 'Login' button at the bottom right. A note above the form states: "The account can only be created by admin".

After clicking the "login" button the user will be directed to the "Homepage" below:

## Homepage



The wireframe shows a homepage layout. At the top left is a 'Patient Avatar'. In the center is a 'Page Title' 'Client Management' and the URL 'senpsi.cis.unimelb.edu.au'. To the right is a 'Clinician Avatar' and 'Clinician Name'. On the far left is a 'Navigation Icon' with four icons. The main content area displays a table of patient data with columns: Name, Title, Age, Status, Last update, and 'Add Client'. Each row has a 'View' button. The table data is as follows:

Name	Title	Age	Status	Last update	Add Client
Patient Name	Dr	23	Normal	2022-3-29	<button>View</button>
Patient Name	Dr	23	Normal	2022-3-29	<button>View</button>
Patient Name	Dr	23	Normal	2022-3-29	<button>View</button>
Patient Name	Dr	23	Normal	2022-3-29	<button>View</button>
Patient Name	Dr	23	Normal	2022-3-29	<button>View</button>

After clicking the "View" button the user will be directed to the "Patient Details" below:

## Patient Details

A client's information

Different AWARE API

The screenshot shows a web interface for managing client information. On the left, there is a sidebar with four icons. The main area has a header bar with three dots and the URL 'senpsi.cis.unimelb.edu.au'. Below the header, there is a section titled 'Client Details' with fields for Title (Dr), First Name (Patient), Date of Birth (30/11/1981), Text Notes (Is involved in SWEN90013), Twitter ID (@sjdalf), Facebook ID (smion.dalfonso), and AWARE device ID (cjwiaodj-awjdioaf-wdaiwofj-awdw). A 'Save' button is at the bottom. To the right of this is a 'Clinician Name' field and a grid of four boxes labeled 'AWARE Information' and 'Social Media Information'. Arrows point from the 'AWARE device ID' field to the 'AWARE Information' grid and from the 'Facebook ID' field to the 'Social Media Information' grid.

After clicking one of the AWARE app info buttons, the user will be directed to the "AWARE Info" page below:

#### AWARE Info

The screenshot shows the 'AWARE Info' page. It has a similar layout to the previous screen, with a sidebar and a main area. The main area includes a 'Client Details' section with 'Application Usage for Patient' and a large empty box. To the right is a 'Clinician Name' field and a grid of four boxes. One box in the top row is highlighted in grey, indicating it is the 'Selected category'. Arrows point from the 'Selected category' box to the 'AWARE Information' grid and from the 'Application Usage for Patient' box to the 'Diagram or chart from AWARE' area.

After clicking the "Add Client" button, the user will be directed to the "Add Client" page below:

#### Add Client

**Client details form**

senpsi.cis.unimelb.edu.au

Senψ

← Add New Client

Clinician Name

Client Title

First Name - Last Name

Date of Birth

Text Notes

Twitter ID

Facebook ID

AWARE device ID

Save Client

### Login page

senpsi.cis.unimelb.edu.au

The account can only be created by admin

Account

Password

Login

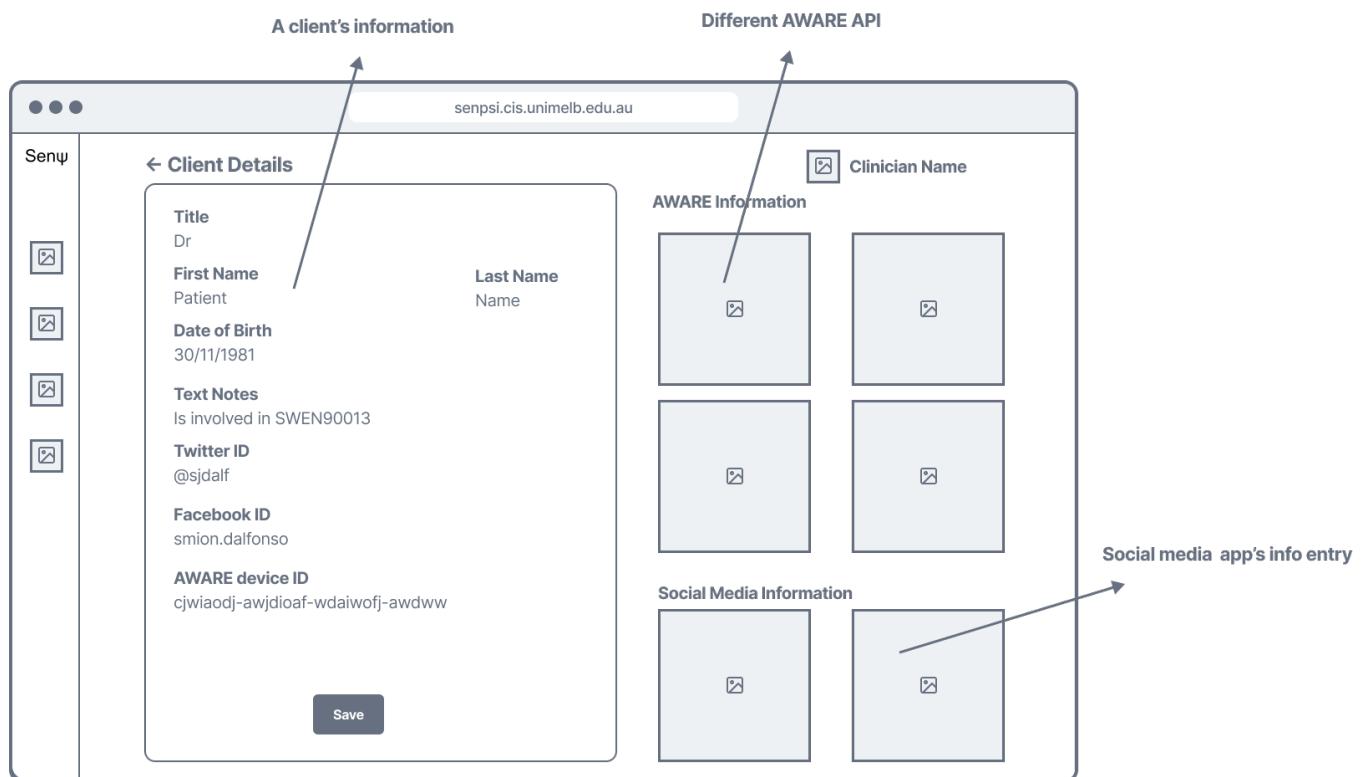
After clicking the "login" button the user will be directed to the "Homepage" below:

**Homepage**



After clicking the "View" button the user will be directed to the "Patient Details" below:

### Patient Details



After clicking one of the AWARE app info buttons, the user will be directed to the "AWARE Info" page below:

### AWARE Info

Diagram or chart from AWARE

Selected category

senpsi.cis.unimelb.edu.au

Senψ

← Client Details

Application Usage for Patient

AWARE Information

Clinician Name

Social Media Information

Senψ

After clicking the "Add Client" button, the user will be directed to the "Add Client" page below:

#### Add Client

Client details form

senpsi.cis.unimelb.edu.au

Senψ

← Add New Client

Clinician Name

Client Title

First Name - Last Name

Date of Birth

Text Notes

Twitter ID

Facebook ID

AWARE device ID

Save Client

Senψ

# **Quality**

# Coding Standards

This page lists the coding standards we will follow for the whole project.

- **JavaScript Coding Standards**
- **React Coding Standards**
- **SQL Coding Standards**
- **Python coding standards**
- **GitHub Guide**
- **The tool: Eslint**

Notes:

- For JavaScript and React, we mainly adopt the ES6 and React/JSX styling guides proposed by Airbnb, a high-profile tech company. The full contents of the styling guides are available at <https://github.com/airbnb/javascript> and <https://github.com/airbnb/javascript/tree/master/react>
- For python, the official style guide from [python.org](https://www.python.org) is considered.
- For SQL, the coding standards of IBM are considered because our client said that we may use IBM NLU for text analysis. The full contents of the styling guides are available at <https://www.ibm.com/docs/en/opw/8.2.0?topic=guide-sql-coding-guidelines>

## JavaScript Coding Standards

See <https://github.com/airbnb/javascript> for the ECMAScript 6 Standard that we use.

- Naming and declaration rules for variables and functions.
- Rules for the use of white space, indentation, and comments.
- Programming practices and principles

### Naming Conventions

- All names start with a **letter**
- Variable and function names written as **camelCase** (aircraftSpeed, sensorRange)
- Global variables written in **UPPERCASE & under\_scores** (CURRENT\_TIMESTAMP)
- Constants (like PI) written in **UPPERCASE**

### Comment

- Use `/** ... */` for multi-line comments.
- Use `//` for single-line comments. Place single line comments on a new line above the subject of the comment. Put an empty line before the comment unless it's on the first line of a block.
- Start all comments with a space to make them easier to read.
- Use `// FIXME`: to annotate problems.
- Use `// TODO`: to annotate solutions to problems.

### Documentation

- Please refer to this link to understand how the tags work in ESDoc.

<https://esdoc.org/manual/tags.html>

### Spaces Around Operator

- Always put spaces around operators (`= + - * /`), and after commas

Examples:

- `var z = x + y;`
- `var array = ["missile", "sensor"];`

### Code Indentation

- Always use 4 spaces for indentation of code blocks

### Statement Rules

- Always end a simple statement with a semicolon.
- Put the opening bracket at the end of the first line.
- Use one space before the opening bracket.
- Put the closing bracket on a new line, without leading spaces.

Examples:

- Loop:

```
for (i = 0; i < 5; i++) {
    x += i;
}
```

- Conditionals:

```
if (counter < 20) {
    alert("Hello");
} else {
    alert("Goodbye");
}
```

## Object Rules

- Place the opening bracket on the same line as the object name.
- Use colon plus one space between each property and its value.
- Use quotes around string values, not around numeric values.
- Do not add a comma after the last property-value pair.
- Place the closing bracket on a new line, without leading spaces.
- Always end an object definition with a semicolon.

Examples:

- ```
var aircraft = {
    id: "Tempest",
    x: 50,
    y: 100,
    z: 1000
};
```

## Line Length < 80

For readability, avoid lines longer than 80 characters.

If a JavaScript statement does not fit on one line, the best place to break it, is after an operator or a comma.

Examples:

- ```
document.getElementById("aircraft").innerHTML =
    "Tempest";
```

## Loading JavaScript in HTML

Use simple syntax for loading external scripts (the type attribute is not necessary).

Example:

- ```
<script src="myScript.js"> </script>
```

## React Coding Standards

This style guide is mostly based on the standards that are currently prevalent in JavaScript, although some conventions (i.e async/await or static class fields) may still be included or prohibited on a case-by-case basis.

1. Basic Rules
2. Class vs React.createClass vs stateless
3. Mixins
4. Naming
5. Declaration
6. Alignment
7. Quotes
8. Spacing
9. Props
10. Refs
11. Parentheses
12. Tags
13. Methods
14. Ordering
15. isMounted

# SQL Coding Standards

Use the following guidelines with SQL statements in the custom query subject file.

- All indentations must be saved as spaces not tabs.
  - The indentation must consist of three spaces.
  - Every nested statement must begin with a new level of indentation.
  - All database reserved words will be in uppercase.
  - The length of lines should not exceed 80 characters.
  - Comments should be used in the SQL to describe functionality. The comments must be in the form of /\* <text> \*/.
  - Filters and grouping should not be placed in the CQS unless absolutely necessary. These should be performed in the report.
  - Use UNION ALL instead of UNION because UNION ALL is much faster. UNION will remove any duplicate rows, but UNION ALL will not. Duplicate rows can be removed in the report through the use of the Auto Group and Summarize property.
  - You will use the RV\_ views instead of the RT\_ tables because the views have user security built into them.
- **Naming Conventions**  
The mnemonics listed in this topic will be used as both table names and as prefixes for column names.
- **SELECT Clause**  
Use the following guidelines when using SELECT clauses.
  - **FROM Clause**  
Use the following guidelines when using FROM clauses.
  - **WHERE Clause**  
Use the following guidelines when using WHERE clauses.
  - **ORDER BY Clause**  
Use the following guideline when using ORDER BY clauses.

# Python coding standards

- For python, the official style guide from [python.org](https://www.python.org) is considered.
- [python\\_code\\_standards](#)

# GitHub Guide

- **Creating or Duplicating repository**

| Command                                                                                                                             | Description                                |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| git init                                                                                                                            | Initialize a local Git repository          |
| git clone <a href="ssh://git@github.com/[username]/[repository-name].git">ssh://git@github.com/[username]/[repository-name].git</a> | Create a local copy of a remote repository |

- **Basic snapshotting**

| Command                          | Description                                       |
|----------------------------------|---------------------------------------------------|
| git status                       | Check status                                      |
| git add [file-name.txt]          | Add a file to the staging area                    |
| git add -A                       | Add all new and changed files to the staging area |
| git commit -m "[commit message]" | Commit changes                                    |
| git rm -r [file-name.txt]        | Remove a file (or folder)                         |

- **Branching and merging**

| Command                     | Description                                             |
|-----------------------------|---------------------------------------------------------|
| git branch                  | List branches (the asterisk denotes the current branch) |
| git branch -a               | List all branches (local and remote)                    |
| git branch [branch name]    | Create a new branch                                     |
| git branch -d [branch name] | Delete a branch                                         |

|                                                    |                                            |
|----------------------------------------------------|--------------------------------------------|
| git push origin --delete [branchName]              | Delete a remote branch                     |
| git checkout -b [branch name]                      | Create a new branch and switch to it       |
| git checkout -b [branch name] origin/[branch name] | Clone a remote branch and switch to it     |
| git checkout [branch name]                         | Switch to a branch                         |
| git checkout -                                     | Switch to the branch last checked out      |
| git checkout -- [file-name.txt]                    | Discard changes to a file                  |
| git merge [branch name]                            | Merge a branch into the active branch      |
| git merge [source branch] [target branch]          | Merge a branch into a target branch        |
| git stash                                          | Stash changes in a dirty working directory |
| git stash clear                                    | Remove all stashed entries                 |

- **Sharing and Updating project**

| Command                                                                         | Description                                                     |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------|
| git push origin [branch name]                                                   | Push a branch to your remote repository                         |
| git push -u origin [branch name]                                                | Push changes to the remote repository (and remember the branch) |
| git push                                                                        | Push changes to the remote repository (remembered branch)       |
| git push origin --delete [branch name]                                          | Delete a remote branch                                          |
| git pull                                                                        | Update local repository to the newest commit                    |
| git pull origin [branch name]                                                   | Pull changes from the remote repository                         |
| git remote add origin ssh://git@github.com/[username]/[repository-name].git     | Add a remote repository                                         |
| git remote set-url origin ssh://git@github.com/[username]/[repository-name].git | Set a repository's origin branch to SSH                         |

- **Inspection and Comparison**

| Command                                  | Description                    |
|------------------------------------------|--------------------------------|
| git log                                  | View changes                   |
| git log --summary                        | View changes (detailed)        |
| git diff [source branch] [target branch] | Preview changes before merging |

## The tool Eslint

ESLint is a tool for identifying and reporting on patterns found in ECMAScript/JavaScript code, with the goal of making code more consistent and avoiding bugs. In many ways, it is similar to JSLint and JSHint with a few exceptions:

- ESLint uses [Esprey](#) for JavaScript parsing.
- ESLint uses an AST to evaluate patterns in code.
- ESLint is completely pluggable, every single rule is a plugin and you can add more at runtime.

Check the full content: <https://eslint.org/docs/user-guide/getting-started>

### Installation and Usage

Prerequisites: [Node.js](#) (^12.22.0, ^14.17.0, or >=16.0.0) built with SSL support. (If you are using an official Node.js distribution, SSL is always built in.)

You can install ESLint using npm or yarn:

```
npm install eslint --save-dev
```

```
# or
```

```
yarn add eslint --dev
```

You should then set up a configuration file, and the easiest way to do that is:

```
npm init @eslint/config
```

```
# or
```

```
yarn create @eslint/config
```

**Note:** `npm init @eslint/config` assumes you have a `package.json` file already. If you don't, make sure to run `npm init` or `yarn init` beforehand.

After that, you can run ESLint on any file or directory like this:

```
npx eslint yourfile.js
```

```
# or
```

```
yarn run eslint yourfile.js
```

It is also possible to install ESLint globally rather than locally (using `npm install eslint --global`). However, this is not recommended, and any plugins or shareable configs that you use must be installed locally in either case.

## Configuration

**Note:** If you are coming from a version before 1.0.0 please see the [migration guide](#).

After running `npm init @eslint/config`, you'll have a `.eslintrc.{js,yml,json}` file in your directory. In it, you'll see some rules configured like this:

```
{
  "rules": {
    "semi": [ "error", "always" ],
    "quotes": [ "error", "double" ]
  }
}
```

The names "semi" and "quotes" are the names of [rules](#) in ESLint. The first value is the error level of the rule and can be one of these values:

- "off" or 0 - turn the rule off
- "warn" or 1 - turn the rule on as a warning (doesn't affect exit code)
- "error" or 2 - turn the rule on as an error (exit code will be 1)

The three error levels allow you fine-grained control over how ESLint applies rules (for more configuration options and details, see the [configuration docs](#)).

Your `.eslintrc.{js,yml,json}` the configuration file will also include the line:

```
{
  "extends": "eslint:recommended"
}
```

Because of this line, all of the rules marked "" on the [rules page](#) will be turned on. Alternatively, you can use configurations that others have created by searching for "eslint-config" on [npmjs.com](#). ESLint will not lint your code unless you extend from a shared configuration or explicitly turn rules on in your configuration.

# Quality constraints

## Quality

The qualities of service of the application cover performance, tolerance to

imperfections, usability, security, maintainability, and portability.

- The system is expected to perform to a level to guarantee its usability – there are no strict performance timeframes that have placed on the system but the general qualities are that the application should feel responsive and not freeze nor crash.
- The application should be maintainable and extendible in future should the need arise.
- Data integrity should be guaranteed by the system – data stored should be accurate, complete, and reliable.
- Business rules for the business domain should be followed – for example, administrators should not be able to register in classes.
- The application is expected to guarantee the security of the system – all users have been given a role which defines the system components they have access to and the transactions they may perform. User passwords should also be encrypted in the database and not stored in plaintext, as per best practice.
- There are no strict usability requirements but the user interface and presentation layer should enable (and not impede) users' use of the application and should be clearly laid out so user's know how to operate the application.

## Scope

The Scope of the application include two main parts: [functional requirement](#) and [non-functional requirement](#).

## Time

Semester 1 presentation: May 22,2022

Final presentation: end of October(TBD)

## Cost

As the server is provided by The University of Melbourne, and the database is restricted to be mysql provided by clients, budget is not a concern in this project.

# Quality Control

## 1.1 Security

- Passwords should not be visible at any time except when clinician users are opt-in visible at login.
- Access to system data can only be changed by the system data administrator.

## 1.2 Confidentiality

- Clinician users can only access their own clients' profiles and data, and not others.

## 1.3 Integrity

- Clinician users are verified for authorization when performing any special action.

## 1.4 Availability

- Clinician users can access their clients' data at any time when they are connected to the Internet and logged into the system.
- A backup or cached version is available in situations where updates take time to resolve. A new installation of the system shall be available for first-time use within 24 hours of the start of the installation.

## 1.5 Reliability

- The system shall maintain redundant backups of data for purposes of restoration in the event of data loss.

## 1.6 Performance

- The response time of actions performed in a short period of time before error messages are displayed is very important.

## 1.7 Space

- Databases should contain enough space to cater to the continuous introduction of data collected and be able to scale.
- Redundant data should be purged to maintain the space usage within the system such as canceled user accounts or deleted images.

## 1.8 Cost

- The project development should not require funding, unless necessary (If necessary, client Simon D'Alfonso will help).
- The system maintenance should remain within the budget of the Client (Simon D'Alfonso).
- The initial system should not demand an expensive architecture to be set up.
- Based on the recommendations of the course tutor and supervisor, the team will choose the free development libraries.

## 1.9 Throughput

- The throughput of the system should match the throughput of the data collected by the system.
- To prevent system overloads, information transfer between submodules should be set to a minimum.

## 2.0 Interface

- The visual effect of the website should refer to more medical websites, with simple colors that are not eye-catching and can be understood by users(Simon D'Alfonso suggests).
- When the size of the browser window changes, the site itself needs to adapt, updating its visuals and preserving its data. Data and page content should not be lost when the site page is restored from minimal to normal (Simon D'Alfonso suggests).
- The website may have the option to provide display options for people with vision impairments such as color-blindness. (Not a priority/urgent)
- Users can use plug-ins or gadgets provided by the browser to facilitate their browsing habits.
- The system shall be accessible to people who are color blind, to the extent that they shall be able to discern all text and other information displayed by the system as easily as a person without color blindness.

## 2.1 Installation

- The dashboard can be run directly in the browser, and Clinician users do not need to make additional downloads.
- The system should not depend on subscription-based external services.
- System functionality may depend on 3rd-party systems to function like IBM NLU for text analysis: <https://www.ibm.com/cloud/watson-natural-language-understanding>.

## 2.2 Distribution

- Source code should be in a state that can be automatically deployed on new instances with minimal effort.
- System architecture should be extensible to have multiple instances for performance improvements.

## 2.3 Deadline

- Requirement formulation should be done in the first five weeks of the project.
- The project should last 1 year, under the agreement with The University of Melbourne.
- The system should be fully operable after the final week of the project.

## 2.4 Variability

- The project should be changeable early in development, and the scope should be flexible. Additional features may be suggested and implemented if time and resources are sufficient.

## 2.5 Changeability

- The team should create documentation related to the source code to make it easy for users to understand how to use different functional modules. The source code also should have sufficient documentation to facilitate an understanding of how to modify functionality.
- The product delivered should have sufficient settings to allow modification of fields and measurement units to cater to diverse users.

## References:

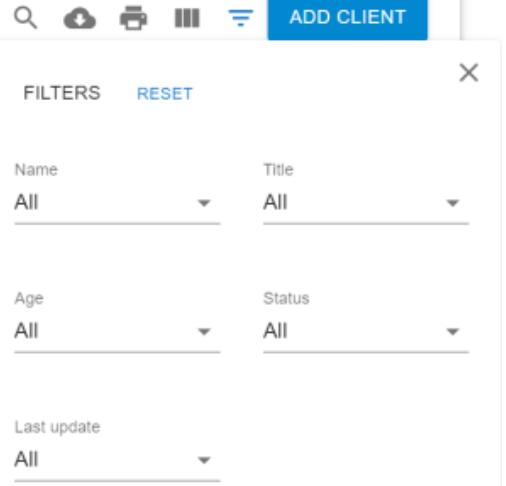
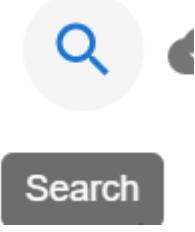
- The blue font was suggested by client Simon D'Alfonso
- Van Lamsweerde, A. (2019). Axel Van Lamsweerde for Non-Functional Requirements on Software Services. Retrieved from [https://www.researchgate.net/figure/Axel-Van-Lamsweerde-for-Non-Functional-Requirements-on-Software-Services-adopted-from\\_fig3\\_268290531](https://www.researchgate.net/figure/Axel-Van-Lamsweerde-for-Non-Functional-Requirements-on-Software-Services-adopted-from_fig3_268290531)
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# **Testing**

# Acceptance Testing

| User Story ID | Acceptance Criteria | Test ID | Acceptance Test                                                                                                                                                                                                   | Critical                            |                          | Test Result                                                                                                                                                                      |  |        | Comments                                                                                                                                                                        |
|---------------|---------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               |                     |         |                                                                                                                                                                                                                   | Yes                                 | No                       | Accept                                                                                                                                                                           |  | Reject |                                                                                                                                                                                 |
| US001         | AC001               | AT001   | Once the clinician selects a client he wants to check and clicks the application usage button, the diagram showing the client's application usage data will be presented.                                         | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1. The clinician clicks on the application button.<br>2. Takes the clinician to a page where they can see the selected client's information about times used and category counts |  |        | Because we use the Apex Charts for creating the charts, so it is a little different from the chart style given by our client, but there is no problem with the key information. |
|               |                     |         | Once the clinician selects a client he wants to check and clicks the application usage button, the diagram showing the application category distribution will be presented.                                       | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1. The clinician clicks on the application button.<br>2. Takes the clinician to a page where they can see the selected client's information about times used and category counts |  |        | Because we use the Apex Charts for creating the charts, so it is a little different from the chart style given by our client, but there is no problem with the key information. |
| US002         | AC002               | AT003   | Once the clinician selects a client he wants to check and clicks the communication usage button, the diagram shows the incoming, outgoing and missed calls.                                                       | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1. The clinician clicks on the communication button.<br>2. Takes the clinician to a page where they can see the selected client's information about calls.                       |  |        | Because we use the Apex Charts for creating the charts, so it is a little different from the chart style given by our client, but there is no problem with the key information. |
|               |                     |         | Once the clinician selects a client he wants to check and clicks the communication usage button, the diagram shows the incoming and outgoing SMSs.                                                                | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1. The clinician clicks on the communication button.<br>2. Takes the clinician to a page where they can see the selected client's information about SMSs.                        |  |        | Because we use the Apex Charts for creating the charts, so it is a little different from the chart style given by our client, but there is no problem with the key information. |
| US003         | AC003               | AT005   | Once the clinician selects a client he wants to check and clicks the location data button, the diagram showing the locations where the client has visited will be presented, including the name and staying time. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1. The clinician clicks on the Location button.<br>2. Takes the clinician to a page where they can see the chart about the number of locations visited by patients               |  |        | Because we use the Apex Charts for creating the charts, so it is a little different from the chart style given by our client, but there is no problem with the key information. |
| US004         | AC004               | AT006   | Once the clinician selects a client he wants to check and clicks the screen usage button, the diagram showing the screen usage data will be presented, including when and duration.                               | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1. The clinician clicks on the Screen button.<br>2. Takes the clinician to a page where they can see the chart about device usage data by patients                               |  |        | Because we use the Apex Charts for creating the charts, so it is a little different from the chart style given by our client, but there is no problem with the key information. |

|       |       |       |                                                                                                                                                                                                                                                                               |                                     |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                 |
|-------|-------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| US005 | AC005 | AT007 | Once the clinician selects a client he wants to check and clicks the Twitter button, the diagram showing the Facebook Keywords will be presented.                                                                                                                             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <ol style="list-style-type: none"> <li>1. The clinician clicks on the Twitter button.</li> <li>2. Takes the clinician to a page where they can see the word-cloud chart about the related keywords.</li> <li>3. The number of tweets the client tweets and the frequency of the keywords in it are displayed</li> </ol>                                                                                         | Because we use the Apex Charts for creating the charts, so it is a little different from the chart style given by our client, but there is no problem with the key information. |
|       |       | AT008 | The Twitter content will be updated and analyzed once a week.                                                                                                                                                                                                                 | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <ol style="list-style-type: none"> <li>1. The content of Twitter is updated once a week.</li> </ol>                                                                                                                                                                                                                                                                                                             | Every Monday it would refresh the charts about the Twitter word cloud chart.                                                                                                    |
| US006 | AC006 | AT009 | Once the clinician selects a client he wants to check and clicks the Facebook button, the diagram showing the Facebook Keywords will be presented.                                                                                                                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                                                                                                                                                                                                                                                                                                                                                                                                                 | Due to the different data formats of Facebook, with the agreement of our client, we do not need to complete the relevant user stories of Facebook.                              |
|       |       | AT010 | The Facebook contents will be updated and analyzed once a week.                                                                                                                                                                                                               | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                                                                                                                                                                                                                                                                                                                                                                                                                 | Due to the different data formats of Facebook, with the agreement of our client, we do not need to complete the relevant user stories of Facebook.                              |
| US007 | AC007 | AT011 | The clinician can choose a specific period with a date filter to review every diagram.                                                                                                                                                                                        | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <p>The clinician could adjust by clicking the buttons as follow screenshot.</p>                                                                                                                                                                                                                                             |                                                                                                                                                                                 |
| US008 | AC008 | AT012 | If the clinician clicks the Add button on the bottom of the client list, a basic information form about a new client will be presented. The clinician can enter the details of the new client and confirm. The client's information and account will be created and recorded. | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <ol style="list-style-type: none"> <li>1. The civilian enters the correct username and password and clicks Login. After successful login, go to the homepage to view the list of clients.</li> <li>2. The civilian can click the "ADD CLIENT" button to add a new client.</li> <li>3. The civilian need to input the information of the new client.</li> <li>4. The civilian click the "ADD" button.</li> </ol> |                                                                                                                                                                                 |
|       | AC009 | AT013 | If the clinician clicks a specific client and clicks the delete button on the bottom of the client list, a pop-up window will show up and ask for a confirmation. If the clinician confirms deleting the client, the client's account will be removed.                        | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <p>The clinician clicks on the Delete Client button and clicks Confirm button. The patient will be deleted, and the profile will be removed from database.</p>                                                                                                                                                                                                                                                  |                                                                                                                                                                                 |

|       |       |                                                                                                                                           |                                     |                          |                                                                                                                                                                                                                                                                                                                                  |  |
|-------|-------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| AC010 | AT014 | The clinician can click the sort button to check a sorted clients' name list.                                                             | <input checked="" type="checkbox"/> | <input type="checkbox"/> | The clinician clicks the Sorted button on the homepage of the dashboard. A sorted client name list will be presented<br><br>                                                                                                                   |  |
|       | AT015 | The clinician can only access his /her clients with credentials.                                                                          | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1 The civilian enters the correct username and password and clicks Login. After successful login, go to the homepage to view the list of clients.<br><br>2. The civilian can click the "view" button to check the patient's information details.                                                                                 |  |
| AC011 | AT016 | The personal page will be presented, including basic information and the relevant data of the client selected by the clinician.           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 1 The civilian enters the correct username and password and clicks Login. After successful login, go to the homepage to view the list of clients.<br><br>2. The civilian can click the "view" button to check the patient's information details.<br><br>3. Then The civilian can click the specific name to check relevant data. |  |
| AC012 | AT017 | If the clinician types a client's name in the search box, similar names will be presented in descending relevant.                         | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                                                                                                                                                                                                                                              |  |
| AC013 | AT018 | The client's personal information could be changed and updated on the personal page.                                                      | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                                                                                                                                                                                                                                                                                                                                  |  |
| US009 | AC014 | AT019 The clinicians and clients can only access their dashboard and view the data permitted with specific account authentication.        | <input checked="" type="checkbox"/> | <input type="checkbox"/> | If other clinicians/patients try to access their detailed usage data. Their access attempt should be denied                                                                                                                                                                                                                      |  |
| US010 | AC015 | AT020 The administrator can manage the clinician accounts in Django will full access.                                                     | <input checked="" type="checkbox"/> | <input type="checkbox"/> | The administrator attempts to manage clinician accounts with Django. And A clinician account could be created, deleted, viewed                                                                                                                                                                                                   |  |
|       | AC016 | AT021 The administrator can manage the clients' accounts in Django will full access.                                                      | <input checked="" type="checkbox"/> | <input type="checkbox"/> | The administrator attempts to manage clients accounts with Django. The clients' list is presented to the administrator. Client's account can be created if necessary.                                                                                                                                                            |  |
| US011 | AC017 | AT022 The clinician can access the dashboard with the correct account and password                                                        | <input checked="" type="checkbox"/> | <input type="checkbox"/> | The clinician enters their account information and password then clicks the login button.<br><br>(eg: Account: Matilda PWD: P@ssword2)                                                                                                                                                                                           |  |
|       | AC018 | AT023 The displayed data must be limited to the part that the account has permission to access; other unauthorized data should be blocked | <input checked="" type="checkbox"/> | <input type="checkbox"/> | The dashboard will be organized according to his/her authentication.                                                                                                                                                                                                                                                             |  |

|       |       |       |                                                                                                                                                                                                                                                                               |                                     |                                     |                                                                                                                                                               |                                                                                                                                          |
|-------|-------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| US012 | AC019 | AT024 | The Edited Data can be saved correctly in the database.<br><br>When clicking the 'Edit' button on the personal page, the user can change the information. After clicking the 'submit' button, all changes will be saved in the database and can be seen on the personal page. | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | The clinician can change the information. After clicking the 'submit' button, all changes will be saved in the database and can be seen on the personal page. |                                                                                                                                          |
|       |       |       | All of the data presented should be fetched from the backend and should be up-to-date                                                                                                                                                                                         | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                                                                                                                                               |                                                                                                                                          |
| US013 | AC021 | AT026 | The layout should be able to customize according to the clinician's usage habits.                                                                                                                                                                                             | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                                                                                                                                                               | But our website can be used correctly on the tablet or mobile phone, and the resolution of the website can be automatically capitalized. |

# Summary testing report

This is the summary testing report for our project.

We tested our website for each sprint, you could check the details about each testing report with the following link.

- [Sprint1 testing report](#)
- [Sprint2 testing report](#)
- [Sprint3 testing report](#)
- [Sprint4 testing report](#)
- [Sprint5 testing report](#)
- [Sprint6 testing report](#)
- [Sprint7 testing report](#)
- [Sprint8&Sprint9 testing report](#)

## Acceptance testing

We manually tested our website based on the acceptance criteria, and we passed 23 out of 26 items in total. The tests that didn't pass were mostly related to the initial client's desire to be able to analyze Facebook's data. Due to the different data formats of Facebook, with the agreement of our client, we do not need to complete the relevant user stories of Facebook.

The acceptance criteria: [Acceptance Criteria](#)

The acceptance testing link: [Acceptance Testing](#)

The Acceptance Criteria document contains the standards used to determine acceptance by end-users.

The team conducts acceptance testing with the client, in the latter part of the protection (at a time to be arranged with the client). The user testing will aim to have experimental testing with end-users (to be arranged), for directional feedback. Testing scripts are to be created by the user story team to follow the general flow of user stories to conduct these tests.

## System testing

We wrote the system testing for each functional user story about the website in each Sprint. All 23 system tests passed.

Especially for many chart formats, although it is not exactly the same as what the client provides, it meets the client's needs.

## Integration Testing

We used the React-testing library to do the snapshot testing for the frontEnd.

We used Postman to test our APIs so that the frontEnd developers can get the correct format data to use and we can make sure the backEnd and database work well.

We have 16 APIs, and we wrote 56 test cases for the correct input parameters. and 56 passed when the data of the request is correct.

We wrote 96 test cases for the wrong input parameters, and only 23 passed. But in most cases, it does not appear at all, and the other part of the failed tests is meaningful. As part of future improvement, the backend can add more fault-tolerant codes.

## Unit Testing

We used the Jest and React-testing-library for the FrontEnd and Unittest for the BackEnd.

20 unit testing for the coverage testing of the backEnd passed and all front-end unit testing passed and checked manually about the charts pages.

We used Unit testing because it helps us to fix bugs early in the development cycle when it is less expensive and easier to locate bugs. In addition, good unit tests serve as project documentation.

Unit tests permit code reuse - if we know a component we have created is thoroughly tested and works well, we can introduce it into other parts of your application's codebase without being concerned it will cause issues.

## Resolution Testing

We use an online testing tool, the Multiscreen test, to check if our website can be used on different tablets or phones. All 12 tests passed.

The link: <http://whatismyscreenresolution.net/multi-screen-test>

The result is that clinicians could browse our website by tablet or phone, though they need to rotate the screen and view it in the landscape.

Please check the details at the end of the Sprint8&Sprint9 testing report.

The link: [Sprint8&Sprint9 testing report](#)

# Testing Plan

Test plans document the team's testing strategy, objectives, tools, and processes for the project.

## Roles & Responsibilities

The Q/A and Testing Lead will be responsible for the testing part of our project.

The responsibilities include:

- Manage the quality of released features
- Responsible for ensuring testing standards set out are met
- Provide assistance with testing
- Maintain risks

## Risk/Assumptions

It is acknowledged that deadlines can often result in the lower prioritization of test case creation and execution. The Testing Lead is responsible to ensure the best possible testing outcomes given tight deadlines and unexpected delays and determining where effort will be best focused.

## Bugs

Any bugs identified during the course of the sprint will be labelled as bugs depending on the severity and criticality of the bug. it will either be dealt with immediately or left as a task for a subsequent cycle.

## Acceptance testing

We will write the system testing for each user story in each Sprint.

The Acceptance Criteria document contains the standards used to determine acceptance by end-users.

The team will conduct acceptance testing with the client, in the latter part of the protection (at a time to be arranged with the client). The user testing will aim to have experimental testing with end-users (to be arranged), for directional feedback.

Testing scripts are to be created by the user story team to follow the general flow of user stories to conduct these tests.

## Integration Testing

We will use the React-testing library to do the snapshot testing for the frontEnd.

We gonna use Postman to test our APIs so that the frontEnd developers can get the correct format data to use.

We may also gonna use Cypress to do the integration testing of the Frontend.

## Unit Testing

We will use the Jest and React-testing-library for the FrontEnd and Unitest for the BackEnd.

We will do Unit testing because it helps us to fix bugs early in the development cycle when it is less expensive and easier to locate bugs. In addition, good unit tests serve as project documentation.

Unit tests permit code re-use - if we know a component we have created is thoroughly tested and works well, we can introduce it into other parts of your application's codebase without being concerned it will cause issues.

## All testing Tool

| Type               | Name                  | Reasons                                                                                      | Status  |
|--------------------|-----------------------|----------------------------------------------------------------------------------------------|---------|
| API Test Tool      | Postman               | <ul style="list-style-type: none"><li>• Free to use</li><li>• Widely used</li></ul>          | DECIDED |
| FrontEnd Test Tool | Jest                  | <ul style="list-style-type: none"><li>• Popular testing tool</li><li>• Free to use</li></ul> | DECIDED |
|                    | React-testing-library | <ul style="list-style-type: none"><li>• Just in React</li></ul>                              | DECIDED |

|                   |         |                                                                                     |         |
|-------------------|---------|-------------------------------------------------------------------------------------|---------|
| BackEnd Test Tool | Unitest | <ul style="list-style-type: none"><li>• Free to use</li><li>• Widely used</li></ul> | DECIDED |
|-------------------|---------|-------------------------------------------------------------------------------------|---------|

# Testing Report

## Testing

For the testing part, we mainly focus on three parts, which are **system testing**, integration testing and **unit testing**.

For the unit testing, we check whether each software unit performs as expected. The finest level of granularity in testing.

For the integration testing, we Check whether multiple software components/units operate correctly.

For the system testing, we check whether our outcome meets the client's requirements.

We also test the compatibility and different resolutions of our website because they are the non-functional requirements of this project.

## Compatibility Testing

The system should be tested for compatibility in Google Chrome under the latest version of **macOS** and **Windows 10**.

## Different Resolutions Testing

We will use the tool which is the BuleTool to test our website at a different resolution.

The link: <https://bluetree.ai/screenfly/>

# Sprint1 testing report

We mainly conduct our software testing from three aspects, namely unit testing, which are system testing, integration testing and unit testing.

## System Testing

### Clinician: Marvin

Marvin is a clinician and he wants to use this website to view data about his patient's cell phone usage.

Marvin landed on the homepage of the digital phenotyping platform.

Then he should see the homepage.



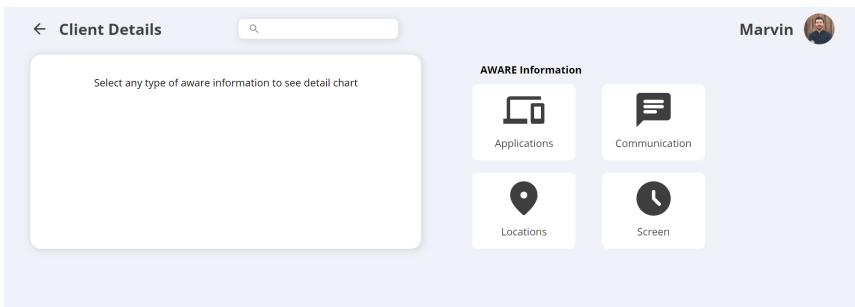
[Homepage](#)

[Login](#)

[Info Details](#)

Because the login function is not in Sprint 1.

We assume that Marvin clicks the log in button on the home page to log in successfully, and wants to query a patient's information by clicking the Info details button.



Below are the system testing cases of sprint1.

| ID: PB001-S1-ST |                                                               |                  |       |          |
|-----------------|---------------------------------------------------------------|------------------|-------|----------|
| Purpose         | Present the data of the client's usage time of each app       |                  |       |          |
| Prerequisite    | None(Just for Sprint1)                                        |                  |       |          |
| Test Data       | Valid data from the AWARE smartphone sensing app in the MySQL |                  |       |          |
| Tests           | Steps                                                         | Expected Results | Pass? | Comments |
|                 |                                                               |                  |       |          |

|                               | <p>The app usage count should be shown</p> <p><b>App usage count</b></p> <table border="1"> <thead> <tr> <th>App</th> <th>Times Used</th> </tr> </thead> <tbody> <tr> <td>Twitter</td> <td>~100</td> </tr> <tr> <td>Google Maps</td> <td>~80</td> </tr> <tr> <td>Facebook</td> <td>~80</td> </tr> <tr> <td>ESPN</td> <td>~45</td> </tr> <tr> <td>Domain Real Estate &amp; Property</td> <td>~15</td> </tr> <tr> <td>Champions League Official</td> <td>~25</td> </tr> <tr> <td>ASUS Weather</td> <td>~55</td> </tr> </tbody> </table> | App | Times Used | Twitter | ~100 | Google Maps | ~80 | Facebook | ~80 | ESPN | ~45 | Domain Real Estate & Property | ~15 | Champions League Official | ~25 | ASUS Weather | ~55 | Yes | <p>Twitter<br/>Google Map<br/>Facebook<br/>ESPN<br/>Domain Real Estate<br/>Champions League...<br/>ASUS Weather<br/>0</p> <p>Because we use the Apex Ch client, but there is no problem</p> |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------|---------|------|-------------|-----|----------|-----|------|-----|-------------------------------|-----|---------------------------|-----|--------------|-----|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| App                           | Times Used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |     |            |         |      |             |     |          |     |      |     |                               |     |                           |     |              |     |     |                                                                                                                                                                                             |
| Twitter                       | ~100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     |            |         |      |             |     |          |     |      |     |                               |     |                           |     |              |     |     |                                                                                                                                                                                             |
| Google Maps                   | ~80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |     |            |         |      |             |     |          |     |      |     |                               |     |                           |     |              |     |     |                                                                                                                                                                                             |
| Facebook                      | ~80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |     |            |         |      |             |     |          |     |      |     |                               |     |                           |     |              |     |     |                                                                                                                                                                                             |
| ESPN                          | ~45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |     |            |         |      |             |     |          |     |      |     |                               |     |                           |     |              |     |     |                                                                                                                                                                                             |
| Domain Real Estate & Property | ~15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |     |            |         |      |             |     |          |     |      |     |                               |     |                           |     |              |     |     |                                                                                                                                                                                             |
| Champions League Official     | ~25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |     |            |         |      |             |     |          |     |      |     |                               |     |                           |     |              |     |     |                                                                                                                                                                                             |
| ASUS Weather                  | ~55                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |     |            |         |      |             |     |          |     |      |     |                               |     |                           |     |              |     |     |                                                                                                                                                                                             |

| ID: PB002-S1-ST |                                                               |                  |       |          |
|-----------------|---------------------------------------------------------------|------------------|-------|----------|
| Purpose         | Present the categories the apps belong                        |                  |       |          |
| Prerequisite    | None(Just for Sprint1)                                        |                  |       |          |
| Test Data       | Valid data from the AWARE smartphone sensing app in the MySQL |                  |       |          |
| Tests           | Steps                                                         | Expected Results | Pass? | Comments |
|                 |                                                               |                  |       |          |

|                    | <p>The app categories count should be shown</p> <p><b>Apps used categories (Note: This can be extracted from Google Play)</b></p> <table border="1"> <thead> <tr> <th>Category</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Social</td> <td>2.0</td> </tr> <tr> <td>Travel &amp; Local</td> <td>1.0</td> </tr> <tr> <td>House &amp; Home</td> <td>1.0</td> </tr> <tr> <td>Sports</td> <td>2.0</td> </tr> <tr> <td>Weather</td> <td>1.0</td> </tr> </tbody> </table> | Category | Count | Social | 2.0 | Travel & Local | 1.0 | House & Home | 1.0 | Sports | 2.0 | Weather | 1.0 | Yes | <p>Categ</p> <table border="1"> <thead> <tr> <th>Category</th> <th>Count</th> </tr> </thead> <tbody> <tr> <td>Art and Design</td> <td>33</td> </tr> <tr> <td>Business</td> <td>20</td> </tr> <tr> <td>Communications</td> <td>18</td> </tr> <tr> <td>Education</td> <td>10</td> </tr> <tr> <td>Entertainment</td> <td>10</td> </tr> <tr> <td>Health and Fitness</td> <td>4</td> </tr> </tbody> </table> <p>Because we use the Apex Charts for chart style given by our client, but the</p> | Category | Count | Art and Design | 33 | Business | 20 | Communications | 18 | Education | 10 | Entertainment | 10 | Health and Fitness | 4 |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------|--------|-----|----------------|-----|--------------|-----|--------|-----|---------|-----|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------|----------------|----|----------|----|----------------|----|-----------|----|---------------|----|--------------------|---|
| Category           | Count                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          |       |        |     |                |     |              |     |        |     |         |     |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |       |                |    |          |    |                |    |           |    |               |    |                    |   |
| Social             | 2.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |       |        |     |                |     |              |     |        |     |         |     |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |       |                |    |          |    |                |    |           |    |               |    |                    |   |
| Travel & Local     | 1.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |       |        |     |                |     |              |     |        |     |         |     |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |       |                |    |          |    |                |    |           |    |               |    |                    |   |
| House & Home       | 1.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |       |        |     |                |     |              |     |        |     |         |     |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |       |                |    |          |    |                |    |           |    |               |    |                    |   |
| Sports             | 2.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |       |        |     |                |     |              |     |        |     |         |     |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |       |                |    |          |    |                |    |           |    |               |    |                    |   |
| Weather            | 1.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |       |        |     |                |     |              |     |        |     |         |     |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |       |                |    |          |    |                |    |           |    |               |    |                    |   |
| Category           | Count                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          |       |        |     |                |     |              |     |        |     |         |     |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |       |                |    |          |    |                |    |           |    |               |    |                    |   |
| Art and Design     | 33                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |       |        |     |                |     |              |     |        |     |         |     |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |       |                |    |          |    |                |    |           |    |               |    |                    |   |
| Business           | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |       |        |     |                |     |              |     |        |     |         |     |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |       |                |    |          |    |                |    |           |    |               |    |                    |   |
| Communications     | 18                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |       |        |     |                |     |              |     |        |     |         |     |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |       |                |    |          |    |                |    |           |    |               |    |                    |   |
| Education          | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |       |        |     |                |     |              |     |        |     |         |     |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |       |                |    |          |    |                |    |           |    |               |    |                    |   |
| Entertainment      | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          |       |        |     |                |     |              |     |        |     |         |     |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |       |                |    |          |    |                |    |           |    |               |    |                    |   |
| Health and Fitness | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |       |        |     |                |     |              |     |        |     |         |     |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |       |                |    |          |    |                |    |           |    |               |    |                    |   |

|                 |                                                                         |                  |       |          |
|-----------------|-------------------------------------------------------------------------|------------------|-------|----------|
| ID: PB003-S1-ST |                                                                         |                  |       |          |
| Purpose         | Present the data of the client's calls (incoming, outgoing, and missed) |                  |       |          |
| Prerequisite    | None(Just for Sprint1)                                                  |                  |       |          |
| Test Data       | Valid data from the AWARE smartphone sensing app in the MySQL           |                  |       |          |
| Tests           | Steps                                                                   | Expected Results | Pass? | Comments |

|            | <p>The Calls should be shown</p> <p><b>Phone Calls (Total)</b></p> <table border="1"> <thead> <tr> <th>Date</th> <th>Incoming</th> <th>Outgoing</th> <th>Missed</th> </tr> </thead> <tbody> <tr><td>21/02/2022</td><td>5</td><td>5</td><td>1</td></tr> <tr><td>22/02/2022</td><td>4</td><td>3</td><td>1</td></tr> <tr><td>23/02/2022</td><td>6</td><td>1</td><td>1</td></tr> <tr><td>24/02/2022</td><td>3</td><td>7</td><td>1</td></tr> <tr><td>25/02/2022</td><td>7</td><td>6</td><td>1</td></tr> <tr><td>26/02/2022</td><td>8</td><td>7</td><td>2</td></tr> <tr><td>27/02/2022</td><td>2</td><td>2</td><td>3</td></tr> </tbody> </table> | Date     | Incoming | Outgoing | Missed | 21/02/2022 | 5 | 5 | 1 | 22/02/2022 | 4 | 3 | 1 | 23/02/2022 | 6 | 1 | 1 | 24/02/2022 | 3 | 7 | 1 | 25/02/2022 | 7 | 6 | 1 | 26/02/2022 | 8 | 7 | 2 | 27/02/2022 | 2 | 2 | 3 | Yes | <table border="1"> <thead> <tr> <th>Date</th> <th>Incoming</th> <th>Outgoing</th> <th>Missed</th> </tr> </thead> <tbody> <tr><td>May 1</td><td>5</td><td>1</td><td>0</td></tr> <tr><td>May 2</td><td>4</td><td>3</td><td>0</td></tr> <tr><td>May 3</td><td>6</td><td>1</td><td>0</td></tr> <tr><td>May 4</td><td>3</td><td>8</td><td>0</td></tr> <tr><td>May 5</td><td>7</td><td>0</td><td>0</td></tr> <tr><td>May 6</td><td>8</td><td>0</td><td>0</td></tr> <tr><td>May 7</td><td>2</td><td>2</td><td>3</td></tr> </tbody> </table> | Date | Incoming | Outgoing | Missed | May 1 | 5 | 1 | 0 | May 2 | 4 | 3 | 0 | May 3 | 6 | 1 | 0 | May 4 | 3 | 8 | 0 | May 5 | 7 | 0 | 0 | May 6 | 8 | 0 | 0 | May 7 | 2 | 2 | 3 |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|--------|------------|---|---|---|------------|---|---|---|------------|---|---|---|------------|---|---|---|------------|---|---|---|------------|---|---|---|------------|---|---|---|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|----------|--------|-------|---|---|---|-------|---|---|---|-------|---|---|---|-------|---|---|---|-------|---|---|---|-------|---|---|---|-------|---|---|---|
| Date       | Incoming                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Outgoing | Missed   |          |        |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |          |          |        |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |
| 21/02/2022 | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5        | 1        |          |        |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |          |          |        |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |
| 22/02/2022 | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3        | 1        |          |        |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |          |          |        |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |
| 23/02/2022 | 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1        | 1        |          |        |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |          |          |        |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |
| 24/02/2022 | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 7        | 1        |          |        |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |          |          |        |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |
| 25/02/2022 | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6        | 1        |          |        |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |          |          |        |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |
| 26/02/2022 | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 7        | 2        |          |        |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |          |          |        |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |
| 27/02/2022 | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2        | 3        |          |        |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |          |          |        |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |
| Date       | Incoming                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Outgoing | Missed   |          |        |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |          |          |        |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |
| May 1      | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1        | 0        |          |        |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |          |          |        |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |
| May 2      | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3        | 0        |          |        |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |          |          |        |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |
| May 3      | 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1        | 0        |          |        |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |          |          |        |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |
| May 4      | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 8        | 0        |          |        |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |          |          |        |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |
| May 5      | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0        | 0        |          |        |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |          |          |        |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |
| May 6      | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0        | 0        |          |        |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |          |          |        |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |
| May 7      | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2        | 3        |          |        |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |            |   |   |   |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |          |          |        |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |       |   |   |   |

|                        |                                                               |                         |              |                 |
|------------------------|---------------------------------------------------------------|-------------------------|--------------|-----------------|
| <b>ID: PB004-S1-ST</b> |                                                               |                         |              |                 |
| <b>Purpose</b>         | Present the data of the client's SMSs (incoming and outgoing) |                         |              |                 |
| <b>Prerequisite</b>    | None(Just for Sprint1)                                        |                         |              |                 |
| <b>Test Data</b>       | Valid data from the AWARE smartphone sensing app in the MySQL |                         |              |                 |
| <b>Tests</b>           | <b>Steps</b>                                                  | <b>Expected Results</b> | <b>Pass?</b> | <b>Comments</b> |

|            | <p>The SMSs should be shown</p> <p><b>SMSs (Total)</b></p> <table border="1"> <thead> <tr> <th>Date</th> <th>Incoming</th> <th>Outgoing</th> </tr> </thead> <tbody> <tr><td>21/02/2022</td><td>5</td><td>5</td></tr> <tr><td>22/02/2022</td><td>4</td><td>3</td></tr> <tr><td>23/02/2022</td><td>6</td><td>1</td></tr> <tr><td>24/02/2022</td><td>3</td><td>8</td></tr> <tr><td>25/02/2022</td><td>7</td><td>6</td></tr> <tr><td>26/02/2022</td><td>8</td><td>7</td></tr> <tr><td>27/02/2022</td><td>2</td><td>2</td></tr> </tbody> </table> | Date     | Incoming | Outgoing | 21/02/2022 | 5 | 5 | 22/02/2022 | 4 | 3 | 23/02/2022 | 6 | 1 | 24/02/2022 | 3 | 8 | 25/02/2022 | 7 | 6 | 26/02/2022 | 8 | 7 | 27/02/2022 | 2 | 2 | Yes | <table border="1"> <thead> <tr> <th>Month</th> <th>Value</th> </tr> </thead> <tbody> <tr><td>May 1</td><td>1</td></tr> <tr><td>May 2</td><td>1</td></tr> <tr><td>May 3</td><td>1</td></tr> <tr><td>May 4</td><td>1</td></tr> <tr><td>May 5</td><td>6</td></tr> </tbody> </table> | Month | Value | May 1 | 1 | May 2 | 1 | May 3 | 1 | May 4 | 1 | May 5 | 6 |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|------------|---|---|------------|---|---|------------|---|---|------------|---|---|------------|---|---|------------|---|---|------------|---|---|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|-------|---|-------|---|-------|---|-------|---|-------|---|
| Date       | Incoming                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Outgoing |          |          |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |     |                                                                                                                                                                                                                                                                                  |       |       |       |   |       |   |       |   |       |   |       |   |
| 21/02/2022 | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 5        |          |          |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |     |                                                                                                                                                                                                                                                                                  |       |       |       |   |       |   |       |   |       |   |       |   |
| 22/02/2022 | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3        |          |          |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |     |                                                                                                                                                                                                                                                                                  |       |       |       |   |       |   |       |   |       |   |       |   |
| 23/02/2022 | 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1        |          |          |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |     |                                                                                                                                                                                                                                                                                  |       |       |       |   |       |   |       |   |       |   |       |   |
| 24/02/2022 | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 8        |          |          |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |     |                                                                                                                                                                                                                                                                                  |       |       |       |   |       |   |       |   |       |   |       |   |
| 25/02/2022 | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 6        |          |          |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |     |                                                                                                                                                                                                                                                                                  |       |       |       |   |       |   |       |   |       |   |       |   |
| 26/02/2022 | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 7        |          |          |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |     |                                                                                                                                                                                                                                                                                  |       |       |       |   |       |   |       |   |       |   |       |   |
| 27/02/2022 | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2        |          |          |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |     |                                                                                                                                                                                                                                                                                  |       |       |       |   |       |   |       |   |       |   |       |   |
| Month      | Value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |          |          |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |     |                                                                                                                                                                                                                                                                                  |       |       |       |   |       |   |       |   |       |   |       |   |
| May 1      | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |          |          |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |     |                                                                                                                                                                                                                                                                                  |       |       |       |   |       |   |       |   |       |   |       |   |
| May 2      | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |          |          |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |     |                                                                                                                                                                                                                                                                                  |       |       |       |   |       |   |       |   |       |   |       |   |
| May 3      | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |          |          |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |     |                                                                                                                                                                                                                                                                                  |       |       |       |   |       |   |       |   |       |   |       |   |
| May 4      | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |          |          |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |     |                                                                                                                                                                                                                                                                                  |       |       |       |   |       |   |       |   |       |   |       |   |
| May 5      | 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |          |          |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |            |   |   |     |                                                                                                                                                                                                                                                                                  |       |       |       |   |       |   |       |   |       |   |       |   |

Because we use the Apex C  
the chart style given by our c

## Integration Testing

We connect the frontEnd and backEnd in the first sprint. We deployed our backend in the Elastic Computing Cloud.

We confirmed the connection between the frontEnd the BackEnd can work.

The screenshot shows the Postman interface with a POST request to `http://ec2-52-64-190-37.ap-southeast-2.compute.amazonaws.com:80/appForeground/`. The 'Tests' tab is selected, containing the following JavaScript code:

```

1 pm.test("InterfaceErrorTest",function(){
2     pm.response.to.have.status(200);
3 });
4
5

```

A tooltip for the `pm.test` function is displayed, explaining that test scripts are run after the response is received. Below the tests, there's a sidebar with snippets for environment and global variables.

At the bottom, the 'Test Results (1/1)' tab is selected, showing one test named 'InterfaceErrorTest' with a status of 'PASS'.

## Unit Testing

Because we mainly implement the visualization of several data items, and we use the third-party library Apexchart to implement charts.

So for the first sprint we just test if the web page will crash when the chart appears

The terminal window displays the following output:

**Snapshot Summary**  
 > 1 snapshot written from 1 test suite.

**Test Suites: 3 passed, 3 total**

- PASS src/pages/Homepage/Homepage\_test.test.jsx
- Console

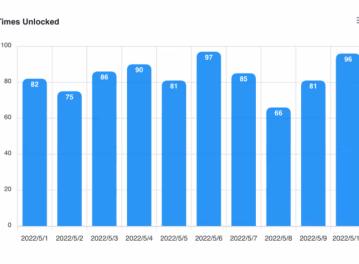
# Sprint2 testing report

## Sprint 2

### System Testing

| ID: PB005-S2-ST |                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                   |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------|------------|---|------------|---|------------|---|------------|---|------------|---|------------|---|------------|---|------------|--------|---------|---|----------|---|------------|---|-----|---|-----|---|------|---|-----|----------------------------------------------------------------------------|
| Purpose         | Present the data about the number of locations visited by patients                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                   |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |
| Prerequisite    | None(Just for Sprint2)                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                   |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |
| Test Data       | Valid data from the AWARE smartphone sensing app in the MySQL                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                   |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |
| Tests           | Steps                                                                                                                                                                                                                                                                                                                                                                                       | Expected Results                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Pass? | Comments          |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |
|                 | <p>1. Ma<br/>rvi<br/>n<br/>clic<br/>ks on<br/>the<br/>Lo<br/>cati<br/>on<br/>but<br/>ton.</p> <p>2. Ta<br/>kes<br/>the<br/>clin<br/>icia<br/>n<br/>to<br/>a<br/>pa<br/>ge<br/>wh<br/>ere<br/>the<br/>y<br/>ca<br/>n<br/>se<br/>e<br/>the<br/>ch<br/>art<br/>ab<br/>out<br/>the<br/>nu<br/>mb<br/>er<br/>of<br/>loc<br/>ati<br/>on<br/>s<br/>visi<br/>ted<br/>by<br/>pat<br/>ien<br/>ts.</p> | <p>The number of locations should be shown.<br/>The place types that the patient has visited should be shown as follow.</p> <p>Number Locations Visited</p> <table border="1"> <thead> <tr> <th>Date</th> <th>Locations Visited</th> </tr> </thead> <tbody> <tr><td>22/02/2022</td><td>4</td></tr> <tr><td>23/02/2022</td><td>7</td></tr> <tr><td>24/02/2022</td><td>6</td></tr> <tr><td>25/02/2022</td><td>9</td></tr> <tr><td>26/02/2022</td><td>4</td></tr> <tr><td>27/02/2022</td><td>4</td></tr> <tr><td>28/02/2022</td><td>5</td></tr> </tbody> </table><br><p>Place Types Visited</p> <table border="1"> <thead> <tr> <th>Place Type</th> <th>Visits</th> </tr> </thead> <tbody> <tr><td>library</td><td>7</td></tr> <tr><td>pharmacy</td><td>5</td></tr> <tr><td>university</td><td>5</td></tr> <tr><td>zoo</td><td>6</td></tr> <tr><td>gym</td><td>4</td></tr> <tr><td>bank</td><td>1</td></tr> </tbody> </table> | Date  | Locations Visited | 22/02/2022 | 4 | 23/02/2022 | 7 | 24/02/2022 | 6 | 25/02/2022 | 9 | 26/02/2022 | 4 | 27/02/2022 | 4 | 28/02/2022 | 5 | Place Type | Visits | library | 7 | pharmacy | 5 | university | 5 | zoo | 6 | gym | 4 | bank | 1 | Yes | <p>AWARE Info</p> <p>street_addresses</p> <p>It is a little different.</p> |
| Date            | Locations Visited                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                   |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |
| 22/02/2022      | 4                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                   |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |
| 23/02/2022      | 7                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                   |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |
| 24/02/2022      | 6                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                   |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |
| 25/02/2022      | 9                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                   |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |
| 26/02/2022      | 4                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                   |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |
| 27/02/2022      | 4                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                   |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |
| 28/02/2022      | 5                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                   |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |
| Place Type      | Visits                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                   |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |
| library         | 7                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                   |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |
| pharmacy        | 5                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                   |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |
| university      | 5                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                   |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |
| zoo             | 6                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                   |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |
| gym             | 4                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                   |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |
| bank            | 1                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                   |            |   |            |   |            |   |            |   |            |   |            |   |            |   |            |        |         |   |          |   |            |   |     |   |     |   |      |   |     |                                                                            |

| ID: PB006-S2-ST |                                                               |
|-----------------|---------------------------------------------------------------|
| Purpose         | Present the client's device usage data                        |
| Prerequisite    | None(Just for Sprint2)                                        |
| Test Data       | Valid data from the AWARE smartphone sensing app in the MySQL |

| Tests     | Steps                                                                                                                                                                                                                                                                                    | Expected Results                                           | Pass?            | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------|------------------|----------|-----|-----|----------|-----|-----|----------|----|----|----------|-----|-----|----------|-----|-----|----------|-----|-----|----------|-----|-----|----------|-----|-----|----------|-----|----|-----------|-----|-----|------|------------|------------|----------|----|----|----------|----|----|----------|----|----|----------|----|----|----------|----|----|----------|----|----|----------|----|----|----------|----|----|----------|----|----|-----------|----|----|
|           | <p>1. Ma<br/>rvi<br/>n clic<br/>ks on<br/>the Scr<br/>ee<br/>n but<br/>ton.</p> <p>2. Ta<br/>kes the<br/>clin<br/>icia<br/>n to<br/>a pa<br/>ge wh<br/>ere the<br/>y ca<br/>n se<br/>e the<br/>ch<br/>art ab<br/>out de<br/>vic<br/>e us<br/>ag<br/>e data<br/>by pat<br/>ien<br/>ts</p> | The device usage of the patient should be shown as follow. | Partially passed | <p><b>AWARE Information</b></p>  <p><b>Screen Unlocked Duration (In minutes)</b></p>  <table border="1"> <caption>Data for Screen Unlocked Duration (In minutes)</caption> <thead> <tr> <th>Date</th> <th>Device 123 (min)</th> <th>Device 666 (min)</th> </tr> </thead> <tbody> <tr><td>2022/5/1</td><td>120</td><td>240</td></tr> <tr><td>2022/5/2</td><td>180</td><td>220</td></tr> <tr><td>2022/5/3</td><td>20</td><td>20</td></tr> <tr><td>2022/5/4</td><td>180</td><td>180</td></tr> <tr><td>2022/5/5</td><td>240</td><td>180</td></tr> <tr><td>2022/5/6</td><td>220</td><td>120</td></tr> <tr><td>2022/5/7</td><td>180</td><td>180</td></tr> <tr><td>2022/5/8</td><td>120</td><td>120</td></tr> <tr><td>2022/5/9</td><td>180</td><td>60</td></tr> <tr><td>2022/5/10</td><td>220</td><td>120</td></tr> </tbody> </table> <p><b>Times Unlocked</b></p>  <table border="1"> <caption>Data for Times Unlocked</caption> <thead> <tr> <th>Date</th> <th>Device 123</th> <th>Device 666</th> </tr> </thead> <tbody> <tr><td>2022/5/1</td><td>82</td><td>75</td></tr> <tr><td>2022/5/2</td><td>78</td><td>78</td></tr> <tr><td>2022/5/3</td><td>88</td><td>78</td></tr> <tr><td>2022/5/4</td><td>90</td><td>81</td></tr> <tr><td>2022/5/5</td><td>97</td><td>81</td></tr> <tr><td>2022/5/6</td><td>88</td><td>81</td></tr> <tr><td>2022/5/7</td><td>80</td><td>68</td></tr> <tr><td>2022/5/8</td><td>78</td><td>78</td></tr> <tr><td>2022/5/9</td><td>81</td><td>78</td></tr> <tr><td>2022/5/10</td><td>95</td><td>78</td></tr> </tbody> </table> <p>It is a little different from the chart style given by our client, but there is no problem with the key information<br/>And our client wants the chart shows the single patient screen data instead of all patient.</p> | Date | Device 123 (min) | Device 666 (min) | 2022/5/1 | 120 | 240 | 2022/5/2 | 180 | 220 | 2022/5/3 | 20 | 20 | 2022/5/4 | 180 | 180 | 2022/5/5 | 240 | 180 | 2022/5/6 | 220 | 120 | 2022/5/7 | 180 | 180 | 2022/5/8 | 120 | 120 | 2022/5/9 | 180 | 60 | 2022/5/10 | 220 | 120 | Date | Device 123 | Device 666 | 2022/5/1 | 82 | 75 | 2022/5/2 | 78 | 78 | 2022/5/3 | 88 | 78 | 2022/5/4 | 90 | 81 | 2022/5/5 | 97 | 81 | 2022/5/6 | 88 | 81 | 2022/5/7 | 80 | 68 | 2022/5/8 | 78 | 78 | 2022/5/9 | 81 | 78 | 2022/5/10 | 95 | 78 |
| Date      | Device 123 (min)                                                                                                                                                                                                                                                                         | Device 666 (min)                                           |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/1  | 120                                                                                                                                                                                                                                                                                      | 240                                                        |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/2  | 180                                                                                                                                                                                                                                                                                      | 220                                                        |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/3  | 20                                                                                                                                                                                                                                                                                       | 20                                                         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/4  | 180                                                                                                                                                                                                                                                                                      | 180                                                        |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/5  | 240                                                                                                                                                                                                                                                                                      | 180                                                        |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/6  | 220                                                                                                                                                                                                                                                                                      | 120                                                        |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/7  | 180                                                                                                                                                                                                                                                                                      | 180                                                        |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/8  | 120                                                                                                                                                                                                                                                                                      | 120                                                        |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/9  | 180                                                                                                                                                                                                                                                                                      | 60                                                         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/10 | 220                                                                                                                                                                                                                                                                                      | 120                                                        |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| Date      | Device 123                                                                                                                                                                                                                                                                               | Device 666                                                 |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/1  | 82                                                                                                                                                                                                                                                                                       | 75                                                         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/2  | 78                                                                                                                                                                                                                                                                                       | 78                                                         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/3  | 88                                                                                                                                                                                                                                                                                       | 78                                                         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/4  | 90                                                                                                                                                                                                                                                                                       | 81                                                         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/5  | 97                                                                                                                                                                                                                                                                                       | 81                                                         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/6  | 88                                                                                                                                                                                                                                                                                       | 81                                                         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/7  | 80                                                                                                                                                                                                                                                                                       | 68                                                         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/8  | 78                                                                                                                                                                                                                                                                                       | 78                                                         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/9  | 81                                                                                                                                                                                                                                                                                       | 78                                                         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |
| 2022/5/10 | 95                                                                                                                                                                                                                                                                                       | 78                                                         |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                  |                  |          |     |     |          |     |     |          |    |    |          |     |     |          |     |     |          |     |     |          |     |     |          |     |     |          |     |    |           |     |     |      |            |            |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |          |    |    |           |    |    |

For presenting the client's device usage data, our client wants to display data for a single patient rather than common data for many people.

So the test is only partially passed and will be corrected in the next sprint.

## Integration Testing

We test our 4 APIs to check whether the output parameters are correct or not by giving different input paraments.

### API Testing

API: <https://digital-phenotyping.herokuapp.com/appForeground/>

| Test1.1                                                                                                                     | Test case                              | Result                                              | Fail analyse                                             | Responses                                      |
|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|----------------------------------------------------------|------------------------------------------------|
| The input parameter is totally correct.<br><pre>{   "uid":1,   "startDate":1641634738549,   "endDate":1641901876549 }</pre> | InterfaceErrorTest                     | Pass                                                | The output parameter is correct.                         |                                                |
|                                                                                                                             | Successful POST request                | Pass                                                |                                                          |                                                |
|                                                                                                                             | The response should be okay to process | Pass                                                |                                                          |                                                |
|                                                                                                                             | Correct output data format             | Pass                                                |                                                          |                                                |
|                                                                                                                             | Response time is less than 500ms       | Fail: AssertionError: expected 2281 to be below 500 | Accidentally chose a US region for the Heroku deployment | We need to change it to Australia next sprint. |

| Test1.2 | Test case | Result | Fail analyse | Responses |
|---------|-----------|--------|--------------|-----------|
|---------|-----------|--------|--------------|-----------|

|                                                                                                                                                                     |                                        |                                                                               |                                                                           |                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------|
| <p>The input parameter is wrong.<br/><b>(change what is inside“”)</b></p> <pre> {   "dhfshfk":1,   "stdfsffe":1641634738549,   "ezdfgaegge":1641901876 549 } </pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | <p>The wrong input parameter would cause a 500 internet server error.</p> | <p>We may need to add error input judgment for the Backend.</p> |
|                                                                                                                                                                     | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                           |                                                                 |
|                                                                                                                                                                     | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                           |                                                                 |
|                                                                                                                                                                     | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                           |                                                                 |
|                                                                                                                                                                     | Response time is less than 500ms       | Fail: AssertionError: expected 3820 to be below 500                           |                                                                           |                                                                 |

| Test1.3                                                                                                                                                      | Test case                              | Result                                              | Fail analyse                                                 | Responses                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|--------------------------------------------------------------|------------------------------------------------|
| <p>The input parameter is wrong.<b>(change to extremely number)</b></p> <pre> {   "uid":1343242343555,   "startDate":1641634738549,   "endDate":164 } </pre> | InterfaceErrorTest                     | Pass                                                | <p>The output is fine with null with the correct format.</p> |                                                |
|                                                                                                                                                              | Successful POST request                | Pass                                                |                                                              |                                                |
|                                                                                                                                                              | The response should be okay to process | Pass                                                |                                                              |                                                |
|                                                                                                                                                              | Correct output data format             | Pass                                                |                                                              |                                                |
|                                                                                                                                                              | Response time is less than 500ms       | Fail: AssertionError: expected 3485 to be below 500 | Accidentally chose a US region for the Heroku deployment     | We need to change it to Australia next sprint. |

API: <https://digital-phenotyping.herokuapp.com/sms/>

| Test2.1                                                                                                                             | Test case                              | Result                                              | Fail analyse                                             | Responses                                      |
|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|----------------------------------------------------------|------------------------------------------------|
| <p>The input parameter is totally correct.</p> <pre> {   "uid":1,   "startDate":164163473 8549,   "endDate":164190187 6549 } </pre> | InterfaceErrorTest                     | Pass                                                | <p>The output parameter is correct.</p>                  |                                                |
|                                                                                                                                     | Successful POST request                | Pass                                                |                                                          |                                                |
|                                                                                                                                     | The response should be okay to process | Pass                                                |                                                          |                                                |
|                                                                                                                                     | Correct output data format             | Pass                                                |                                                          |                                                |
|                                                                                                                                     | Response time is less than 500ms       | Fail: AssertionError: expected 2281 to be below 500 | Accidentally chose a US region for the Heroku deployment | We need to change it to Australia next sprint. |

| Test2.2                                                                                                                                                   | Test case                              | Result                                                                        | Fail analyse                                                              | Responses                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------|
| <p>The input parameter is wrong.<b>(change what is inside“”)</b></p> <pre> {   "dhfshfk":1,   "ftt":1641634738549,   "ezdfgaegge":1641901876 549 } </pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | <p>The wrong input parameter would cause a 500 internet server error.</p> | <p>We may need to add error input judgment for the Backend.</p> |
|                                                                                                                                                           | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                           |                                                                 |
|                                                                                                                                                           | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                           |                                                                 |
|                                                                                                                                                           | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                           |                                                                 |
|                                                                                                                                                           | Response time is less than 500ms       | Fail: AssertionError: expected 3820 to be below 500                           |                                                                           |                                                                 |

| Test2.3                                                                                                                                                      | Test case                              | Result                                              | Fail analyse                                | Responses                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|---------------------------------------------|----------------------------------------------------------|
| <p>The input parameter is wrong.<b>(change to extremely number)</b></p> <pre> {   "uid":1343242343555,   "startDate":1641634738549,   "endDate":164 } </pre> | InterfaceErrorTest                     | Pass                                                | <p>No connection issue.</p>                 |                                                          |
|                                                                                                                                                              | Successful POST request                | Pass                                                |                                             |                                                          |
|                                                                                                                                                              | The response should be okay to process | Pass                                                |                                             |                                                          |
|                                                                                                                                                              | Correct output data format             | Fail: Assertion Error: expected 0 to deeply equal 3 | The output parameter is in the wrong format | We may need to add error input judgment for the Backend. |

|  |                                  |                                                     |                                                          |                                                |
|--|----------------------------------|-----------------------------------------------------|----------------------------------------------------------|------------------------------------------------|
|  | Response time is less than 500ms | Fail: AssertionError: expected 1923 to be below 500 | Accidentally chose a US region for the Heroku deployment | We need to change it to Australia next sprint. |
|--|----------------------------------|-----------------------------------------------------|----------------------------------------------------------|------------------------------------------------|

API: <https://digital-phenotyping.herokuapp.com/dataServer/calls>

| Test3.1                                                                                                                    | Test case                              | Result                                              | Fail analyse                                               | Responses                                      |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|------------------------------------------------------------|------------------------------------------------|
| The input parameter is totally correct.<br>{<br>"uid":1,<br>"startDate":1641634738549,<br>"endDate":164190187<br>}<br>6549 | InterfaceErrorTest                     | Pass                                                | The output parameter is correct.                           | We need to change it to Australia next sprint. |
|                                                                                                                            | Successful POST request                | Pass                                                |                                                            |                                                |
|                                                                                                                            | The response should be okay to process | Pass                                                |                                                            |                                                |
|                                                                                                                            | Correct output data format             | Pass                                                |                                                            |                                                |
|                                                                                                                            | Response time is less than 500ms       | Fail: AssertionError: expected 3089 to be below 500 | Accidentally chose a US region for the Heroku deployment   |                                                |
|                                                                                                                            | Contain Keywords                       | Pass                                                | The output parameter is correct with "success" and "data". |                                                |

| Test3.2                                                                                                                                              | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. ( <b>change what is inside ""</b> )<br>{<br>"dhfshfk":1,<br>"fte":1641634738549,<br>"ezdfgaegge":164190187<br>}<br>549 | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                      | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                      | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                      | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                                      | Response time is less than 500ms       | Fail: AssertionError: expected 3525 to be below 500                           |                                                                    |                                                          |
|                                                                                                                                                      | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

| Test3.3                                                                                                                                              | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. ( <b>change to extremely number</b> )<br>{<br>"uid":1343242343555,<br>"startDate":1641634738549,<br>"endDate":164<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                      | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                      | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                      | Correct output data format             | Fail: Assertion Error: expected 0 to deeply equal 4                           |                                                                    |                                                          |
|                                                                                                                                                      | Response time is less than 500ms       | Fail: AssertionError: expected 2985 to be below 500                           |                                                                    |                                                          |
|                                                                                                                                                      | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

API: <https://digital-phenotyping.herokuapp.com/NumbersOfLocation/>

| Test4.1                                                                                      | Test case                              | Result                                              | Fail analyse                                             | Responses                                      |
|----------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|----------------------------------------------------------|------------------------------------------------|
| The input parameter is totally correct.<br>{<br>"uid":1,<br>"endDate":164190187<br>}<br>6549 | InterfaceErrorTest                     | Pass                                                | The output parameter is correct.                         | We need to change it to Australia next sprint. |
|                                                                                              | Successful POST request                | Pass                                                |                                                          |                                                |
|                                                                                              | The response should be okay to process | Pass                                                |                                                          |                                                |
|                                                                                              | Correct output data format             | Pass                                                |                                                          |                                                |
|                                                                                              | Response time is less than 500ms       | Fail: AssertionError: expected 1981 to be below 500 | Accidentally chose a US region for the Heroku deployment |                                                |

| Test4.2                                                                                                                                             | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.<br><b>(change what is inside“”)</b><br><br>{<br>"dhfshfk":1,<br>"ezdfdfdfgaegge":1641901<br>876549<br>}<br><br>876549 | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                     | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                     | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                     | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                                     | Response time is less than 500ms       | Fail: AssertionError: expected 1920 to be below 500                           |                                                                    |                                                          |

| Test4.3                                                                                                                        | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.( <b>c<br/>hange to extremely number</b> )<br><br>{<br>"uid":1343242343555,<br>"endDate":164<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. |                                                          |
|                                                                                                                                | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    | We may need to add error input judgment for the Backend. |
|                                                                                                                                | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                                                                    |                                                          |

## Unit Testing

We tested different components. The second sprint task is similar to the first sprint task, but with a different type of data visualized.

We added some snapshot tests to ensure that when we use the third-party library Apexchart, the web page doesn't crash and the visualization can be displayed properly.

```
at act (node_modules/react/cjs/react.development.js:14:24)
at render (node_modules/@testing-library/react/dist/react-test-renderer.js:14:14)
at Object.<anonymous> (src/pages/InfoDetailsPage/InfoDetailsPage.test.js:11:14)

Test Suites: 3 passed, 3 total
Tests:       7 passed, 7 total
Snapshots:  3 passed, 3 total
Time:        4.431 s
Ran all test suites related to changed files.

Watch Usage: Press w to show more ▾
```

For the backend, we manually tested that some data was formatted correctly.

# Sprint3 testing report

## Sprint3

### System Testing

#### Clinician: Marvin

Marvin is a clinician and he wants to use this website to view data about his patient's cell phone usage.

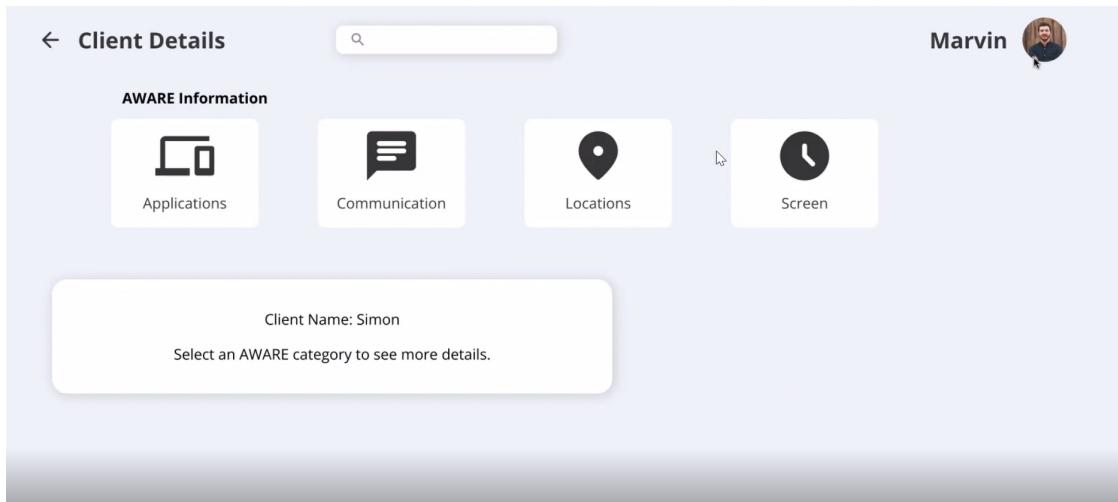
Marvin landed on the homepage of the digital phenotyping platform.

Then he should see the homepage.



We assume that Marvin clicks the log in button on the home page to log in successfully, and wants to query a patient's information by clicking the Info details button.

We change the layout of the website in this sprint and we can find the client name information.



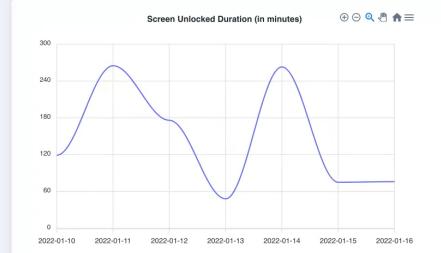
Here Is the system testing of sprint3.

| ID: PB005-S3-ST |                                                                    |
|-----------------|--------------------------------------------------------------------|
| Purpose         | Present the data about the number of locations visited by patients |
| Prerequisite    | Login the website                                                  |
| Test Data       | Valid data from the AWARE smartphone sensing app in the MySQL      |

| Tests | Steps                                                                                                                                                                   | Expected Results                                                                                                                   | Pass? | Comments                                                                                                                                                                                                         |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | <p>1. Marvin clicks on the Location button.</p> <p>2. Takes the clinician to a page where they can see the chart about the number of locations visited by patients.</p> | <p>The number of locations should be shown.</p> <p>The place types that the patient has visited should be shown as follow.</p><br> | Yes   | <p>← Client De</p> <p>AWARE</p> <p>Appl</p> <p>2022-01-16</p> <p>2022-01-15</p> <p>2022-01-14</p> <p>2022-01-13</p> <p>2022-01-12</p> <p>2022-01-11</p> <p>2022-01-10</p> <p>pr</p> <p>It is a little differ</p> |

ID: PB006-S3-ST

| Purpose      | Present the client's device usage data                        |                  |       |          |
|--------------|---------------------------------------------------------------|------------------|-------|----------|
| Prerequisite | Login the website                                             |                  |       |          |
| Test Data    | Valid data from the AWARE smartphone sensing app in the MySQL |                  |       |          |
| Tests        | Steps                                                         | Expected Results | Pass? | Comments |

|  |                                                                                                                                                        |     |                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>1. Marvin clicks on the Screen button.</p> <p>2. Takes the clinician to a page where they can see the chart about device usage data by patients</p> | Yes | <p><b>Client Details</b></p> <p>AWARE Information</p>  <p>Screen Unlocked Duration (in minutes)</p>  <p>Times Unlocked</p>  <p>Our client likes this style.</p> |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Integration Testing

### API Testing

For the other 4 APIs that we tested in sprint2, the response time issue has been fixed. The changing part is red.

And we add a new API for the location part.

API: <https://digital-phenotyping.herokuapp.com/appForeground/>

| Test1.1                                                                                    | Test case                              | Result | Fail analyse                     | Responses |
|--------------------------------------------------------------------------------------------|----------------------------------------|--------|----------------------------------|-----------|
| The input parameter is totally correct.<br><br>{<br>"uid":1,<br>"startDate":1641634738549, | InterfaceErrorTest                     | Pass   | The output parameter is correct. |           |
|                                                                                            | Successful POST request                | Pass   |                                  |           |
|                                                                                            | The response should be okay to process | Pass   |                                  |           |
|                                                                                            | Correct output data format             | Pass   |                                  |           |

|                                  |                                  |                                                                 |                                                                                    |                                                                                                              |
|----------------------------------|----------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| "endDate":16419018<br>76549<br>} | Response time is less than 500ms | Fail: AssertionError: expected 2281 to be below 500<br><br>Pass | Accidentally chose a US region for the Heroku deployment<br><br>Fix it in sprint 3 | We need to change it to Australia next sprint.<br><br>We deploy the server again and change it to Australia. |
|----------------------------------|----------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|

| Test1.2                                                                                                                                                         | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.<br><b>(change what is inside "")</b><br><br>{<br>"dhfshfk":1,<br>"stfdsfte":1641634738549,<br>"ezdfgaegge":1641901876<br>549<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                                 | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                                 | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                                 | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                                                 | Response time is less than 500ms       | Fail: AssertionError: expected 3820 to be below 500                           |                                                                    |                                                          |

| Test1.3                                                                                                                                                   | Test case                              | Result                                                          | Fail analyse                                                                       | Responses                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| The input parameter is wrong.<br><b>(change to extremely number)</b><br><br>{<br>"uid":1343242343555,<br>"startDate":1641634738549,<br>"endDate":164<br>} | InterfaceErrorTest                     | Pass                                                            | The output is fine with null with the correct format.                              | We need to change it to Australia next sprint.<br><br>We deploy the server again and change it to Australia. |
|                                                                                                                                                           | Successful POST request                | Pass                                                            |                                                                                    |                                                                                                              |
|                                                                                                                                                           | The response should be okay to process | Pass                                                            |                                                                                    |                                                                                                              |
|                                                                                                                                                           | Correct output data format             | Pass                                                            |                                                                                    |                                                                                                              |
|                                                                                                                                                           | Response time is less than 500ms       | Fail: AssertionError: expected 3485 to be below 500<br><br>Pass | Accidentally chose a US region for the Heroku deployment<br><br>Fix it in sprint 3 |                                                                                                              |

API: <https://digital-phenotyping.herokuapp.com/sms/>

| Test2.1                                                                                                                        | Test case                              | Result                                                          | Fail analyse                                                                       | Responses                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| The input parameter is totally correct.<br><br>{<br>"uid":1,<br>"startDate":1641634738549,<br>"endDate":1641901876<br>549<br>} | InterfaceErrorTest                     | Pass                                                            | The output parameter is correct.                                                   | We need to change it to Australia next sprint.<br><br>We deploy the server again and change it to Australia. |
|                                                                                                                                | Successful POST request                | Pass                                                            |                                                                                    |                                                                                                              |
|                                                                                                                                | The response should be okay to process | Pass                                                            |                                                                                    |                                                                                                              |
|                                                                                                                                | Correct output data format             | Pass                                                            |                                                                                    |                                                                                                              |
|                                                                                                                                | Response time is less than 500ms       | Fail: AssertionError: expected 2281 to be below 500<br><br>Pass | Accidentally chose a US region for the Heroku deployment<br><br>Fix it in sprint 3 |                                                                                                              |

| Test2.2                                                                                                                                                     | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.<br><b>(change what is inside "")</b><br><br>{<br>"dhfshfk":1,<br>"ffte":1641634738549,<br>"ezdfgaegge":1641901876<br>549<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                             | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                             | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                             | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                                             | Response time is less than 500ms       | Fail: AssertionError: expected 3820 to be below 500                           |                                                                    |                                                          |

| Test2.3 | Test case | Result | Fail analyse | Responses |
|---------|-----------|--------|--------------|-----------|
|---------|-----------|--------|--------------|-----------|

|                                                                                                                                                             |                                        |                                                     |                                                          |                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|
| <p>The input parameter is wrong. (<b>change to extremely number</b>)</p> <pre>{   "uid":1343242343555,   "startDate":1641634738549,   "endDate":164 }</pre> | InterfaceErrorTest                     | Pass                                                | No connection issue.                                     |                                                          |
|                                                                                                                                                             | Successful POST request                | Pass                                                |                                                          |                                                          |
|                                                                                                                                                             | The response should be okay to process | Pass                                                |                                                          |                                                          |
|                                                                                                                                                             | Correct output data format             | Fail: AssertionError: expected 0 to deeply equal 3  | The output parameter is in the wrong format              | We may need to add error input judgment for the Backend. |
|                                                                                                                                                             | Response time is less than 500ms       | Fail: AssertionError: expected 4023 to be below 500 | Accidentally chose a US region for the Heroku deployment | We need to change it to Australia next sprint.           |
|                                                                                                                                                             |                                        | Pass                                                | Fix it in sprint 3                                       | We deploy the server again and change it to Australia.   |

API: <https://digital-phenotyping.herokuapp.com/dataServer/calls>

| Test3.1                                                                                                                      | Test case                              | Result                                              | Fail analyse                                               | Responses                                      |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|------------------------------------------------------------|------------------------------------------------|
| <p>The input parameter is totally correct.</p> <pre>{   "uid":1,   "startDate":1641634738549,   "endDate":1641901876 }</pre> | InterfaceErrorTest                     | Pass                                                | The output parameter is correct.                           |                                                |
|                                                                                                                              | Successful POST request                | Pass                                                |                                                            |                                                |
|                                                                                                                              | The response should be okay to process | Pass                                                |                                                            |                                                |
|                                                                                                                              | Correct output data format             | Pass                                                | Accidentally chose a US region for the Heroku deployment   | We need to change it to Australia next sprint. |
|                                                                                                                              | Response time is less than 500ms       | Fail: AssertionError: expected 3089 to be below 500 |                                                            |                                                |
|                                                                                                                              | Contain Keywords                       | Pass                                                | The output parameter is correct with "success" and "data". |                                                |

| Test3.2                                                                                                                                               | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| <p>The input parameter is wrong. (<b>change what is inside ""</b>)</p> <pre>{   "dhfshfk":1,   "fte":1641634738549,   "ezdfgaegge":1641901876 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                       | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                       | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                       | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                       | Response time is less than 500ms       | Fail: AssertionError: expected 3525 to be below 500                           |                                                                    |                                                          |
|                                                                                                                                                       | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

| Test3.3                                                                                                                                                     | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| <p>The input parameter is wrong. (<b>change to extremely number</b>)</p> <pre>{   "uid":1343242343555,   "startDate":1641634738549,   "endDate":164 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                             | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                             | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                             | Correct output data format             | Fail: AssertionError: expected 0 to deeply equal 4                            | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                             | Response time is less than 500ms       | Fail: AssertionError: expected 2985 to be below 500                           |                                                                    |                                                          |
|                                                                                                                                                             | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

API: <https://digital-phenotyping.herokuapp.com/NumbersOfLocation/>

| Test4.1                                 | Test case          | Result | Fail analyse                     | Responses |
|-----------------------------------------|--------------------|--------|----------------------------------|-----------|
| The input parameter is totally correct. | InterfaceErrorTest | Pass   | The output parameter is correct. |           |

|                                                      |                                        |                                                             |                                                                                |                                                                                                          |
|------------------------------------------------------|----------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <pre>{   "uid":1,   "endDate":16419018 } 76549</pre> | Successful POST request                | Pass                                                        |                                                                                |                                                                                                          |
|                                                      | The response should be okay to process | Pass                                                        |                                                                                |                                                                                                          |
|                                                      | Correct output data format             | Pass                                                        |                                                                                |                                                                                                          |
|                                                      | Response time is less than 500ms       | Fail: AssertionError: expected 1084 to be below 500<br>Pass | Accidentally chose a US region for the Heroku deployment<br>Fix it in sprint 3 | We need to change it to Australia next sprint.<br>We deploy the server again and change it to Australia. |
|                                                      |                                        |                                                             |                                                                                |                                                                                                          |

| Test4.2                                                                                                                   | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change what is inside "") <pre>{   "dhfshfk":1,   "ezdfdfdfgaegge":16419018 } 876549</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                           | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                           | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                           | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                           | Response time is less than 500ms       | Fail: AssertionError: expected 1920 to be below 500                           |                                                                    |                                                          |

| Test4.3                                                                                                          | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change to extremely number) <pre>{   "uid":1343242343555,   "endDate":164 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                  | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                  | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                  | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                  | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                                                                    |                                                          |

API: <https://digital-phenotyping.herokuapp.com/screenServer/ScreenUnlocked>

| Test5.1                                                                                     | Test case                              | Result | Fail analyse                     | Responses |
|---------------------------------------------------------------------------------------------|----------------------------------------|--------|----------------------------------|-----------|
| The input parameter is totally correct. <pre>{   "uid":1,   "endDate":1641901876549 }</pre> | InterfaceErrorTest                     | Pass   | The output parameter is correct. |           |
|                                                                                             | Successful POST request                | Pass   |                                  |           |
|                                                                                             | The response should be okay to process | Pass   |                                  |           |
|                                                                                             | Correct output data format             | Pass   |                                  |           |
|                                                                                             | Response time is less than 500ms       | Pass   |                                  |           |

| Test5.2                                                                                                    | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change what is inside "") <pre>{   "uid":1,   "dfsdf":1646409600000 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                            | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                            | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                            | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                            | Response time is less than 500ms       | Fail: AssertionError: expected 1920 to be below 500                           |                                                                    |                                                          |

| Test5.3 | Test case | Result | Fail analyse | Responses |
|---------|-----------|--------|--------------|-----------|
|         |           |        |              |           |

|                                                                                                                                        |                                               |                                                                               |                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The input parameter is wrong.(<b>c<br/>hange to extremely number</b>)</p> <pre>{   "uid":3782498,   "endDate":1646409600000 }</pre> | <b>InterfaceErrorTest</b>                     | Fail: AssertionError: expected response to having status code 200 but got 500 | <p>The wrong input parameter would cause a 500 internet server error.</p> <p>We may need to add error input judgment for the Backend.</p> |
|                                                                                                                                        | <b>Successful POST request</b>                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                                                                                           |
|                                                                                                                                        | <b>The response should be okay to process</b> | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                                                                                           |
|                                                                                                                                        | <b>Correct output data format</b>             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                                                                                           |
|                                                                                                                                        | <b>Response time is less than 500ms</b>       | Fail: AssertionError: expected 2913 to be below 500                           |                                                                                                                                           |

## Unit Testing

For the frontEnd, after we changed the language from JavaScript to TypeScript. Some of the previous test cases don't make sense.

We check all the buttons because we change the layout in this sprint.

```
PASS  src/testing/InfoDetailsPage.test.tsx
● Console

  console.error
    Warning: ReactDOM.render is no longer supported in React 18. Use createRoot instead. Until you switch to the new API, your app will behave as if it's running React 17. Learn more: https://reactjs.org/link/switch-to-createRoot
      6 |
      7 | test('main feature button functional', async () => {
      8 |   render(
      9 |     <MemoryRouter>
     10 |       <InfoDetailsPage />
     11 |     </MemoryRouter>
     at printWarning (node_modules/react-dom/cjs/react-dom.development.js:86:30)
     at error (node_modules/react-dom/cjs/react-dom.development.js:60:7)
     at Object.render (node_modules/react-dom/cjs/react-dom.development.js:29572:5)
     at node_modules/@testing-library/react/dist/pure.js:101:25
     at act (node_modules/react/cjs/react.development.js:2510:16)
     at render (node_modules/@testing-library/react/dist/pure.js:97:26)
     at Object.<anonymous> (src/testing/InfoDetailsPage.test.tsx:8:5)

Test Suites: 3 passed, 3 total
Tests:       4 passed, 4 total
Snapshots:  1 passed, 1 total
Time:        4.916 s
Ran all test suites.
```

The backend mainly does the coverage test of the location part.

```
parallel auto -v 2 --keepdb
Found 22 test(s).
Using existing test database for alias 'default' ('test_swen90013')...
Operations to perform:
  Synchronize unmigrated apps: corsheaders, messages, rest_framework, staticfiles
  Apply all migrations: admin, appForeground, auth, contenttypes, dataServer, locationServer, screenServer, sessions, sms
Synchronizing apps without migrations:
  Creating tables...
    Running deferred SQL...
Running migrations:
  No migrations to apply.
System check identified no issues (0 silenced).
test_aware_device_id_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_client_title_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_clinician_id_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_date_of_birth_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_email_address_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_facebook_id_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_first_name_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_last_name_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_password_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_twitter_id_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_post (locationServer.tests.test_views.NumerosLocationTests) ... ok
test_get (locationServer.tests.test_views.PreProcessLocationTests) ... ok
test_getCheckTime (locationServer.tests.test_views.PreProcessLocationTests) ... ok
test_getDateFromTimestamp (locationServer.tests.test_views.PreProcessLocationTests) ... ok
test_getDatePremeters (locationServer.tests.test_views.PreProcessLocationTests) ... ok
test_getFutureDate (locationServer.tests.test_views.PreProcessLocationTests)
getFutureDate() returns value days after input date in datetime. ... ok
test_getNextDate (locationServer.tests.test_views.PreProcessLocationTests) ... ok
test_getStartAndEndTimestamp (locationServer.tests.test_views.PreProcessLocationTests) ... ok
test_getTimestampFromDate (locationServer.tests.test_views.PreProcessLocationTests) ... ok
test_getUserLatlng (locationServer.tests.test_views.PreProcessLocationTests) ... ok
test_getZeroDate (locationServer.tests.test_views.PreProcessLocationTests) ... ok
test_initialProcessLocation (locationServer.tests.test_views.PreProcessLocationTests) ... ok

-----
Ran 22 tests in 9.456s
OK
```

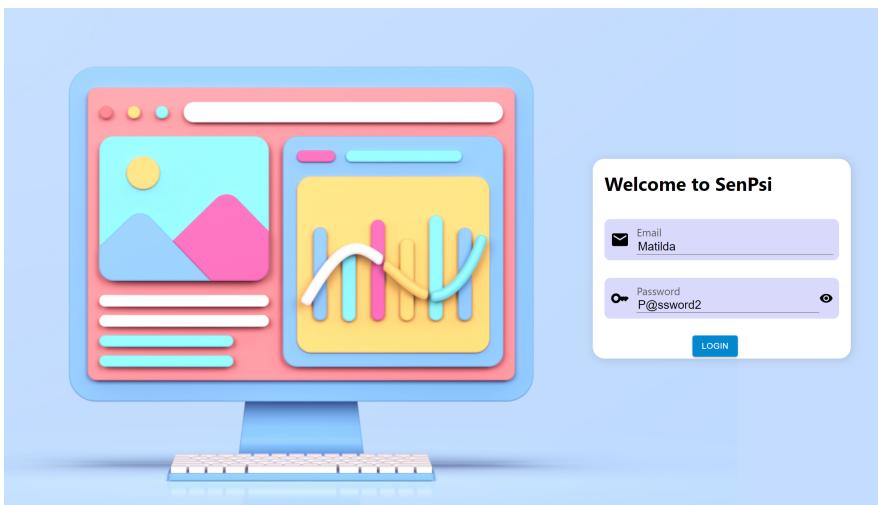
| Test content                                    | Attributes              | Pass or not | To do |
|-------------------------------------------------|-------------------------|-------------|-------|
| check the format(mainly the max length of data) | aware_device_id         | Pass        |       |
|                                                 | client_title            | Pass        |       |
|                                                 | clinician_id            | Pass        |       |
|                                                 | date_of_birth           | Pass        |       |
|                                                 | email_address           | Pass        |       |
|                                                 | facebook_id             | Pass        |       |
|                                                 | first_name              | Pass        |       |
|                                                 | last_name               | Pass        |       |
|                                                 | password                | Pass        |       |
| Get the correct data                            | get                     | Pass        |       |
|                                                 | getCheckTime            | Pass        |       |
|                                                 | getDateFromTimestamp    | Pass        |       |
|                                                 | getDatePremeters        | Pass        |       |
|                                                 | getFutureDate           | Pass        |       |
|                                                 | getNextDate             | Pass        |       |
|                                                 | getStartAndEndTimeStamp | Pass        |       |
|                                                 | getUserLatlng           | Pass        |       |
|                                                 | GetzeroDate             | Pass        |       |
| check the location data in the beginning        | initialProcessLocation  | Pass        |       |

# Sprint4 testing report

Clinician: Matilda

Matilda is a clinician and he wants to use this website to view data about his patient's cell phone usage.

Matilda landed on the homepage of the digital phenotyping platform.



After successful login, Matilda goes to the homepage to view the list of clients. We changed a lot about the homepage.

| Name             | Title | Age | Status | Last update | Action                |
|------------------|-------|-----|--------|-------------|-----------------------|
| Tom Garcia       | Ms.   | 36  | Normal | 2022-08-19  | <button>VIEW</button> |
| Jerry Tom        | Mr.   | 55  | Normal | 2022-08-19  | <button>VIEW</button> |
| Chain Smoker     | Mr.   | 45  | Normal | 2022-08-19  | <button>VIEW</button> |
| Anakin Skywalker | Mr.   | 55  | Normal | 2022-08-19  | <button>VIEW</button> |
| Simon Dalfonso   | Dr    | 39  | Normal | 2022-08-21  | <button>VIEW</button> |
| Marvin Bai       | Mr    | 24  | Normal | 2022-08-21  | <button>VIEW</button> |

Especially the layout, and improve many functions, such as logout, search and print client lists.

## System Testing

| ID: PB023-S4-ST |                                                               |                  |       |          |
|-----------------|---------------------------------------------------------------|------------------|-------|----------|
| Purpose         | The clinician can view the list of clients                    |                  |       |          |
| Prerequisite    | Successfully logged in to the website                         |                  |       |          |
| Test Data       | Valid data from the AWARE smartphone sensing app in the MySQL |                  |       |          |
| Tests           | Steps                                                         | Expected Results | Pass? | Comments |
|                 |                                                               |                  |       |          |

|                  | <p>1 The civilian enters the correct username and password and clicks Login. After successful login, go to the homepage to view the list of clients.</p> <p>2. The civilian can click the "view" button to check the patient's information details.</p> | The clinician can check all clients after successfully logging in to the website. He can | Yes    | <table border="1"> <thead> <tr> <th>Name</th> <th>Title</th> <th>Age</th> <th>Status</th> <th>Last update</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>Tom Garcia</td> <td>Ms.</td> <td>36</td> <td>Normal</td> <td>2022-08-19</td> <td><button>VIEW</button></td> </tr> <tr> <td>Jerry Tom</td> <td>Mr.</td> <td>55</td> <td>Normal</td> <td>2022-08-19</td> <td><button>VIEW</button></td> </tr> <tr> <td>Chain Smoker</td> <td>Mr.</td> <td>45</td> <td>Normal</td> <td>2022-08-19</td> <td><button>VIEW</button></td> </tr> <tr> <td>Anakin Skywalker</td> <td>Mr.</td> <td>55</td> <td>Normal</td> <td>2022-08-19</td> <td><button>VIEW</button></td> </tr> <tr> <td>Simon Dalfonso</td> <td>Dr</td> <td>39</td> <td>Normal</td> <td>2022-08-21</td> <td><button>VIEW</button></td> </tr> <tr> <td>Marvin Bai</td> <td>Mr</td> <td>24</td> <td>Normal</td> <td>2022-08-21</td> <td><button>VIEW</button></td> </tr> </tbody> </table> | Name                  | Title | Age | Status | Last update | Action | Tom Garcia | Ms. | 36 | Normal | 2022-08-19 | <button>VIEW</button> | Jerry Tom | Mr. | 55 | Normal | 2022-08-19 | <button>VIEW</button> | Chain Smoker | Mr. | 45 | Normal | 2022-08-19 | <button>VIEW</button> | Anakin Skywalker | Mr. | 55 | Normal | 2022-08-19 | <button>VIEW</button> | Simon Dalfonso | Dr | 39 | Normal | 2022-08-21 | <button>VIEW</button> | Marvin Bai | Mr | 24 | Normal | 2022-08-21 | <button>VIEW</button> |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------|-----|--------|-------------|--------|------------|-----|----|--------|------------|-----------------------|-----------|-----|----|--------|------------|-----------------------|--------------|-----|----|--------|------------|-----------------------|------------------|-----|----|--------|------------|-----------------------|----------------|----|----|--------|------------|-----------------------|------------|----|----|--------|------------|-----------------------|
| Name             | Title                                                                                                                                                                                                                                                   | Age                                                                                      | Status | Last update                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Action                |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Tom Garcia       | Ms.                                                                                                                                                                                                                                                     | 36                                                                                       | Normal | 2022-08-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Jerry Tom        | Mr.                                                                                                                                                                                                                                                     | 55                                                                                       | Normal | 2022-08-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Chain Smoker     | Mr.                                                                                                                                                                                                                                                     | 45                                                                                       | Normal | 2022-08-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Anakin Skywalker | Mr.                                                                                                                                                                                                                                                     | 55                                                                                       | Normal | 2022-08-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Simon Dalfonso   | Dr                                                                                                                                                                                                                                                      | 39                                                                                       | Normal | 2022-08-21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Marvin Bai       | Mr                                                                                                                                                                                                                                                      | 24                                                                                       | Normal | 2022-08-21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |

| ID: PB023-S4-ST  |                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                     |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------|-----|--------|-------------|--------|------------|-----|----|--------|------------|-----------------------|-----------|-----|----|--------|------------|-----------------------|--------------|-----|----|--------|------------|-----------------------|------------------|-----|----|--------|------------|-----------------------|----------------|----|----|--------|------------|-----------------------|------------|----|----|--------|------------|-----------------------|
| Purpose          | The clinician can add a new client                                                                                                                                                                                                                                                                                                                            |                                                                                                                                     |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Prerequisite     | Successfully logged in to the website                                                                                                                                                                                                                                                                                                                         |                                                                                                                                     |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Test Data        | Valid data from the AWARE smartphone sensing app in the MySQL                                                                                                                                                                                                                                                                                                 |                                                                                                                                     |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Tests            | Steps                                                                                                                                                                                                                                                                                                                                                         | Expected Results                                                                                                                    | Pass?  | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                       |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
|                  | <p>1 The civilian enters the correct username and password and clicks Login. After successful login, go to the homepage to view the list of clients.</p> <p>2. The civilian can click the "ADD CLIENT" button to add a new client.</p> <p>3. The civilian need to input the information of the new client.</p> <p>4. The civilian click the "ADD" button.</p> | The clinician can see the new client shown in the list on the homepage and can check the detailed information about the new client. | Yes    | <p>← Add a Client</p> <p>Client Title *</p> <p>First Name *</p> <p>Last Name *</p> <p>Date of Birth *</p> <p>Text Notes</p> <p>Twitter ID</p> <p>Facebook ID</p> <p>AWARE device ID *</p> <p><b>ADD</b></p><br><table border="1"> <thead> <tr> <th>Name</th> <th>Title</th> <th>Age</th> <th>Status</th> <th>Last update</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>Tom Garcia</td> <td>Ms.</td> <td>36</td> <td>Normal</td> <td>2022-08-19</td> <td><button>VIEW</button></td> </tr> <tr> <td>Jerry Tom</td> <td>Mr.</td> <td>55</td> <td>Normal</td> <td>2022-08-19</td> <td><button>VIEW</button></td> </tr> <tr> <td>Chain Smoker</td> <td>Mr.</td> <td>45</td> <td>Normal</td> <td>2022-08-19</td> <td><button>VIEW</button></td> </tr> <tr> <td>Anakin Skywalker</td> <td>Mr.</td> <td>55</td> <td>Normal</td> <td>2022-08-19</td> <td><button>VIEW</button></td> </tr> <tr> <td>Simon Dalfonso</td> <td>Dr</td> <td>39</td> <td>Normal</td> <td>2022-08-21</td> <td><button>VIEW</button></td> </tr> <tr> <td>Marvin Bai</td> <td>Mr</td> <td>24</td> <td>Normal</td> <td>2022-08-21</td> <td><button>VIEW</button></td> </tr> </tbody> </table> | Name                  | Title | Age | Status | Last update | Action | Tom Garcia | Ms. | 36 | Normal | 2022-08-19 | <button>VIEW</button> | Jerry Tom | Mr. | 55 | Normal | 2022-08-19 | <button>VIEW</button> | Chain Smoker | Mr. | 45 | Normal | 2022-08-19 | <button>VIEW</button> | Anakin Skywalker | Mr. | 55 | Normal | 2022-08-19 | <button>VIEW</button> | Simon Dalfonso | Dr | 39 | Normal | 2022-08-21 | <button>VIEW</button> | Marvin Bai | Mr | 24 | Normal | 2022-08-21 | <button>VIEW</button> |
| Name             | Title                                                                                                                                                                                                                                                                                                                                                         | Age                                                                                                                                 | Status | Last update                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Action                |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Tom Garcia       | Ms.                                                                                                                                                                                                                                                                                                                                                           | 36                                                                                                                                  | Normal | 2022-08-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Jerry Tom        | Mr.                                                                                                                                                                                                                                                                                                                                                           | 55                                                                                                                                  | Normal | 2022-08-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Chain Smoker     | Mr.                                                                                                                                                                                                                                                                                                                                                           | 45                                                                                                                                  | Normal | 2022-08-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Anakin Skywalker | Mr.                                                                                                                                                                                                                                                                                                                                                           | 55                                                                                                                                  | Normal | 2022-08-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Simon Dalfonso   | Dr                                                                                                                                                                                                                                                                                                                                                            | 39                                                                                                                                  | Normal | 2022-08-21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Marvin Bai       | Mr                                                                                                                                                                                                                                                                                                                                                            | 24                                                                                                                                  | Normal | 2022-08-21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |

## Integration Testing

We use simple JWT to generate a token for authentication.

After each successful login, a token will be returned for security verification. So every time we want to test the APIs, in addition to the "login" API, we need to add a Token within 24 hours.

**API:** <https://digital-phenotyping.herokuapp.com/login/>

| Test                                                                                                     | Test case                              | Result | Fail analyse                     | Responses                                              |
|----------------------------------------------------------------------------------------------------------|----------------------------------------|--------|----------------------------------|--------------------------------------------------------|
| The input parameter is totally correct.<br><br>{<br>"username":"Matilda",<br>"password":"P@ssword2"<br>} | InterfaceErrorTest                     | Pass   | The output parameter is correct. |                                                        |
|                                                                                                          | Successful POST request                | Pass   |                                  |                                                        |
|                                                                                                          | The response should be okay to process | Pass   |                                  |                                                        |
|                                                                                                          | Correct output data format             | Pass   |                                  |                                                        |
|                                                                                                          | Response time is less than 500ms       | Pass   | Fix it in sprint 3               | We deploy the server again and change it to Australia. |
|                                                                                                          | The correct format of the token        | Pass   | The token is the correct format  |                                                        |

| Test                                                                                    | Test case                              | Result                                                                                | Fail analyse                                                    | Responses                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The input password is wrong.<br><br>{<br>"username":"Matilda",<br>"password":"zzz"<br>} | InterfaceErrorTest                     | AssertionError: expected response to have status code 200 but got 401                 | The wrong input parameter would cause a 401 Unauthorized error. | <div style="text-align: center; background-color: red; color: white; padding: 10px; border-radius: 10px;"><span style="font-size: 2em; margin-right: 10px;">!</span> Wrong password or email</div><br>Every time the input ID or password is incorrect, there is a popup about it |
|                                                                                         | Successful POST request                | AssertionError: expected 401 to be one of [ 200, 202 ]                                |                                                                 |                                                                                                                                                                                                                                                                                   |
|                                                                                         | The response should be okay to process | AssertionError: expected response code to not be 4XX or 5XX                           |                                                                 |                                                                                                                                                                                                                                                                                   |
|                                                                                         | Correct output data format             | AssertionError: expected response to have status reason 'OK' but got 'UNAUTHORIZED'   |                                                                 |                                                                                                                                                                                                                                                                                   |
|                                                                                         | Response time is less than 500 ms      | AssertionError: expected 533 to be below 500                                          |                                                                 |                                                                                                                                                                                                                                                                                   |
|                                                                                         | The correct format of token            | AssertionError: expected { Object (detail) } in response to contain property 'access' |                                                                 |                                                                                                                                                                                                                                                                                   |

| Test                                                                            | Test case                              | Result                                                                | Fail analyse                                                    | Responses                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The input password is wrong.<br><br>{<br>"username": "",<br>"password": ""<br>} | InterfaceErrorTest                     | AssertionError: expected response to have status code 200 but got 401 | The wrong input parameter would cause a 401 Unauthorized error. | <div style="text-align: center; background-color: red; color: white; padding: 10px; border-radius: 10px;"><span style="font-size: 2em; margin-right: 10px;">!</span> Please fill out all fields</div><br>In FrontEnd, if we find that the user clicks the login button without inputting ID or password, there would be a popup. |
|                                                                                 | Successful POST request                | AssertionError: expected 401 to be one of [ 200, 202 ]                |                                                                 |                                                                                                                                                                                                                                                                                                                                  |
|                                                                                 | The response should be okay to process | AssertionError: expected response code to not be 4XX or 5XX           |                                                                 |                                                                                                                                                                                                                                                                                                                                  |

|                                  |                                                                                       |  |  |
|----------------------------------|---------------------------------------------------------------------------------------|--|--|
| Correct output data format       | AssertionError: expected response to have status reason 'OK' but got 'UNAUTHORIZED'   |  |  |
| Response time is less than 500ms | AssertionError: expected 533 to be below 500                                          |  |  |
| The correct format of token      | AssertionError: expected { Object (detail) } in response to contain property 'access' |  |  |

We change the correct uid from 6 to 9 in the BackEnd.

API: <https://digital-phenotyping.herokuapp.com/appForeground/>

| Test1.1                                                                                                                     | Test case                              | Result | Fail analyse                     | Responses                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------|----------------------------------|------------------------------------------------------------------------------|
| The input parameter is totally correct.<br><pre>{   "uid":6,   "startDate":1641634738549,   "endDate":1641901876549 }</pre> | InterfaceErrorTest                     | Pass   | The output parameter is correct. |                                                                              |
|                                                                                                                             | Successful POST request                | Pass   |                                  |                                                                              |
|                                                                                                                             | The response should be okay to process | Pass   |                                  |                                                                              |
|                                                                                                                             | Correct output data format             | Pass   |                                  |                                                                              |
|                                                                                                                             | Response time is less than 500ms       | Pass   |                                  | Fix it in sprint 3<br>We deploy the server again and change it to Australia. |

| Test1.2                                                                                                                                            | Test case                              | Result                                                                      | Fail analyse                                                       | Responses                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change what is inside "")<br><pre>{   "dhfshfk":6,   "stdfsffe":1641634738549,   "ezdfgaegge":1641901876549 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to have status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                    | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                |                                                                    |                                                          |
|                                                                                                                                                    | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX           |                                                                    |                                                          |
|                                                                                                                                                    | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^              |                                                                    |                                                          |
|                                                                                                                                                    | Response time is less than 500ms       | Fail: AssertionError: expected 3820 to be below 500                         |                                                                    |                                                          |

| Test1.3                                                                                                                                          | Test case                              | Result                                              | Fail analyse                                             | Responses                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------|
| The input parameter is wrong. (change e to extremely number)<br><pre>{   "uid":1343242343555,   "startDate":1641634738549,   "endDate":164</pre> | InterfaceErrorTest                     | Pass                                                | The output is fine with null with the correct format.    |                                                                      |
|                                                                                                                                                  | Successful POST request                | Pass                                                |                                                          |                                                                      |
|                                                                                                                                                  | The response should be okay to process | Pass                                                |                                                          |                                                                      |
|                                                                                                                                                  | Correct output data format             | Pass                                                |                                                          |                                                                      |
|                                                                                                                                                  | Response time is less than 500ms       | Fail: AssertionError: expected 3485 to be below 500 | Accidentally chose a US region for the Heroku deployment | Fix it in sprint 3<br>We need to change it to Australia next sprint. |
|                                                                                                                                                  |                                        | Pass                                                |                                                          | We deploy the server again and change it to Australia.               |

API: <https://digital-phenotyping.herokuapp.com/sms/>

| Test2.1                                                                                                                     | Test case                              | Result | Fail analyse                     | Responses |
|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------|----------------------------------|-----------|
| The input parameter is totally correct.<br><pre>{   "uid":6,   "startDate":1641634738549,   "endDate":1641901876549 }</pre> | InterfaceErrorTest                     | Pass   | The output parameter is correct. |           |
|                                                                                                                             | Successful POST request                | Pass   |                                  |           |
|                                                                                                                             | The response should be okay to process | Pass   |                                  |           |
|                                                                                                                             | Correct output data format             | Pass   |                                  |           |
|                                                                                                                             |                                        |        |                                  |           |

|  |                                  |                                                                        |                                                                                    |                                                                                                              |
|--|----------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
|  | Response time is less than 500ms | Fail: AssertionError: expected <u>2281</u> to be below 500<br><br>Pass | Accidentally chose a US region for the Heroku deployment<br><br>Fix it in sprint 3 | We need to change it to Australia next sprint.<br><br>We deploy the server again and change it to Australia. |
|--|----------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|

| Test2.2                                                                                                                                                  | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. ( <b>change what is inside“”</b> )<br><br>{<br>"dhfshfk":6,<br>"fфе":1641634738549,<br>"ezdfgaegge":1641901876<br>549<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                          | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                          | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                          | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                                          | Response time is less than 500ms       | Fail: AssertionError: expected 3820 to be below 500                           |                                                                    |                                                          |

| Test2.3                                                                                                                                                  | Test case                              | Result                                                          | Fail analyse                                                                       | Responses                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| The input parameter is wrong. ( <b>change to extremely number</b> )<br><br>{<br>"uid":1343242343555,<br>"startDate":1641634738549,<br>"endDate":164<br>} | InterfaceErrorTest                     | Pass                                                            | No connection issue.                                                               | We may need to add error input judgment for the Backend.                                                     |
|                                                                                                                                                          | Successful POST request                | Pass                                                            |                                                                                    |                                                                                                              |
|                                                                                                                                                          | The response should be okay to process | Pass                                                            |                                                                                    |                                                                                                              |
|                                                                                                                                                          | Correct output data format             | Fail: AssertionError: expected 0 to deeply equal 3              | The output parameter is in the wrong format                                        |                                                                                                              |
|                                                                                                                                                          | Response time is less than 500ms       | Fail: AssertionError: expected 4023 to be below 500<br><br>Pass | Accidentally chose a US region for the Heroku deployment<br><br>Fix it in sprint 3 | We need to change it to Australia next sprint.<br><br>We deploy the server again and change it to Australia. |

API: <https://digital-phenotyping.herokuapp.com/dataServer/calls>

| Test3.1                                                                                                                                | Test case                              | Result                                              | Fail analyse                                               | Responses                                      |
|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|------------------------------------------------------------|------------------------------------------------|
| The input parameter is totally correct.<br><br>{<br>"uid":6,<br>"startDate":1641634738549,<br>"endDate":1641901876<br>549<br>6549<br>} | InterfaceErrorTest                     | Pass                                                | The output parameter is correct.                           | We need to change it to Australia next sprint. |
|                                                                                                                                        | Successful POST request                | Pass                                                |                                                            |                                                |
|                                                                                                                                        | The response should be okay to process | Pass                                                |                                                            |                                                |
|                                                                                                                                        | Correct output data format             | Pass                                                |                                                            |                                                |
|                                                                                                                                        | Response time is less than 500ms       | Fail: AssertionError: expected 3089 to be below 500 | Accidentally chose a US region for the Heroku deployment   |                                                |
|                                                                                                                                        | Contain Keywords                       | Pass                                                | The output parameter is correct with "success" and "data". |                                                |

| Test3.2                                                                                                                                                  | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. ( <b>change what is inside“”</b> )<br><br>{<br>"dhfshfk":6,<br>"fфе":1641634738549,<br>"ezdfgaegge":1641901876<br>549<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                          | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                          | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                          | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                                          | Response time is less than 500ms       | Fail: AssertionError: expected 3525 to be below 500                           |                                                                    |                                                          |
|                                                                                                                                                          | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

| Test3.3                                                                                                                                                 | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.( <b>change to extremely number</b> )<br><br>{<br>"uid":1343242343555,<br>"startDate":1641634738549,<br>"endDate":164<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                         | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                         | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                         | Correct output data format             | Fail: AssertionError: expected 0 to deeply equal 4                            |                                                                    |                                                          |
|                                                                                                                                                         | Response time is less than 500ms       | Fail: AssertionError: expected 2985 to be below 500                           |                                                                    |                                                          |
|                                                                                                                                                         | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

API: <https://digital-phenotyping.herokuapp.com/NumbersOfLocation/>

| Test4.1                                                                                          | Test case                              | Result                                              | Fail analyse                                             | Responses                                              |
|--------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------|
| The input parameter is totally correct.<br><br>{<br>"uid":6,<br>"endDate":16419018<br>76549<br>} | InterfaceErrorTest                     | Pass                                                | The output parameter is correct.                         |                                                        |
|                                                                                                  | Successful POST request                | Pass                                                |                                                          |                                                        |
|                                                                                                  | The response should be okay to process | Pass                                                |                                                          |                                                        |
|                                                                                                  | Correct output data format             | Pass                                                |                                                          |                                                        |
|                                                                                                  | Response time is less than 500ms       | Fail: AssertionError: expected 4081 to be below 500 |                                                          | We need to change it to Australia next sprint.         |
|                                                                                                  |                                        | Pass                                                | Accidentally chose a US region for the Heroku deployment | Fix it in sprint 3                                     |
|                                                                                                  |                                        |                                                     |                                                          | We deploy the server again and change it to Australia. |

| Test4.2                                                                                                                           | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. ( <b>change what is inside""</b> )<br><br>{<br>"dhfshfk":6,<br>"ezdfdfgagge":1641901<br>876549<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                   | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                   | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                   | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                   | Response time is less than 500ms       | Fail: AssertionError: expected 1920 to be below 500                           |                                                                    |                                                          |
|                                                                                                                                   |                                        |                                                                               |                                                                    |                                                          |

| Test4.3                                                                                                                    | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. ( <b>change to extremely number</b> )<br><br>{<br>"uid":1343242343555,<br>"endDate":164<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                            | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                            | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                            | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                            | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                                                                    |                                                          |
|                                                                                                                            |                                        |                                                                               |                                                                    |                                                          |

API: <https://digital-phenotyping.herokuapp.com/screenServer/ScreenUnlocked>

| Test5.1                                                           | Test case               | Result | Fail analyse                     | Responses |
|-------------------------------------------------------------------|-------------------------|--------|----------------------------------|-----------|
| The input parameter is totally correct.<br><br>{<br>"uid":6,<br>} | InterfaceErrorTest      | Pass   | The output parameter is correct. |           |
|                                                                   | Successful POST request | Pass   |                                  |           |

|                              |                                        |      |  |  |
|------------------------------|----------------------------------------|------|--|--|
| "endDate":1641901876549<br>} | The response should be okay to process | Pass |  |  |
|                              | Correct output data format             | Pass |  |  |
|                              | Response time is less than 500ms       | Pass |  |  |

| Test5.2                                                                                                                | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.<br><b>(change what is inside "")</b><br><br>{<br>"uid":6,<br>"dfsgef":1646409600000<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                        | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                        | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                        | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                        | Response time is less than 500ms       | Fail: AssertionError: expected 1920 to be below 500                           |                                                                    |                                                          |

| Test5.3                                                                                                                         | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.<br><b>(change to extremely number)</b><br><br>{<br>"uid":3782498,<br>"endDate":1646409600000<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                 | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                 | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                 | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                 | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                                                                    |                                                          |

## AddClient

```
2022-08-21T11:11:36.000000+00:00 app[api]: Build succeeded
2022-08-21T11:15:27.937796+00:00 heroku[router]: at=info method=POST path="/userServer/AddClient" host=digital-phenotyping.herokuapp.com request_id=7d338f05-a26a-4c69-p1b8-e7aae7499e fwd="110.147.173.158" dyno=web.1 connect=0ms service=178ms status=500 bytes=104760 protocol=https
2022-08-21T11:15:27.935048+00:00 app[web.1]: Internal Server Error: /userServer/AddClient
2022-08-21T11:15:27.935064+00:00 app[web.1]: Traceback (most recent call last):
2022-08-21T11:15:27.935065+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/django/core/handlers/exception.py", line 55, in inner
2022-08-21T11:15:27.935065+00:00 app[web.1]:     response = get_response(request)
2022-08-21T11:15:27.935067+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/django/core/handlers/base.py", line 197, in _get_response
2022-08-21T11:15:27.935068+00:00 app[web.1]:     response = wrapped_callback(request, *callback_args, **callback_kwargs)
2022-08-21T11:15:27.935068+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/django/views/decorators/csrf.py", line 54, in wrapped_view
2022-08-21T11:15:27.935069+00:00 app[web.1]:     return view_func(*args, **kwargs)
2022-08-21T11:15:27.935069+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/django/views/generic/base.py", line 84, in view
2022-08-21T11:15:27.935070+00:00 app[web.1]:     return self.dispatch(request, *args, **kwargs)
2022-08-21T11:15:27.935070+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/rest_framework/views.py", line 509, in dispatch
2022-08-21T11:15:27.935070+00:00 app[web.1]:     response = self.handle_exception(exc)
2022-08-21T11:15:27.935071+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/rest_framework/views.py", line 469, in handle_exception
2022-08-21T11:15:27.935071+00:00 app[web.1]:     self.raise_uncaught_exception(exc)
2022-08-21T11:15:27.935071+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/rest_framework/views.py", line 480, in raise_uncaught_exception
2022-08-21T11:15:27.935072+00:00 app[web.1]:     raise exc
2022-08-21T11:15:27.935072+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/rest_framework/views.py", line 506, in dispatch
2022-08-21T11:15:27.935073+00:00 app[web.1]:     response = handler(request, *args, **kwargs)
2022-08-21T11:15:27.935073+00:00 app[web.1]:   File "/app/backend/django_site/userServer/views.py", line 109, in post
2022-08-21T11:15:27.935074+00:00 app[web.1]:     twitter_id = client.get_user(username=username).data.id
2022-08-21T11:15:27.935074+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/tweepy/client.py", line 2423, in get_user
2022-08-21T11:15:27.935074+00:00 app[web.1]:     return self._make_request()
2022-08-21T11:15:27.935074+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/tweepy/client.py", line 126, in _make_request
2022-08-21T11:15:27.935074+00:00 app[web.1]:     response = self.request(method, route, params=request_params,
2022-08-21T11:15:27.935074+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/tweepy/client.py", line 95, in request
2022-08-21T11:15:27.935074+00:00 app[web.1]:     raise BadRequest(response)
2022-08-21T11:15:27.935074+00:00 app[web.1]: tweepy.errors.BadRequest: 400 Bad Request
2022-08-21T11:15:27.935074+00:00 app[web.1]: The 'username' query parameter value '@william' does not match '[A-Za-z0-9_-]{1,15}$
2022-08-21T11:15:27.936011+00:00 app[web.1]: [21/Aug/2022 11:15:27] "POST /userServer/AddClient HTTP/1.1" 500 104317
```

The regex is only accepting Twitter usernames themselves, `^[A-Za-z0-9_-]{1,15}$` is a 1 to 15-letter username with upper and lower case letters and numbers.

We can't use @ in the user name.

## Unit Testing

We check all the buttons because we change the layout in this sprint.

```
PASS  src/testing/InfoDetailsPage.test.tsx
  ● Console

    console.error
      Warning: ReactDOM.render is no longer supported in React 18. Use createRoot instead. Until you switch to the new API, your app will behave as if it's running React 17. Learn more: https://reactjs.org/link/switch-to-createRoot
      at printWarning (node modules/react-dom/cjs/react-dom.development.js:86:30)
      at error (node modules/react-dom/cjs/react-dom.development.js:60:7)
      at Object.render (node modules/react-dom/cjs/react-dom.development.js:29572:5)
      at node modules/@testing-library/react/dist/pure.js:101:25
      at act (node modules/react/cjs/react.development.js:2510:16)
      at render (node modules/@testing-library/react/dist/pure.js:97:26)
      at Object.<anonymous> (src/testing/InfoDetailsPage.test.tsx:8:5)

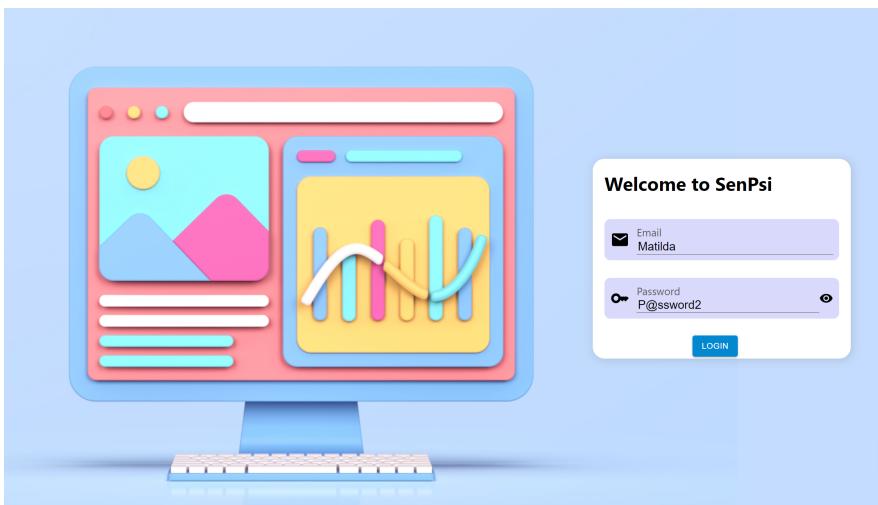
Test Suites: 3 passed, 3 total
Tests:       4 passed, 4 total
Snapshots:  1 passed, 1 total
Time:        4.916 s
Ran all test suites.
```

# Sprint5 testing report

Clinician: Matilda

Matilda is a clinician and he wants to use this website to view data about his patient's cell phone usage.

Matilda landed on the homepage of the digital phenotyping platform.



After successful login, Matilda goes to the homepage to view the list of clients. We changed a lot about the homepage.

| Name             | Title | Age | Status | Last update | Action                |
|------------------|-------|-----|--------|-------------|-----------------------|
| Tom Garcia       | Ms.   | 36  | Normal | 2022-08-19  | <button>VIEW</button> |
| Jerry Tom        | Mr.   | 55  | Normal | 2022-08-19  | <button>VIEW</button> |
| Chain Smoker     | Mr.   | 45  | Normal | 2022-08-19  | <button>VIEW</button> |
| Anakin Skywalker | Mr.   | 55  | Normal | 2022-08-19  | <button>VIEW</button> |
| Simon Dalfonso   | Dr    | 39  | Normal | 2022-08-21  | <button>VIEW</button> |
| Marvin Bai       | Mr    | 24  | Normal | 2022-08-21  | <button>VIEW</button> |

Especially the layout, and improve many functions, such as logout, search and print client list

## System Testing

| ID: PB023-S5-ST |                                                               |                  |       |          |
|-----------------|---------------------------------------------------------------|------------------|-------|----------|
| Purpose         | The clinician can view the list of clients                    |                  |       |          |
| Prerequisite    | Successfully logged in to the website                         |                  |       |          |
| Test Data       | Valid data from the AWARE smartphone sensing app in the MySQL |                  |       |          |
| Tests           | Steps                                                         | Expected Results | Pass? | Comments |
|                 |                                                               |                  |       |          |

|                  | <p>1 The civilian enters the correct username and password and clicks Login. After successful login, go to the homepage to view the list of clients.</p> <p>2. The civilian can click the "view" button to check the patient's information details.</p> | The clinician can check all clients after successfully logging in to the website. He can | Yes    | <table border="1"> <thead> <tr> <th>Name</th> <th>Title</th> <th>Age</th> <th>Status</th> <th>Last update</th> <th>Action</th> </tr> </thead> <tbody> <tr><td>Tom Garcia</td><td>Ms.</td><td>36</td><td>Normal</td><td>2022-08-19</td><td><button>VIEW</button></td></tr> <tr><td>Jerry Tom</td><td>Mr.</td><td>55</td><td>Normal</td><td>2022-08-19</td><td><button>VIEW</button></td></tr> <tr><td>Chain Smoker</td><td>Mr.</td><td>45</td><td>Normal</td><td>2022-08-19</td><td><button>VIEW</button></td></tr> <tr><td>Anakin Skywalker</td><td>Mr.</td><td>55</td><td>Normal</td><td>2022-08-19</td><td><button>VIEW</button></td></tr> <tr><td>Simon Dalfonso</td><td>Dr</td><td>39</td><td>Normal</td><td>2022-08-21</td><td><button>VIEW</button></td></tr> <tr><td>Marvin Bai</td><td>Mr</td><td>24</td><td>Normal</td><td>2022-08-21</td><td><button>VIEW</button></td></tr> </tbody> </table> | Name                  | Title | Age | Status | Last update | Action | Tom Garcia | Ms. | 36 | Normal | 2022-08-19 | <button>VIEW</button> | Jerry Tom | Mr. | 55 | Normal | 2022-08-19 | <button>VIEW</button> | Chain Smoker | Mr. | 45 | Normal | 2022-08-19 | <button>VIEW</button> | Anakin Skywalker | Mr. | 55 | Normal | 2022-08-19 | <button>VIEW</button> | Simon Dalfonso | Dr | 39 | Normal | 2022-08-21 | <button>VIEW</button> | Marvin Bai | Mr | 24 | Normal | 2022-08-21 | <button>VIEW</button> |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------|-----|--------|-------------|--------|------------|-----|----|--------|------------|-----------------------|-----------|-----|----|--------|------------|-----------------------|--------------|-----|----|--------|------------|-----------------------|------------------|-----|----|--------|------------|-----------------------|----------------|----|----|--------|------------|-----------------------|------------|----|----|--------|------------|-----------------------|
| Name             | Title                                                                                                                                                                                                                                                   | Age                                                                                      | Status | Last update                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Action                |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Tom Garcia       | Ms.                                                                                                                                                                                                                                                     | 36                                                                                       | Normal | 2022-08-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Jerry Tom        | Mr.                                                                                                                                                                                                                                                     | 55                                                                                       | Normal | 2022-08-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Chain Smoker     | Mr.                                                                                                                                                                                                                                                     | 45                                                                                       | Normal | 2022-08-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Anakin Skywalker | Mr.                                                                                                                                                                                                                                                     | 55                                                                                       | Normal | 2022-08-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Simon Dalfonso   | Dr                                                                                                                                                                                                                                                      | 39                                                                                       | Normal | 2022-08-21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Marvin Bai       | Mr                                                                                                                                                                                                                                                      | 24                                                                                       | Normal | 2022-08-21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |

| ID: PB023-S5-ST  |                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                     |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                       |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------|-----|--------|-------------|--------|------------|-----|----|--------|------------|-----------------------|-----------|-----|----|--------|------------|-----------------------|--------------|-----|----|--------|------------|-----------------------|------------------|-----|----|--------|------------|-----------------------|----------------|----|----|--------|------------|-----------------------|------------|----|----|--------|------------|-----------------------|
| Purpose          | The clinician can add a new client                                                                                                                                                                                                                                                                                                                            |                                                                                                                                     |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                       |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Prerequisite     | Successfully logged in to the website                                                                                                                                                                                                                                                                                                                         |                                                                                                                                     |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                       |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Test Data        | Valid data from the AWARE smartphone sensing app in the MySQL                                                                                                                                                                                                                                                                                                 |                                                                                                                                     |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                       |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Tests            | Steps                                                                                                                                                                                                                                                                                                                                                         | Expected Results                                                                                                                    | Pass?  | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                       |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
|                  | <p>1 The civilian enters the correct username and password and clicks Login. After successful login, go to the homepage to view the list of clients.</p> <p>2. The civilian can click the "ADD CLIENT" button to add a new client.</p> <p>3. The civilian need to input the information of the new client.</p> <p>4. The civilian click the "ADD" button.</p> | The clinician can see the new client shown in the list on the homepage and can check the detailed information about the new client. | Yes    | <p>← Add a Client</p> <p>Client Title *</p> <p>First Name *</p> <p>Last Name *</p> <p>Date of Birth *</p> <p>Text Notes</p> <p>Twitter ID</p> <p>Facebook ID</p> <p>AWARE device ID *</p> <p><b>ADD</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                       |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
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| Name             | Title                                                                                                                                                                                                                                                                                                                                                         | Age                                                                                                                                 | Status | Last update                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Action                |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Tom Garcia       | Ms.                                                                                                                                                                                                                                                                                                                                                           | 36                                                                                                                                  | Normal | 2022-08-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Jerry Tom        | Mr.                                                                                                                                                                                                                                                                                                                                                           | 55                                                                                                                                  | Normal | 2022-08-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Chain Smoker     | Mr.                                                                                                                                                                                                                                                                                                                                                           | 45                                                                                                                                  | Normal | 2022-08-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Anakin Skywalker | Mr.                                                                                                                                                                                                                                                                                                                                                           | 55                                                                                                                                  | Normal | 2022-08-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Simon Dalfonso   | Dr                                                                                                                                                                                                                                                                                                                                                            | 39                                                                                                                                  | Normal | 2022-08-21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |
| Marvin Bai       | Mr                                                                                                                                                                                                                                                                                                                                                            | 24                                                                                                                                  | Normal | 2022-08-21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <button>VIEW</button> |       |     |        |             |        |            |     |    |        |            |                       |           |     |    |        |            |                       |              |     |    |        |            |                       |                  |     |    |        |            |                       |                |    |    |        |            |                       |            |    |    |        |            |                       |

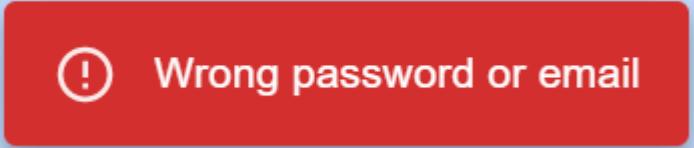
## Integration Testing

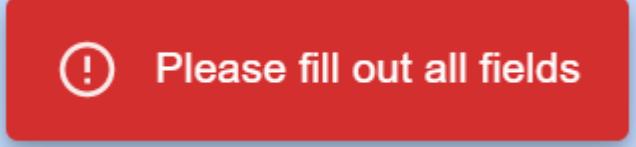
We use simple JWT to generate a token for authentication.

After each successful login, a token will be returned for security verification. So every time we want to test the APIs, in addition to the "login" API, we need to add a Token within 24 hours.

**API:** <https://digital-phenotyping.herokuapp.com/login/>

| Test                                                                                                     | Test case                              | Result | Fail analyse                     | Responses                                                                    |
|----------------------------------------------------------------------------------------------------------|----------------------------------------|--------|----------------------------------|------------------------------------------------------------------------------|
| The input parameter is totally correct.<br><br>{<br>"username":"Matilda",<br>"password":"P@ssword2"<br>} | InterfaceErrorTest                     | Pass   | The output parameter is correct. |                                                                              |
|                                                                                                          | Successful POST request                | Pass   |                                  |                                                                              |
|                                                                                                          | The response should be okay to process | Pass   |                                  |                                                                              |
|                                                                                                          | Correct output data format             | Pass   |                                  |                                                                              |
|                                                                                                          | Response time is less than 500ms       | Pass   |                                  | Fix it in sprint 3<br>We deploy the server again and change it to Australia. |
|                                                                                                          | The correct format of the token        | Pass   |                                  | The token is the correct format                                              |

| Test                                                                                    | Test case                              | Result                                                                                | Fail analyse                                                    | Responses                                                                                                                                                              |
|-----------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The input password is wrong.<br><br>{<br>"username":"Matilda",<br>"password":"zzz"<br>} | InterfaceErrorTest                     | AssertionError: expected response to have status code 200 but got 401                 | The wrong input parameter would cause a 401 Unauthorized error. | <br><br>Every time the input ID or password is incorrect, there is a popup about it |
|                                                                                         | Successful POST request                | AssertionError: expected 401 to be one of [ 200, 202 ]                                |                                                                 |                                                                                                                                                                        |
|                                                                                         | The response should be okay to process | AssertionError: expected response code to not be 4XX or 5XX                           |                                                                 |                                                                                                                                                                        |
|                                                                                         | Correct output data format             | AssertionError: expected response to have status reason 'OK' but got 'UNAUTHORIZED'   |                                                                 |                                                                                                                                                                        |
|                                                                                         | Response time is less than 500 ms      | AssertionError: expected 533 to be below 500                                          |                                                                 |                                                                                                                                                                        |
|                                                                                         | The correct format of token            | AssertionError: expected { Object (detail) } in response to contain property 'access' |                                                                 |                                                                                                                                                                        |

| Test                                                                            | Test case                              | Result                                                                | Fail analyse                                                    | Responses                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The input password is wrong.<br><br>{<br>"username": "",<br>"password": ""<br>} | InterfaceErrorTest                     | AssertionError: expected response to have status code 200 but got 401 | The wrong input parameter would cause a 401 Unauthorized error. | <br><br>In FrontEnd, if we find that the user clicks the login button without inputting ID or password, there would be a popup. |
|                                                                                 | Successful POST request                | AssertionError: expected 401 to be one of [ 200, 202 ]                |                                                                 |                                                                                                                                                                                                                     |
|                                                                                 | The response should be okay to process | AssertionError: expected response code to not be 4XX or 5XX           |                                                                 |                                                                                                                                                                                                                     |
|                                                                                 |                                        |                                                                       |                                                                 |                                                                                                                                                                                                                     |

|                                  |                                                                                       |  |  |
|----------------------------------|---------------------------------------------------------------------------------------|--|--|
| Correct output data format       | AssertionError: expected response to have status reason 'OK' but got 'UNAUTHORIZED'   |  |  |
| Response time is less than 500ms | AssertionError: expected 533 to be below 500                                          |  |  |
| The correct format of token      | AssertionError: expected { Object (detail) } in response to contain property 'access' |  |  |

We change the correct uid from 6 to 9 in the BackEnd.

API: <https://digital-phenotyping.herokuapp.com/appForeground/>

| Test1.1                                                                                                                     | Test case                              | Result | Fail analyse                     | Responses                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------|----------------------------------|------------------------------------------------------------------------------|
| The input parameter is totally correct.<br><pre>{   "uid":6,   "startDate":1641634738549,   "endDate":1641901876549 }</pre> | InterfaceErrorTest                     | Pass   | The output parameter is correct. |                                                                              |
|                                                                                                                             | Successful POST request                | Pass   |                                  |                                                                              |
|                                                                                                                             | The response should be okay to process | Pass   |                                  |                                                                              |
|                                                                                                                             | Correct output data format             | Pass   |                                  |                                                                              |
|                                                                                                                             | Response time is less than 500ms       | Pass   |                                  | Fix it in sprint 3<br>We deploy the server again and change it to Australia. |

| Test1.2                                                                                                                                            | Test case                              | Result                                                                      | Fail analyse                                                       | Responses                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change what is inside "")<br><pre>{   "dhfshfk":6,   "stdfsffe":1641634738549,   "ezdfgaegge":1641901876549 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to have status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                    | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                |                                                                    |                                                          |
|                                                                                                                                                    | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX           |                                                                    |                                                          |
|                                                                                                                                                    | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^              |                                                                    |                                                          |
|                                                                                                                                                    | Response time is less than 500ms       | Fail: AssertionError: expected 3820 to be below 500                         |                                                                    |                                                          |

| Test1.3                                                                                                                                          | Test case                              | Result                                              | Fail analyse                                             | Responses                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------|
| The input parameter is wrong. (change e to extremely number)<br><pre>{   "uid":1343242343555,   "startDate":1641634738549,   "endDate":164</pre> | InterfaceErrorTest                     | Pass                                                | The output is fine with null with the correct format.    |                                                                      |
|                                                                                                                                                  | Successful POST request                | Pass                                                |                                                          |                                                                      |
|                                                                                                                                                  | The response should be okay to process | Pass                                                |                                                          |                                                                      |
|                                                                                                                                                  | Correct output data format             | Pass                                                |                                                          |                                                                      |
|                                                                                                                                                  | Response time is less than 500ms       | Fail: AssertionError: expected 3485 to be below 500 | Accidentally chose a US region for the Heroku deployment | Fix it in sprint 3<br>We need to change it to Australia next sprint. |
|                                                                                                                                                  |                                        | Pass                                                |                                                          | We deploy the server again and change it to Australia.               |

API: <https://digital-phenotyping.herokuapp.com/sms/>

| Test2.1                                                                                                                     | Test case                              | Result | Fail analyse                     | Responses |
|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------|----------------------------------|-----------|
| The input parameter is totally correct.<br><pre>{   "uid":6,   "startDate":1641634738549,   "endDate":1641901876549 }</pre> | InterfaceErrorTest                     | Pass   | The output parameter is correct. |           |
|                                                                                                                             | Successful POST request                | Pass   |                                  |           |
|                                                                                                                             | The response should be okay to process | Pass   |                                  |           |
|                                                                                                                             | Correct output data format             | Pass   |                                  |           |
|                                                                                                                             |                                        |        |                                  |           |

|  |                                  |                                                                        |                                                                                    |                                                                                                              |
|--|----------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
|  | Response time is less than 500ms | Fail: AssertionError: expected <u>2281</u> to be below 500<br><br>Pass | Accidentally chose a US region for the Heroku deployment<br><br>Fix it in sprint 3 | We need to change it to Australia next sprint.<br><br>We deploy the server again and change it to Australia. |
|--|----------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|

| Test2.2                                                                                                                                                  | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. ( <b>change what is inside“”</b> )<br><br>{<br>"dhfshfk":6,<br>"fфе":1641634738549,<br>"ezdfgaegge":1641901876<br>549<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                          | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                          | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                          | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                                          | Response time is less than 500ms       | Fail: AssertionError: expected 3820 to be below 500                           |                                                                    |                                                          |

| Test2.3                                                                                                                                                  | Test case                              | Result                                                          | Fail analyse                                                                       | Responses                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| The input parameter is wrong. ( <b>change to extremely number</b> )<br><br>{<br>"uid":1343242343555,<br>"startDate":1641634738549,<br>"endDate":164<br>} | InterfaceErrorTest                     | Pass                                                            | No connection issue.                                                               | We may need to add error input judgment for the Backend.                                                     |
|                                                                                                                                                          | Successful POST request                | Pass                                                            |                                                                                    |                                                                                                              |
|                                                                                                                                                          | The response should be okay to process | Pass                                                            |                                                                                    |                                                                                                              |
|                                                                                                                                                          | Correct output data format             | Fail: AssertionError: expected 0 to deeply equal 3              | The output parameter is in the wrong format                                        |                                                                                                              |
|                                                                                                                                                          | Response time is less than 500ms       | Fail: AssertionError: expected 4023 to be below 500<br><br>Pass | Accidentally chose a US region for the Heroku deployment<br><br>Fix it in sprint 3 | We need to change it to Australia next sprint.<br><br>We deploy the server again and change it to Australia. |

API: <https://digital-phenotyping.herokuapp.com/dataServer/calls>

| Test3.1                                                                                                                                | Test case                              | Result                                              | Fail analyse                                               | Responses                                      |
|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|------------------------------------------------------------|------------------------------------------------|
| The input parameter is totally correct.<br><br>{<br>"uid":6,<br>"startDate":1641634738549,<br>"endDate":1641901876<br>549<br>6549<br>} | InterfaceErrorTest                     | Pass                                                | The output parameter is correct.                           | We need to change it to Australia next sprint. |
|                                                                                                                                        | Successful POST request                | Pass                                                |                                                            |                                                |
|                                                                                                                                        | The response should be okay to process | Pass                                                |                                                            |                                                |
|                                                                                                                                        | Correct output data format             | Pass                                                |                                                            |                                                |
|                                                                                                                                        | Response time is less than 500ms       | Fail: AssertionError: expected 3089 to be below 500 | Accidentally chose a US region for the Heroku deployment   |                                                |
|                                                                                                                                        | Contain Keywords                       | Pass                                                | The output parameter is correct with "success" and "data". |                                                |

| Test3.2                                                                                                                                                  | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. ( <b>change what is inside“”</b> )<br><br>{<br>"dhfshfk":6,<br>"fфе":1641634738549,<br>"ezdfgaegge":1641901876<br>549<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                          | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                          | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                          | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                                          | Response time is less than 500ms       | Fail: AssertionError: expected 3525 to be below 500                           |                                                                    |                                                          |
|                                                                                                                                                          | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

| Test3.3                                                                                                                                                 | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.( <b>change to extremely number</b> )<br><br>{<br>"uid":1343242343555,<br>"startDate":1641634738549,<br>"endDate":164<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                         | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                         | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                         | Correct output data format             | Fail: AssertionError: expected 0 to deeply equal 4                            |                                                                    |                                                          |
|                                                                                                                                                         | Response time is less than 500ms       | Fail: AssertionError: expected 2985 to be below 500                           |                                                                    |                                                          |
|                                                                                                                                                         | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

API: <https://digital-phenotyping.herokuapp.com/NumbersOfLocation/>

| Test4.1                                                                                          | Test case                              | Result                                              | Fail analyse                                             | Responses                                              |
|--------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------|
| The input parameter is totally correct.<br><br>{<br>"uid":6,<br>"endDate":16419018<br>76549<br>} | InterfaceErrorTest                     | Pass                                                | The output parameter is correct.                         |                                                        |
|                                                                                                  | Successful POST request                | Pass                                                |                                                          |                                                        |
|                                                                                                  | The response should be okay to process | Pass                                                |                                                          |                                                        |
|                                                                                                  | Correct output data format             | Pass                                                |                                                          |                                                        |
|                                                                                                  | Response time is less than 500ms       | Fail: AssertionError: expected 4081 to be below 500 |                                                          | We need to change it to Australia next sprint.         |
|                                                                                                  |                                        | Pass                                                | Accidentally chose a US region for the Heroku deployment | Fix it in sprint 3                                     |
|                                                                                                  |                                        |                                                     |                                                          | We deploy the server again and change it to Australia. |

| Test4.2                                                                                                                           | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. ( <b>change what is inside""</b> )<br><br>{<br>"dhfshfk":6,<br>"ezdfdfgagge":1641901<br>876549<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                   | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                   | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                   | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                   | Response time is less than 500ms       | Fail: AssertionError: expected 1920 to be below 500                           |                                                                    |                                                          |
|                                                                                                                                   |                                        |                                                                               |                                                                    |                                                          |

| Test4.3                                                                                                                    | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. ( <b>change to extremely number</b> )<br><br>{<br>"uid":1343242343555,<br>"endDate":164<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                            | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                            | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                            | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                            | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                                                                    |                                                          |
|                                                                                                                            |                                        |                                                                               |                                                                    |                                                          |

API: <https://digital-phenotyping.herokuapp.com/screenServer/ScreenUnlocked>

| Test5.1                                                           | Test case               | Result | Fail analyse                     | Responses |
|-------------------------------------------------------------------|-------------------------|--------|----------------------------------|-----------|
| The input parameter is totally correct.<br><br>{<br>"uid":6,<br>} | InterfaceErrorTest      | Pass   | The output parameter is correct. |           |
|                                                                   | Successful POST request | Pass   |                                  |           |

|                              |                                        |      |  |  |
|------------------------------|----------------------------------------|------|--|--|
| "endDate":1641901876549<br>} | The response should be okay to process | Pass |  |  |
|                              | Correct output data format             | Pass |  |  |
|                              | Response time is less than 500ms       | Pass |  |  |

| Test5.2                                                                                                                | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.<br><b>(change what is inside "")</b><br><br>{<br>"uid":6,<br>"dfsgef":1646409600000<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                        | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                        | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                        | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                        | Response time is less than 500ms       | Fail: AssertionError: expected 1920 to be below 500                           |                                                                    |                                                          |

| Test5.3                                                                                                                         | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.<br><b>(change to extremely number)</b><br><br>{<br>"uid":3782498,<br>"endDate":1646409600000<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                 | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                 | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                 | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                 | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                                                                    |                                                          |

## AddClient

```
2022-08-21T11:11:36.000000+00:00 app[api]: Build succeeded
2022-08-21T11:15:27.937796+00:00 heroku[router]: at=info method=POST path="/userServer/AddClient" host=digital-phenotyping.herokuapp.com request_id=7d338f05-a26a-4c69-p1b8-e7aae7499e fwd="110.147.173.158" dyno=web.1 connect=0ms service=178ms status=500 bytes=104760 protocol=https
2022-08-21T11:15:27.935048+00:00 app[web.1]: Internal Server Error: /userServer/AddClient
2022-08-21T11:15:27.935064+00:00 app[web.1]: Traceback (most recent call last):
2022-08-21T11:15:27.935065+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/django/core/handlers/exception.py", line 55, in inner
2022-08-21T11:15:27.935065+00:00 app[web.1]:     response = get_response(request)
2022-08-21T11:15:27.935067+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/django/core/handlers/base.py", line 197, in _get_response
2022-08-21T11:15:27.935068+00:00 app[web.1]:     response = wrapped_callback(request, *callback_args, **callback_kwargs)
2022-08-21T11:15:27.935068+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/django/views/decorators/csrf.py", line 54, in wrapped_view
2022-08-21T11:15:27.935069+00:00 app[web.1]:     return view_func(*args, **kwargs)
2022-08-21T11:15:27.935069+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/django/views/generic/base.py", line 84, in view
2022-08-21T11:15:27.935070+00:00 app[web.1]:     return self.dispatch(request, *args, **kwargs)
2022-08-21T11:15:27.935070+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/rest_framework/views.py", line 509, in dispatch
2022-08-21T11:15:27.935070+00:00 app[web.1]:     response = self.handle_exception(exc)
2022-08-21T11:15:27.935071+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/rest_framework/views.py", line 469, in handle_exception
2022-08-21T11:15:27.935071+00:00 app[web.1]:     self.raise_uncaught_exception(exc)
2022-08-21T11:15:27.935071+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/rest_framework/views.py", line 480, in raise_uncaught_exception
2022-08-21T11:15:27.935072+00:00 app[web.1]:     raise exc
2022-08-21T11:15:27.935072+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/rest_framework/views.py", line 506, in dispatch
2022-08-21T11:15:27.935073+00:00 app[web.1]:     response = handler(request, *args, **kwargs)
2022-08-21T11:15:27.935073+00:00 app[web.1]:   File "/app/backend/django_site/userServer/views.py", line 109, in post
2022-08-21T11:15:27.935074+00:00 app[web.1]:     twitter_id = client.get_user(username=username).data.id
2022-08-21T11:15:27.935074+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/tweepy/client.py", line 2423, in get_user
2022-08-21T11:15:27.935074+00:00 app[web.1]:     return self._make_request()
2022-08-21T11:15:27.935074+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/tweepy/client.py", line 126, in _make_request
2022-08-21T11:15:27.935074+00:00 app[web.1]:     response = self.request(method, route, params=request_params,
2022-08-21T11:15:27.935074+00:00 app[web.1]:   File "/app/heroku/python/lib/python3.9/site-packages/tweepy/client.py", line 95, in request
2022-08-21T11:15:27.935074+00:00 app[web.1]:     raise BadRequest(response)
2022-08-21T11:15:27.935074+00:00 app[web.1]: tweepy.errors.BadRequest: 400 Bad Request
2022-08-21T11:15:27.935074+00:00 app[web.1]: The 'username' query parameter value '@william' does not match '[A-Za-z0-9_-]{1,15}$
2022-08-21T11:15:27.936011+00:00 app[web.1]: [21/Aug/2022 11:15:27] "POST /userServer/AddClient HTTP/1.1" 500 104317
```

The regex is only accepting Twitter usernames themselves, `^[A-Za-z0-9_-]{1,15}$` is a 1 to 15-letter username with upper and lower case letters and numbers.

We can't use @ in the user name.

## Unit Testing

We check all the buttons because we change the layout in this sprint.

```

PASS  src/testing/InfoDetailsPage.test.tsx
  • Console

    console.error
      Warning: ReactDOM.render is no longer supported in React 18. Use createRoot instead. Until you switch to the new API, your app will behave as if it's running React 17. Learn more: https://reactjs.org/link/switch-to-createRoot

  6 |
  7 |   test('main feature button functional', async () => {
  8 |     render(
  9 |       ^
 10 |       <MemoryRouter>
 11 |         <InfoDetailsPage />
 12 |       </MemoryRouter>
 13 |
 14 |       at printWarning (node modules/react-dom/cjs/react-dom.development.js:86:30)
 15 |       at error (node modules/react-dom/cjs/react-dom.development.js:60:7)
 16 |       at Object.render (node modules/react-dom/cjs/react-dom.development.js:29572:5)
 17 |       at node modules/@testing-library/react/dist/pure.js:101:25
 18 |       at act (node modules/react/cjs/react.development.js:2510:16)
 19 |       at render (node modules/@testing-library/react/dist/pure.js:97:26)
 20 |       at render (node modules/@testing-library/react/dist/pure.js:97:26)
 21 |       at Object.<anonymous> (src/testing/InfoDetailsPage.test.tsx:8:5)
 22 |
 23 |     Test Suites: 3 passed, 3 total
 24 |     Tests:       4 passed, 4 total
 25 |     Snapshots:  1 passed, 1 total
 26 |     Time:        4.916 s
 27 |     Ran all test suites.

```

The backend mainly does the coverage test of the location part.

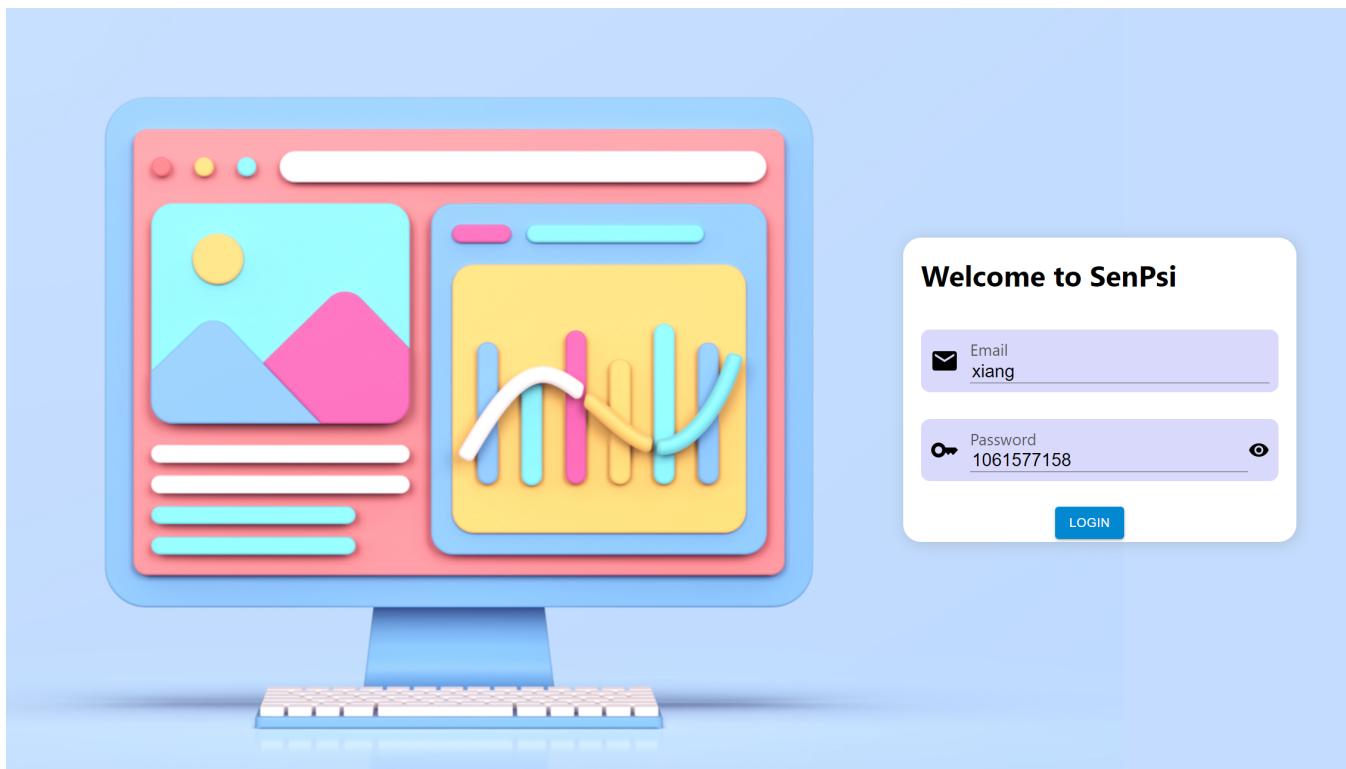
| Test content                                    | Attributes               | Pass or not | To do |
|-------------------------------------------------|--------------------------|-------------|-------|
| Test content                                    | Attributes               | Pass or not | To do |
| check the format(mainly the max length of data) | aware_device_id          | Pass        |       |
|                                                 | client_title             | Pass        |       |
|                                                 | clinician_id             | Pass        |       |
|                                                 | date_of_birth            | Pass        |       |
|                                                 | email_address            | Pass        |       |
|                                                 | facebook_id              | Pass        |       |
|                                                 | first_name               | Pass        |       |
|                                                 | last_name                | Pass        |       |
|                                                 | password                 | Pass        |       |
|                                                 | twotter_id               | Pass        |       |
| Get the correct data                            | get                      | Pass        |       |
|                                                 | getCheckTime             | Pass        |       |
|                                                 | getDateFromTimestamp     | Pass        |       |
|                                                 | getDatePremeters         | Pass        |       |
|                                                 | getFutureDate            | Pass        |       |
|                                                 | getNextDate              | Pass        |       |
|                                                 | getStartAndEndTimesStamp | Pass        |       |
|                                                 | getUserLating            | Pass        |       |
|                                                 | GetzeroDate              | Pass        |       |
| check the location data in the beginning        | initialProcessLocation   | Pass        |       |

# Sprint6 testing report

Clinician: Matilda

Matilda is a clinician and he wants to use this website to view data about his patient's cell phone usage.

Matilda landed on the homepage of the digital phenotyping platform. Then she inputs her Email address and password to log in.



After successful login, Matilda goes to the homepage to view the list of clients. We changed a lot about the homepage.

The screenshot shows the 'Client Management' section of the SenPsi platform. At the top, there are three summary boxes: 'Total Clients', 'Unique Visitors', and 'Social Media Apps'. Below this is a table titled 'Clients' with columns for Name, Title, Age, Status, Last update, and Action. The table lists several clients with their details and a 'VIEW' button for each. The interface includes a search bar, a user profile for 'Matilda Taylor', and various icons for file operations.

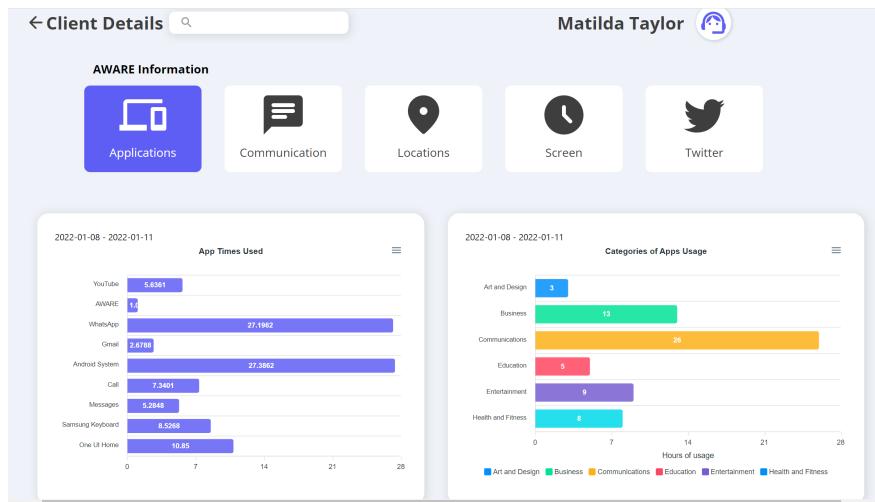
| Name             | Title | Age | Status | Last update | Action                |
|------------------|-------|-----|--------|-------------|-----------------------|
| Tom Garcia       | Ms.   | 36  | Normal | 2022-09-02  | <button>VIEW</button> |
| Jerry Tom        | Mr.   | 55  | Normal | 2022-08-19  | <button>VIEW</button> |
| Chain Smoker     | Mr.   | 45  | Normal | 2022-08-19  | <button>VIEW</button> |
| Anakin Skywalker | Mr.   | 55  | Normal | 2022-08-19  | <button>VIEW</button> |
| Simon Dalfonso   | Dr    | 39  | Normal | 2022-08-21  | <button>VIEW</button> |
| Marvin Bai       | Mr    | 24  | Normal | 2022-08-21  | <button>VIEW</button> |

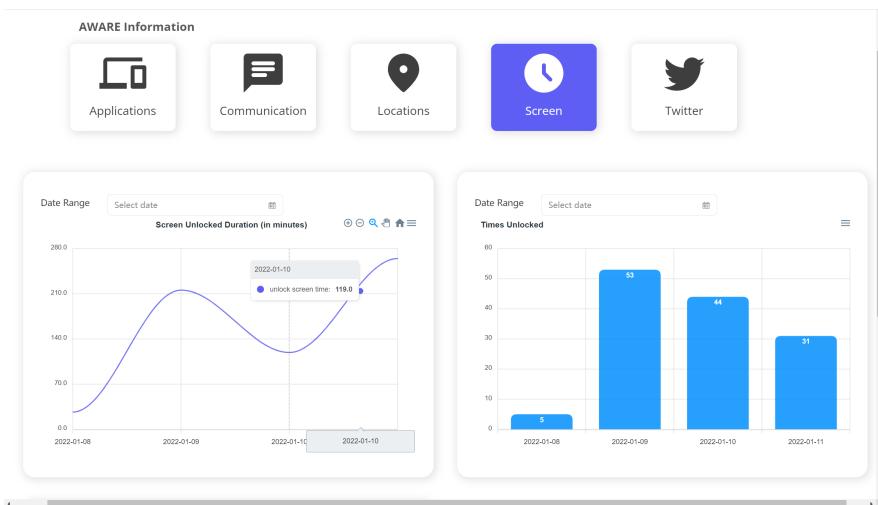
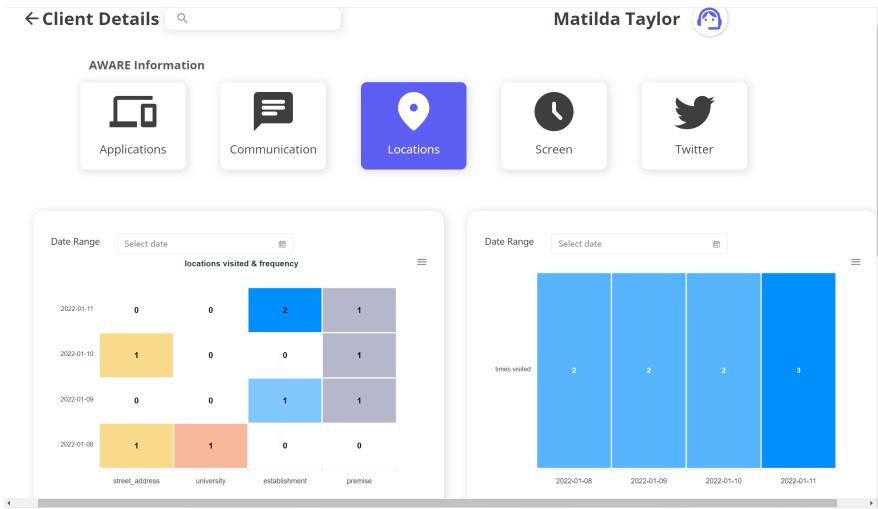
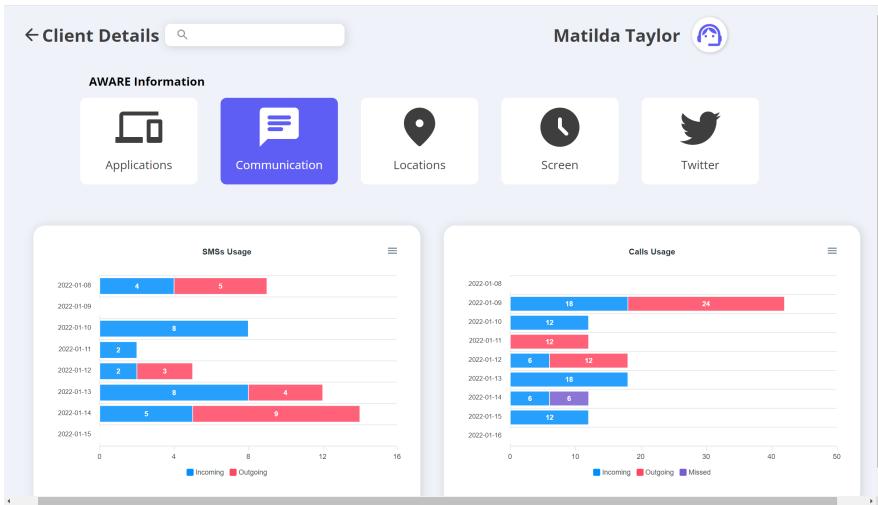
Then she could one client to view the related data so that Matilda could analyse his specific patient.

The screenshot shows a client details page for 'Tom Garcia'. At the top, there's a back arrow labeled 'Client Details' and a search bar. To the right, the client's name 'Matilda Taylor' is displayed with a blue profile icon. Below the header, there's a section titled 'AWARE Information' with five categories: 'Applications' (represented by a laptop icon), 'Communication' (represented by a speech bubble icon), 'Locations' (represented by a location pin icon), 'Screen' (represented by a clock icon), and 'Twitter' (represented by the Twitter bird icon). A large callout box in the center contains the text 'Client Name: Tom Garcia' and 'Select an AWARE category to see more details.' A horizontal scrollbar is visible at the bottom of the page.

There are 5 buttons that she could select, after Matilda clicks each button the following figures would show as follow.

She could choose the data range of each figure for a better view.





← Client Details  Matilda Taylor

AWARE Information

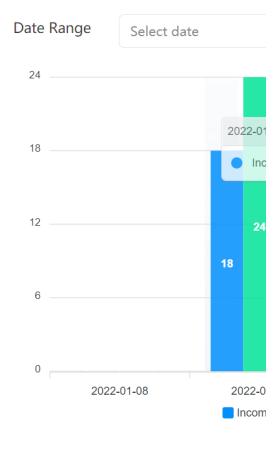
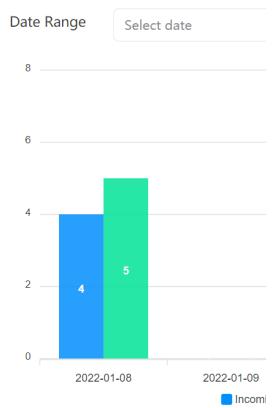
Applications Communication Locations Screen Twitter

## System Testing

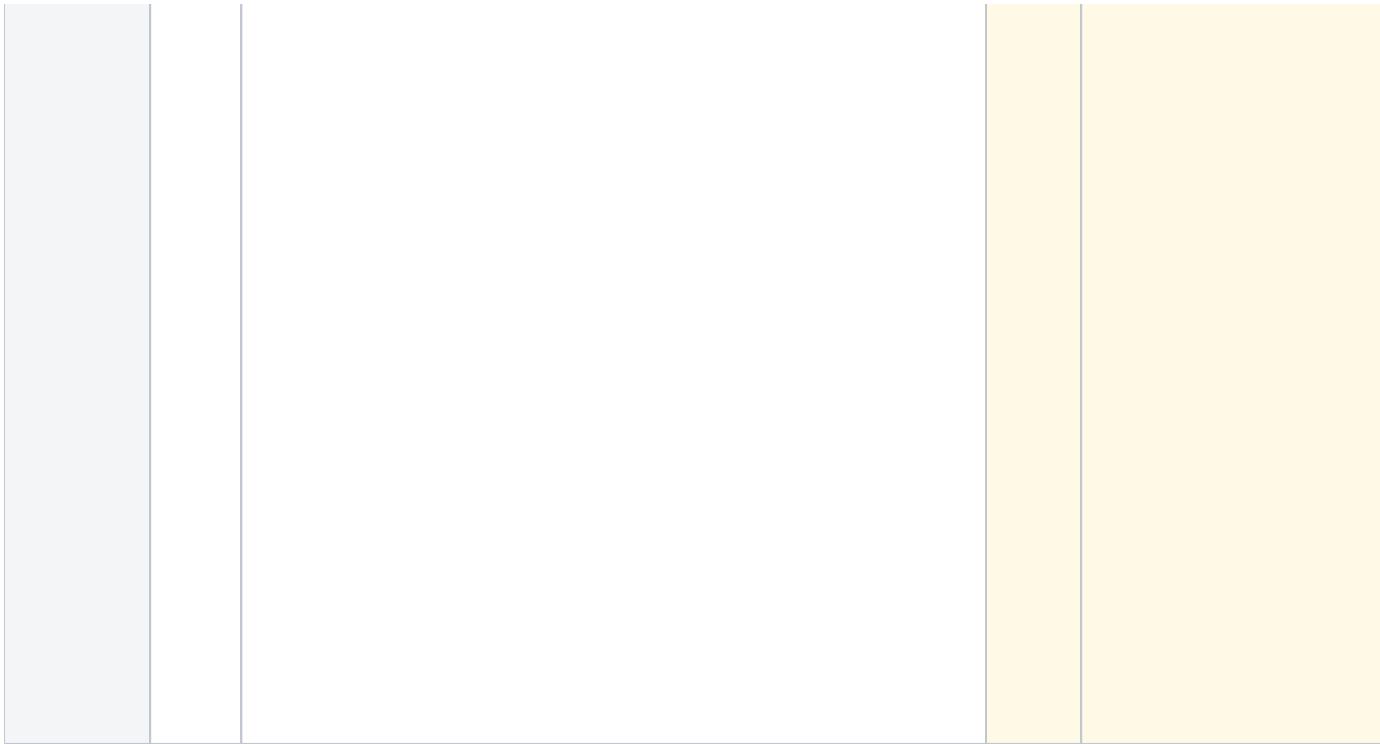
| ID: PB033-S6-ST |                                                                                                              |                  |                                                         |          |
|-----------------|--------------------------------------------------------------------------------------------------------------|------------------|---------------------------------------------------------|----------|
| Purpose         | The clinician can view multiple parallel bars showing incoming, outgoing and missed calls                    |                  |                                                         |          |
| Prerequisite    | Successfully logged in to the website                                                                        |                  |                                                         |          |
| Test Data       | Valid data from the AWARE smartphone sensing app in the MySQL                                                |                  |                                                         |          |
| Tests           | Steps                                                                                                        | Expected Results | Pass?                                                   | Comments |
|                 | 1. Matilda clicks the view button to check the data of Tom Garcia.<br>2. Matilda clicks the location button. | <br><br>         | Partially passed, we don't have phone time data for now |          |

3. Then Ma  
tild a  
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4. After Ma  
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ld sh  
ow on  
the we  
bsit e.



Although it is not exactly the same as  
needs



ID: PB034-S6-ST

| Purpose      | The clinician can check a google map diagram for location data |                  |       |          |
|--------------|----------------------------------------------------------------|------------------|-------|----------|
| Prerequisite | Successfully logged in to the website                          |                  |       |          |
| Test Data    | Valid data from the AWARE smartphone sensing app in the MySQL  |                  |       |          |
| Tests        | Steps                                                          | Expected Results | Pass? | Comments |
|              |                                                                |                  |       |          |

|  |                                                                                                                                                                                                                                                                                                                       |                                                                                      |     |  |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----|--|
|  | <p>1. Matilda clicks the view button to check the data of Tom Garcia</p> <p>2. Matilda clicks the communication button</p> <p>3. Then Matilda can select the data range by clicking the select data button</p> <p>4. After Matilda selects the data range that she wants, the figures should show on the website.</p> | The Google map should be shown and the locations should be marked on the Google map. | Yes |  |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----|--|

ID: PB011-S6-ST

| Purpose      | The clinician can view the client's data in a specific period                                                                                                                              |                                                    |       |                                                                                                                  |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------|------------------------------------------------------------------------------------------------------------------|
| Prerequisite | Successfully logged in to the website                                                                                                                                                      |                                                    |       |                                                                                                                  |
| Test Data    | Valid data from the AWARE smartphone sensing app in the MySQL                                                                                                                              |                                                    |       |                                                                                                                  |
| Tests        | Steps                                                                                                                                                                                      | Expected Results                                   | Pass? | Comments                                                                                                         |
|              | <p>1. Then Matilda can select the data range by clicking the select data button</p> <p>2. After Matilda selects the data range that she wants, the figures should show on the website.</p> | The figures are generated with the selected period | Yes   | <p>Now the client could select the period that they want in each diagram so that they can analyse it easier.</p> |

ID: PB037-S6-ST

| Purpose | The clinician can check the day/hour combination heat map for screen usage data for the last 2 weeks |
|---------|------------------------------------------------------------------------------------------------------|
|---------|------------------------------------------------------------------------------------------------------|

| Prerequisite | Successfully logged in to the website                                                                                                                                                                                                                                                                                                                                  |                                                                                                                  |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Data    | Valid data from the AWARE smartphone sensing app in the MySQL                                                                                                                                                                                                                                                                                                          |                                                                                                                  |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Tests        | Steps                                                                                                                                                                                                                                                                                                                                                                  | Expected Results                                                                                                 | Pass? | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|              | <ol style="list-style-type: none"> <li>1. Matilda clicks the view button to check the data of Tom Garcia</li> <li>2. Matilda clicks the communication button</li> <li>3. Then Matilda can select the data range by clicking the select data button</li> <li>4. After Matilda selects the data range that she wants, the figures should show on the website.</li> </ol> | The clinician could check the day/hour combination heat map for screen usage data so they can analyse it easier. | Yes   | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Date Range <input type="text" value="Select date"/> </p> <p>Screen Unlocked Duration (in minutes)</p> </div> <div style="width: 45%;"> <p>Date Range <input type="text" value="Select date"/> </p> <p>Times Unlocked</p> </div> </div><br><div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Date Range <input type="text" value="Select date"/> </p> <p>Screen Usage Frequency</p> </div> <div style="width: 45%;"> <p>Date Range <input type="text" value="Select date"/> </p> <p>Screen Usage Frequency</p> </div> </div> |

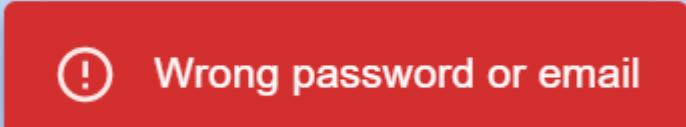
## Integration Testing

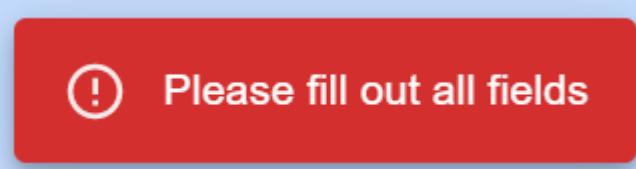
We use simple JWT to generate a token for authentication.

After each successful login, a token will be returned for security verification. So every time we want to test the APIs, in addition to the "login" API, we need to add a Token within 24 hours.

**API:** <https://digital-phenotyping.herokuapp.com/login/>

| Test                                                                                                     | Test case                              | Result | Fail analyse                     | Responses                                              |
|----------------------------------------------------------------------------------------------------------|----------------------------------------|--------|----------------------------------|--------------------------------------------------------|
| The input parameter is totally correct.<br><br>{<br>"username":"Matilda",<br>"password":"P@ssword2"<br>} | InterfaceErrorTest                     | Pass   | The output parameter is correct. |                                                        |
|                                                                                                          | Successful POST request                | Pass   |                                  |                                                        |
|                                                                                                          | The response should be okay to process | Pass   |                                  |                                                        |
|                                                                                                          | Correct output data format             | Pass   |                                  |                                                        |
|                                                                                                          | Response time is less than 500ms       | Pass   | Fix it in sprint 3               | We deploy the server again and change it to Australia. |
|                                                                                                          | The correct format of the token        | Pass   | The token is the correct format  |                                                        |

| Test                                                                                    | Test case                              | Result                                                                                | Fail analyse                                                    | Responses                                                                                                                                                             |
|-----------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The input password is wrong.<br><br>{<br>"username":"Matilda",<br>"password":"zzz"<br>} | InterfaceErrorTest                     | AssertionError: expected response to have status code 200 but got 401                 | The wrong input parameter would cause a 401 Unauthorized error. | <br><br>Every time the input ID or password is incorrect, there is a popup about it |
|                                                                                         | Successful POST request                | AssertionError: expected 401 to be one of [ 200, 202 ]                                |                                                                 |                                                                                                                                                                       |
|                                                                                         | The response should be okay to process | AssertionError: expected response code to not be 4XX or 5XX                           |                                                                 |                                                                                                                                                                       |
|                                                                                         | Correct output data format             | AssertionError: expected response to have status reason 'OK' but got 'UNAUTHORIZED'   |                                                                 |                                                                                                                                                                       |
|                                                                                         | Response time is less than 500ms       | AssertionError: expected 533 to be below 500                                          |                                                                 |                                                                                                                                                                       |
|                                                                                         | The correct format of token            | AssertionError: expected { Object (detail) } in response to contain property 'access' |                                                                 |                                                                                                                                                                       |

| Test                                                                            | Test case                              | Result                                                                              | Fail analyse                                                    | Responses                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The input password is wrong.<br><br>{<br>"username": "",<br>"password": ""<br>} | InterfaceErrorTest                     | AssertionError: expected response to have status code 200 but got 401               | The wrong input parameter would cause a 401 Unauthorized error. | <br><br>In FrontEnd, if we find that the user clicks the login button without inputting ID or password, there would be a popup. |
|                                                                                 | Successful POST request                | AssertionError: expected 401 to be one of [ 200, 202 ]                              |                                                                 |                                                                                                                                                                                                                     |
|                                                                                 | The response should be okay to process | AssertionError: expected response code to not be 4XX or 5XX                         |                                                                 |                                                                                                                                                                                                                     |
|                                                                                 | Correct output data format             | AssertionError: expected response to have status reason 'OK' but got 'UNAUTHORIZED' |                                                                 |                                                                                                                                                                                                                     |
|                                                                                 | Response time is less than 500ms       | AssertionError: expected 533 to be below 500                                        |                                                                 |                                                                                                                                                                                                                     |

|                             |                                                                                       |  |  |  |
|-----------------------------|---------------------------------------------------------------------------------------|--|--|--|
| The correct format of token | AssertionError: expected { Object (detail) } in response to contain property 'access' |  |  |  |
|-----------------------------|---------------------------------------------------------------------------------------|--|--|--|

We change the correct uid from 6 to 9 in the BackEnd.

API: <https://digital-phenotyping.herokuapp.com/appForeground/>

| Test1.1                                                                                                                    | Test case                              | Result | Fail analyse                     | Responses                                                                    |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------|----------------------------------|------------------------------------------------------------------------------|
| The input parameter is totally correct.<br><br>{<br>"uid":6,<br>"startDate":1641634738549,<br>"endDate":1641901876549<br>} | InterfaceErrorTest                     | Pass   | The output parameter is correct. |                                                                              |
|                                                                                                                            | Successful POST request                | Pass   |                                  |                                                                              |
|                                                                                                                            | The response should be okay to process | Pass   |                                  |                                                                              |
|                                                                                                                            | Correct output data format             | Pass   |                                  |                                                                              |
|                                                                                                                            | Response time is less than 500ms       | Pass   |                                  | Fix it in sprint 3<br>We deploy the server again and change it to Australia. |

| Test1.2                                                                                                                                            | Test case                              | Result                                                                      | Fail analyse                                                       | Responses                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change what is inside "")<br><br>{<br>"dhfshfk":6,<br>"stfdsffte":1641634738549,<br>"ezdfgaegge":1641901876549<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to have status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                    | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                |                                                                    |                                                          |
|                                                                                                                                                    | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX           |                                                                    |                                                          |
|                                                                                                                                                    | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:<!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                                    | Response time is less than 500ms       | Fail: AssertionError: expected 3820 to be below 500                         |                                                                    |                                                          |

| Test1.3                                                                                                                                           | Test case                              | Result                                              | Fail analyse                                             | Responses                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------|
| The input parameter is wrong. (change e to extremely number)<br><br>{<br>"uid":1343242343555,<br>"startDate":1641634738549,<br>"endDate":164<br>} | InterfaceErrorTest                     | Pass                                                | The output is fine with null with the correct format.    |                                                        |
|                                                                                                                                                   | Successful POST request                | Pass                                                |                                                          |                                                        |
|                                                                                                                                                   | The response should be okay to process | Pass                                                |                                                          |                                                        |
|                                                                                                                                                   | Correct output data format             | Pass                                                |                                                          |                                                        |
|                                                                                                                                                   | Response time is less than 500ms       | Fail: AssertionError: expected 3485 to be below 500 | Accidentally chose a US region for the Heroku deployment | We need to change it to Australia next sprint.         |
|                                                                                                                                                   |                                        | Pass                                                | Fix it in sprint 3                                       | We deploy the server again and change it to Australia. |

API: <https://digital-phenotyping.herokuapp.com/sms/>

| Test2.1                                                                                                                    | Test case                              | Result                                              | Fail analyse                                             | Responses                                              |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------|
| The input parameter is totally correct.<br><br>{<br>"uid":6,<br>"startDate":1641634738549,<br>"endDate":1641901876549<br>} | InterfaceErrorTest                     | Pass                                                | The output parameter is correct.                         |                                                        |
|                                                                                                                            | Successful POST request                | Pass                                                |                                                          |                                                        |
|                                                                                                                            | The response should be okay to process | Pass                                                |                                                          |                                                        |
|                                                                                                                            | Correct output data format             | Pass                                                |                                                          |                                                        |
|                                                                                                                            | Response time is less than 500ms       | Fail: AssertionError: expected 2284 to be below 500 | Accidentally chose a US region for the Heroku deployment | We need to change it to Australia next sprint.         |
|                                                                                                                            |                                        | Pass                                                | Fix it in sprint 3                                       | We deploy the server again and change it to Australia. |

| Test2.2                                                  | Test case          | Result                                                                        | Fail analyse                                                       | Responses                                                |
|----------------------------------------------------------|--------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change what is inside "") | InterfaceErrorTest | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |

|                                                                                     |                                        |                                                                   |  |  |
|-------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------|--|--|
| <pre>{   "dhfshfk":6,   "ffte":1641634738549,   "ezdfgaegge":1641901876 549 }</pre> | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]      |  |  |
|                                                                                     | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX |  |  |
|                                                                                     | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^    |  |  |
|                                                                                     | Response time is less than 500ms       | Fail: AssertionError: expected 3820 to be below 500               |  |  |

| Test2.3                                                                                                                                                        | Test case                              | Result                                                      | Fail analyse                                                                   | Responses                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| The input parameter is wrong.( <b>change to extremely number</b> ) <pre>{   "uid":1343242343555,   "startDate":1641634738549,   "endDate":164 }</pre> 549 6549 | InterfaceErrorTest                     | Pass                                                        | No connection issue.                                                           |                                                                                                          |
|                                                                                                                                                                | Successful POST request                | Pass                                                        |                                                                                |                                                                                                          |
|                                                                                                                                                                | The response should be okay to process | Pass                                                        |                                                                                |                                                                                                          |
|                                                                                                                                                                | Correct output data format             | Fail: AssertionError: expected 0 to deeply equal 3          | The output parameter is in the wrong format                                    | We may need to add error input judgment for the Backend.                                                 |
|                                                                                                                                                                | Response time is less than 500ms       | Fail: AssertionError: expected 1023 to be below 500<br>Pass | Accidentally chose a US region for the Heroku deployment<br>Fix it in sprint 3 | We need to change it to Australia next sprint.<br>We deploy the server again and change it to Australia. |

API: <https://digital-phenotyping.herokuapp.com/dataServer/calls>

| Test3.1                                                                                                                        | Test case                              | Result                                              | Fail analyse                                               | Responses                                      |
|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|------------------------------------------------------------|------------------------------------------------|
| The input parameter is totally correct. <pre>{   "uid":6,   "startDate":1641634738549,   "endDate":1641901877 549 6549 }</pre> | InterfaceErrorTest                     | Pass                                                | The output parameter is correct.                           |                                                |
|                                                                                                                                | Successful POST request                | Pass                                                |                                                            |                                                |
|                                                                                                                                | The response should be okay to process | Pass                                                |                                                            |                                                |
|                                                                                                                                | Correct output data format             | Pass                                                |                                                            |                                                |
|                                                                                                                                | Response time is less than 500ms       | Fail: AssertionError: expected 3089 to be below 500 | Accidentally chose a US region for the Heroku deployment   | We need to change it to Australia next sprint. |
|                                                                                                                                | Contain Keywords                       | Pass                                                | The output parameter is correct with "success" and "data". |                                                |

| Test3.2                                                                                                                                              | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. ( <b>change what is inside""</b> ) <pre>{   "dhfshfk":6,   "ffte":1641634738549,   "ezdfgaegge":1641901876 549 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                      | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                      | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                      | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                                      | Response time is less than 500ms       | Fail: AssertionError: expected 3525 to be below 500                           |                                                                    |                                                          |
|                                                                                                                                                      | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

| Test3.3                                                                                                                                                | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. ( <b>change to extremely number</b> ) <pre>{   "uid":1343242343555,   "startDate":1641634738549,   "endDate":164 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                        | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                        | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |

|                                  |                                                                |  |
|----------------------------------|----------------------------------------------------------------|--|
| Correct output data format       | Fail: AssertionError: expected 0 to deeply equal 4             |  |
| Response time is less than 500ms | Fail: AssertionError: expected 2985 to be below 500            |  |
| Contain Keywords                 | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^ |  |

API: <https://digital-phenotyping.herokuapp.com/NumbersOfLocation/>

| Test4.1                                                                                      | Test case                              | Result                                              | Fail analyse                                             | Responses                                              |
|----------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------|
| The input parameter is totally correct.<br><br>{<br>"uid":6,<br>"endDate":1641901876549<br>} | InterfaceErrorTest                     | Pass                                                | The output parameter is correct.                         |                                                        |
|                                                                                              | Successful POST request                | Pass                                                |                                                          |                                                        |
|                                                                                              | The response should be okay to process | Pass                                                |                                                          |                                                        |
|                                                                                              | Correct output data format             | Pass                                                |                                                          |                                                        |
|                                                                                              | Response time is less than 500ms       | Fail: AssertionError: expected 1084 to be below 500 | Accidentally chose a US region for the Heroku deployment | We need to change it to Australia next sprint.         |
|                                                                                              |                                        | Pass                                                | Fix it in sprint 3                                       | We deploy the server again and change it to Australia. |

| Test4.2                                                                                                                  | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|--------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change what is inside "")<br><br>{<br>"dhfshfk":6,<br>"ezdfdfdfgaegge":1641901876549<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                          | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                          | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                          | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                          | Response time is less than 500ms       | Fail: AssertionError: expected 1920 to be below 500                           |                                                                    |                                                          |

| Test4.3                                                                                                           | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|-------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change to extremely number)<br><br>{<br>"uid":1343242343555,<br>"endDate":164<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                   | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                   | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                   | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                   | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                                                                    |                                                          |

API: <https://digital-phenotyping.herokuapp.com/screenServer/ScreenUnlocked>

| Test5.1                                                                                      | Test case                              | Result | Fail analyse                     | Responses |
|----------------------------------------------------------------------------------------------|----------------------------------------|--------|----------------------------------|-----------|
| The input parameter is totally correct.<br><br>{<br>"uid":6,<br>"endDate":1641901876549<br>} | InterfaceErrorTest                     | Pass   | The output parameter is correct. |           |
|                                                                                              | Successful POST request                | Pass   |                                  |           |
|                                                                                              | The response should be okay to process | Pass   |                                  |           |
|                                                                                              | Correct output data format             | Pass   |                                  |           |
|                                                                                              | Response time is less than 500ms       | Pass   |                                  |           |

| Test5.2                                                  | Test case          | Result                                                                        | Fail analyse                                                       | Responses                                                |
|----------------------------------------------------------|--------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change what is inside "") | InterfaceErrorTest | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |

|                                                   |                                        |                                                                   |  |
|---------------------------------------------------|----------------------------------------|-------------------------------------------------------------------|--|
| <pre>{   "uid":6,   "dfsfe":1646409600000 }</pre> | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]      |  |
|                                                   | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX |  |
|                                                   | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^    |  |
|                                                   | Response time is less than 500ms       | Fail: AssertionError: expected 1920 to be below 500               |  |

| Test5.3                                                                                                                      | Test case                              | Result                                                                        | Fail analyse                                                                                                                   | Responses |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------|
| Test5.3                                                                                                                      | Test case                              | Result                                                                        | Fail analyse                                                                                                                   | Responses |
| The input parameter is wrong.( <b>change to extremely number</b> ) <pre>{   "uid":3782498,   "endDate":1646409600000 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error.<br>We may need to add error input judgment for the Backend. |           |
|                                                                                                                              | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                                                                                |           |
|                                                                                                                              | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                                                                                |           |
|                                                                                                                              | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                                                                                |           |
|                                                                                                                              | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                                                                                                                                |           |

AddClient

API: <https://digital-phenotyping.herokuapp.com/userServer/AddClient>

| Test6.1                                                                                                                                                                                                                                                                                           | Test case                              | Result | Fail analyse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Responses |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| The input parameter is totally correct. <pre>{   "clinicianId":1,   "clientTitle":"Mr",   "firstName":"Jay",   "lastName":"Wong",   "dateOfBirth":"1991-01-01",   "textNotes":"testing",   "twitterId:"PlayStation",   "facebookId":3",   "awareDeviceId":"asdas-asfagASF-asdasdas-adsas" }</pre> | InterfaceErrorTest                     | Pass   | Then we use the ClientInfo API can get the information of the client that we just added <pre>{   "uid": 36,   "clinician_id": "1",   "client_title": "Mr",   "first_name": "Jay",   "last_name": "Wong",   "date_of_birth": "1991-01-01",   "age": 31,   "text_notes": "testing",   "status": "Normal",   "twitter_id": "PlayStation",   "facebook_id": "3",   "aware_device_id": "asdas-asfagASF-asdasdas-adsas",   "last_update": "2022-08-31T23:31:45Z",   "twitter_id_int": 10671602 }</pre> |           |
|                                                                                                                                                                                                                                                                                                   | Successful POST request                | Pass   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |
|                                                                                                                                                                                                                                                                                                   | The response should be okay to process | Pass   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |
|                                                                                                                                                                                                                                                                                                   | Correct output data format             | Pass   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |
|                                                                                                                                                                                                                                                                                                   | Response time is less than 500ms       | Pass   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |

| Test6.2                                                                                                                                                                                                                                                                                                         | Test case                              | Result                                                                        | Fail analyse                                                               | Responses                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------|
| The input parameter is wrong. (The Twitter Id does not exist) <pre>{   "clinicianId":"aa",   "clientTitle":"Mr",   "firstName":"Jay",   "lastName":"Wong",   "dateOfBirth":"1991-01-01",   "textNotes":"testing",   "twitterId":1,   "facebookId":3",   "awareDeviceId":"asdas-asfagASF-asdasdas-adsas" }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The Twitter Id does not exist which means we cannot add such a new client. | Return "The Twitter Id does not exist" to remind the user |
|                                                                                                                                                                                                                                                                                                                 | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                            |                                                           |
|                                                                                                                                                                                                                                                                                                                 | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                            |                                                           |
|                                                                                                                                                                                                                                                                                                                 | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                            |                                                           |
|                                                                                                                                                                                                                                                                                                                 | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                                                                            |                                                           |

| Test6.3                                                                                                                                                                                                                                                                                                                                            | Test case                              | Result | Fail analyse                        | Responses                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------|-------------------------------------|---------------------------------------------------------------|
| The input parameter is wrong. (The format of clinicianId is wrong)<br><br>{<br>"clinicianId": "aa",<br>"clientTitle": "Mr",<br>"firstName": "Jay",<br>"lastName": "Wong",<br>"dateOfBirth": "1991-01-01",<br>"textNotes": "testing",<br>"twitterId": "PlayStation",<br>"facebookId": "3",<br>"awareDeviceId": "asdas-asfagASF-asdasdas-asdas"<br>} | InterfaceErrorTest                     | Pass   | Return 200 while it should be wrong | We should check the format of the clinicianId in the Backend. |
|                                                                                                                                                                                                                                                                                                                                                    | Successful POST request                | Pass   |                                     |                                                               |
|                                                                                                                                                                                                                                                                                                                                                    | The response should be okay to process | Pass   |                                     |                                                               |
|                                                                                                                                                                                                                                                                                                                                                    | Correct output data format             | Pass   |                                     |                                                               |
|                                                                                                                                                                                                                                                                                                                                                    | Response time is less than 500ms       | Pass   |                                     |                                                               |

## Client Info List

API:<https://digital-phenotyping.herokuapp.com/userServer/ClientInfoList>

| Test7.1                                                                   | Test case                              | Result | Fail analyse | Responses |
|---------------------------------------------------------------------------|----------------------------------------|--------|--------------|-----------|
| The input parameter is totally correct.<br><br>{<br>" <b>id</b> ": 1<br>} | InterfaceErrorTest                     | Pass   |              |           |
|                                                                           | Successful POST request                | Pass   |              |           |
|                                                                           | The response should be okay to process | Pass   |              |           |
|                                                                           | Correct output data format             | Pass   |              |           |
|                                                                           | Response time is less than 500ms       | Pass   |              |           |

| Test7.2                                                                                    | Test case                              | Result                                                                        | Fail analyse        | Responses                                                |
|--------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|---------------------|----------------------------------------------------------|
| The input parameter is wrong. (a large number of id)<br><br>{<br>" <b>id</b> ": 13434<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | No data for such id | We may need to add error input judgment for the Backend. |
|                                                                                            | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                     |                                                          |
|                                                                                            | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                     |                                                          |
|                                                                                            | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                     |                                                          |
|                                                                                            | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                     |                                                          |

| Test7.3                                                                                         | Test case                              | Result                                                                        | Fail analyse        | Responses                                                |
|-------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|---------------------|----------------------------------------------------------|
| The input parameter is wrong. (The format of id is wrong)<br><br>{<br>" <b>id</b> ": "aaa"<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | No data for such id | We may need to add error input judgment for the Backend. |
|                                                                                                 | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                     |                                                          |
|                                                                                                 | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                     |                                                          |
|                                                                                                 | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                     |                                                          |
|                                                                                                 | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                     |                                                          |

## Google map

API:<https://digital-phenotyping.herokuapp.com/locationServer/MapCoordinate>

| Test9.1                                 | Test case          | Result | Fail analyse                     | Responses |
|-----------------------------------------|--------------------|--------|----------------------------------|-----------|
| The input parameter is totally correct. | InterfaceErrorTest | Pass   | The output parameter is correct. |           |

|                                                                                  |                                        |      |                                                                             |  |
|----------------------------------------------------------------------------------|----------------------------------------|------|-----------------------------------------------------------------------------|--|
| <pre>{   "uid":6,   "startDate":1641634738549,   "endDate":1641901876549 }</pre> | Successful POST request                | Pass |                                                                             |  |
|                                                                                  | The response should be okay to process | Pass |                                                                             |  |
|                                                                                  | Correct output data format             | Pass |                                                                             |  |
|                                                                                  | Response time is less than 500ms       | Pass |                                                                             |  |
|                                                                                  | Contain Keywords                       | Pass | The output parameter is correct with "lat" and "long" for the location data |  |
|                                                                                  |                                        |      |                                                                             |  |

| Test9.2                                                                                                                                                      | Test case                              | Result                                                                        | Fail analyse                                                              | Responses                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------|
| <p>The input parameter is wrong.<br/><b>(change what is inside "")</b></p> <pre>{   "dhfshfk":6,   "fte":1641634738549,   "ezdfgaegge":1641901876549 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | <p>The wrong input parameter would cause a 500 internet server error.</p> | <p>We may need to add error input judgment for the Backend.</p> |
|                                                                                                                                                              | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                           |                                                                 |
|                                                                                                                                                              | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                           |                                                                 |
|                                                                                                                                                              | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                           |                                                                 |
|                                                                                                                                                              | Response time is less than 500ms       | Fail: AssertionError: expected 3525 to be below 500                           |                                                                           |                                                                 |
|                                                                                                                                                              | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                           |                                                                 |

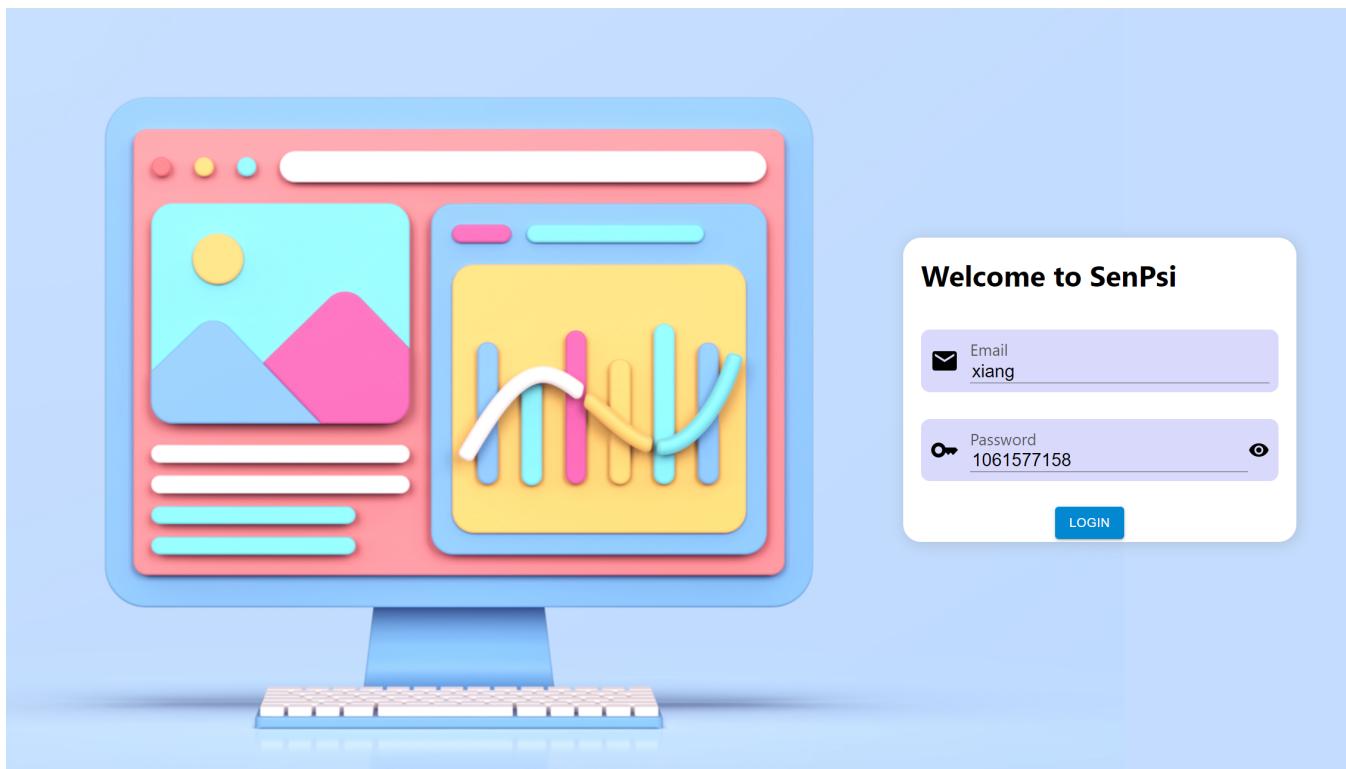
| Test9.3                                                                                                                                                         | Test case                              | Result                                                                        | Fail analyse                                                              | Responses                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------|
| <p>The input parameter is wrong.<br/><b>(change to extremely number)</b></p> <pre>{   "uid":1343242343555,   "startDate":1641634738549,   "endDate":164 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | <p>The wrong input parameter would cause a 500 internet server error.</p> | <p>We may need to add error input judgment for the Backend.</p> |
|                                                                                                                                                                 | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                           |                                                                 |
|                                                                                                                                                                 | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                           |                                                                 |
|                                                                                                                                                                 | Correct output data format             | Fail: AssertionError: expected 0 to deeply equal 4                            |                                                                           |                                                                 |
|                                                                                                                                                                 | Response time is less than 500ms       | Fail: AssertionError: expected 2985 to be below 500                           |                                                                           |                                                                 |
|                                                                                                                                                                 | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                           |                                                                 |

# Sprint7 testing report

Clinician: Matilda

Matilda is a clinician and he wants to use this website to view data about his patient's cell phone usage.

Matilda landed on the homepage of the digital phenotyping platform. Then she inputs her Email address and password to log in.



After successful login, Matilda goes to the homepage to view the list of clients. We changed a lot about the homepage.

The screenshot shows the 'Client Management' section of the SenPsi platform. At the top, there are three cards: 'Total Clients', 'Unique Visitors', and 'Social Media Apps'. Below this is a table titled 'Clients' with columns for Name, Title, Age, Status, Last update, and Action. The table lists six clients:

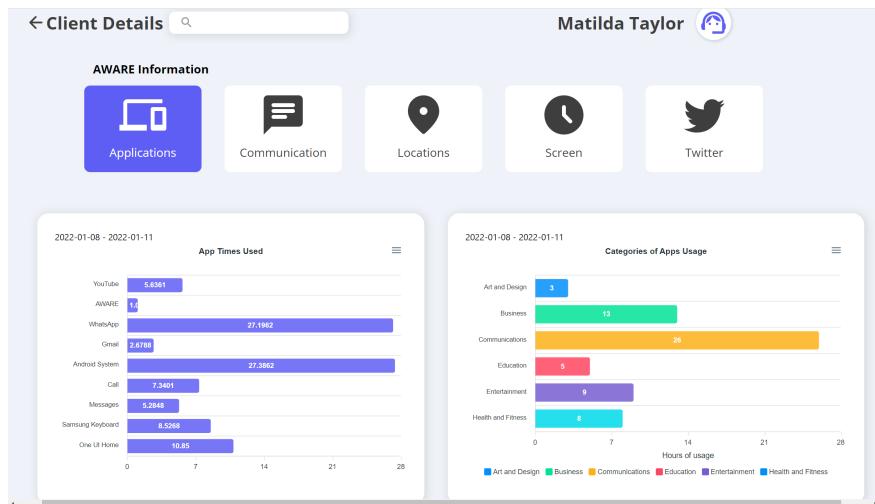
| Name             | Title | Age | Status | Last update | Action                |
|------------------|-------|-----|--------|-------------|-----------------------|
| Tom Garcia       | Ms.   | 36  | Normal | 2022-09-02  | <button>VIEW</button> |
| Jerry Tom        | Mr.   | 55  | Normal | 2022-08-19  | <button>VIEW</button> |
| Chain Smoker     | Mr.   | 45  | Normal | 2022-08-19  | <button>VIEW</button> |
| Anakin Skywalker | Mr.   | 55  | Normal | 2022-08-19  | <button>VIEW</button> |
| Simon Dalfonso   | Dr    | 39  | Normal | 2022-08-21  | <button>VIEW</button> |
| Marvin Bai       | Mr    | 24  | Normal | 2022-08-21  | <button>VIEW</button> |

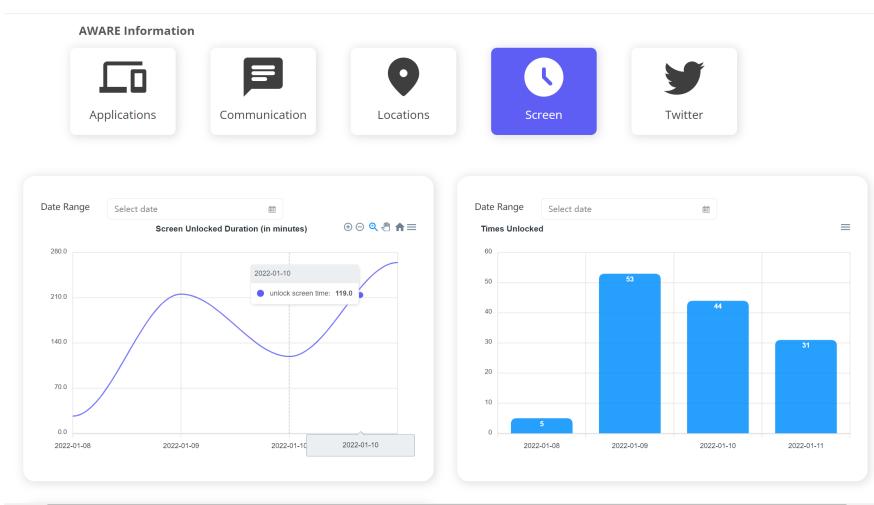
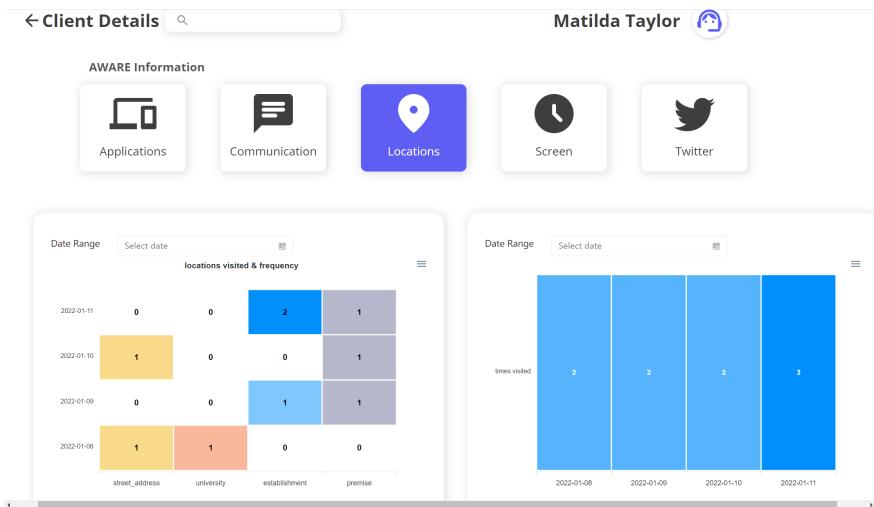
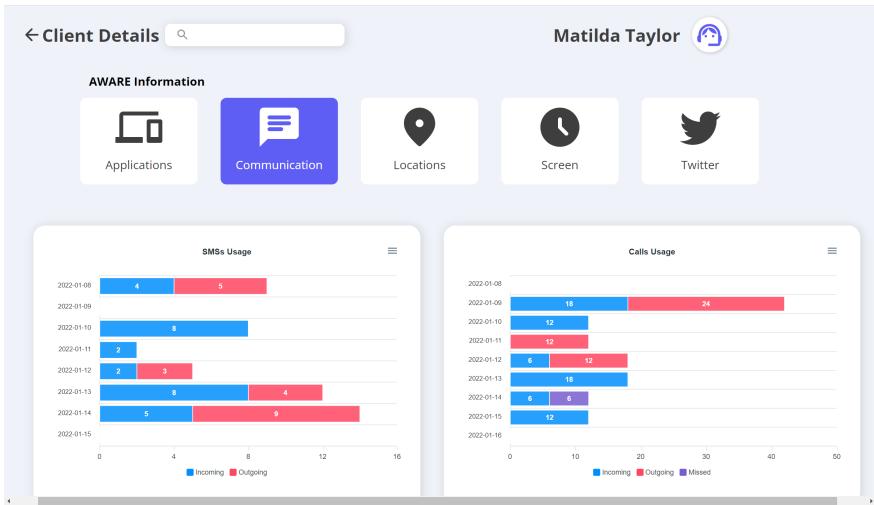
Then she could one client to view the related data so that Matilda could analyse his specific patient.

The screenshot shows a user interface titled 'Client Details' with a search bar. At the top right is a profile picture of 'Matilda Taylor'. Below the title, there's a section titled 'AWARE Information' with five categories: Applications, Communication, Locations, Screen, and Twitter, each represented by an icon. A large callout box contains the text 'Client Name: Tom Garcia' and 'Select an AWARE category to see more details.'

There are 5 buttons that she could select, after Matilda clicks each button the following figures would show as follow.

She could choose the data range of each figure for a better view.



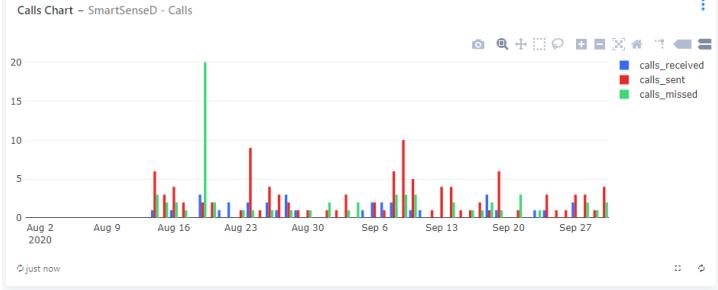
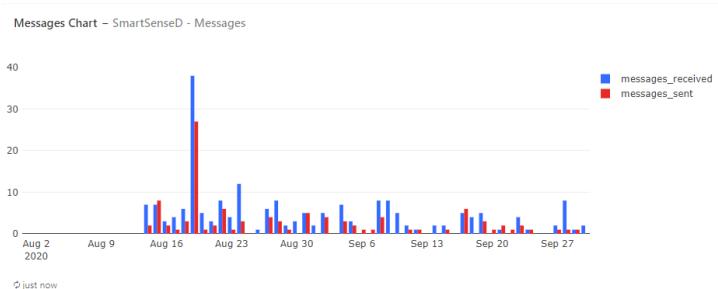
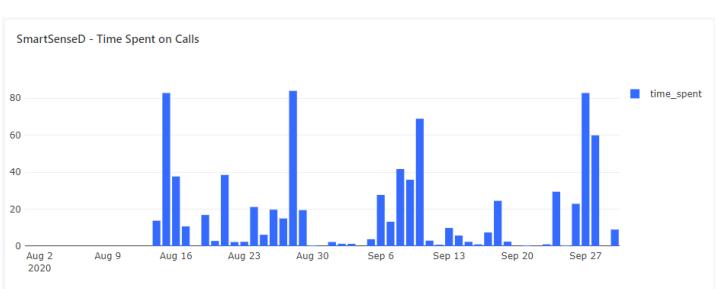


← Client Details  Matilda Taylor

AWARE Information

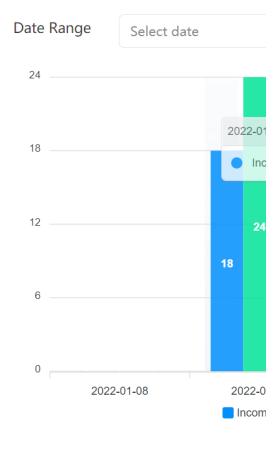
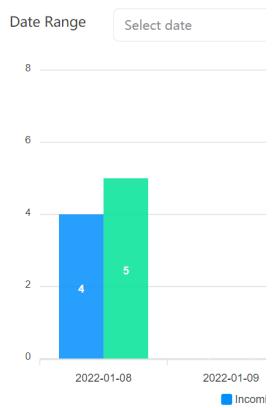
Applications Communication Locations Screen Twitter

## System Testing

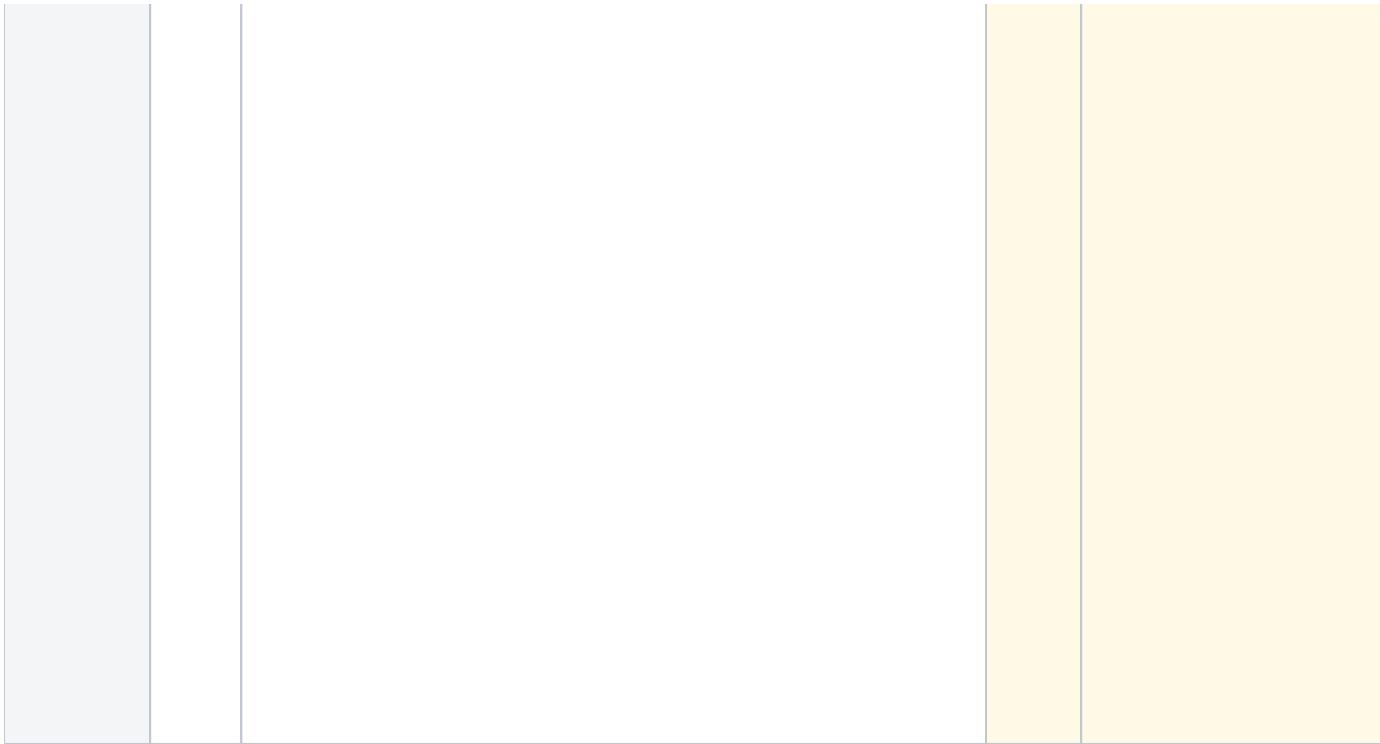
| ID: PB033-S6-ST |                                                                                                              |                                                                                                                                                                                                                                                                      |                                                         |          |
|-----------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|----------|
| Purpose         | The clinician can view multiple parallel bars showing incoming, outgoing and missed calls                    |                                                                                                                                                                                                                                                                      |                                                         |          |
| Prerequisite    | Successfully logged in to the website                                                                        |                                                                                                                                                                                                                                                                      |                                                         |          |
| Test Data       | Valid data from the AWARE smartphone sensing app in the MySQL                                                |                                                                                                                                                                                                                                                                      |                                                         |          |
| Tests           | Steps                                                                                                        | Expected Results                                                                                                                                                                                                                                                     | Pass?                                                   | Comments |
|                 | 1. Matilda clicks the view button to check the data of Tom Garcia.<br>2. Matilda clicks the location button. | <br><br> | Partially passed, we don't have phone time data for now |          |

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needs



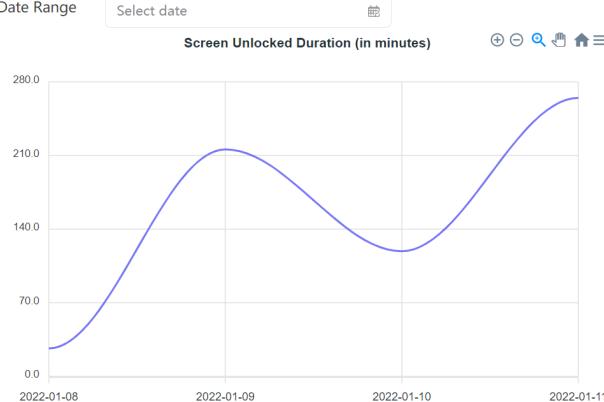
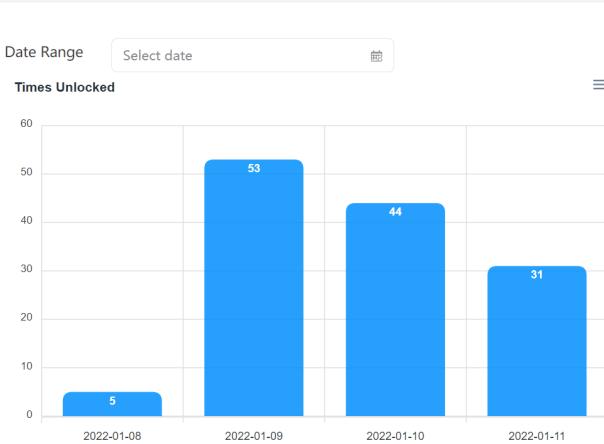
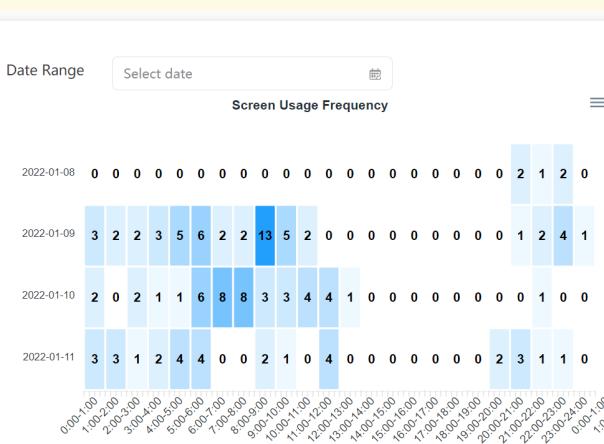
ID: PB034-S6-ST

| Purpose      | The clinician can check a google map diagram for location data |                  |       |          |
|--------------|----------------------------------------------------------------|------------------|-------|----------|
| Prerequisite | Successfully logged in to the website                          |                  |       |          |
| Test Data    | Valid data from the AWARE smartphone sensing app in the MySQL  |                  |       |          |
| Tests        | Steps                                                          | Expected Results | Pass? | Comments |
|              |                                                                |                  |       |          |

|  |                                                                                                                                                                                                                                                                                                                       |                                                                                      |     |  |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----|--|
|  | <p>1. Matilda clicks the view button to check the data of Tom Garcia</p> <p>2. Matilda clicks the communication button</p> <p>3. Then Matilda can select the data range by clicking the select data button</p> <p>4. After Matilda selects the data range that she wants, the figures should show on the website.</p> | The Google map should be shown and the locations should be marked on the Google map. | Yes |  |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----|--|

| ID: PB011-S6-ST |                                                                                                                                                                                            |                                                    |       |                                                                                                                  |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------|------------------------------------------------------------------------------------------------------------------|
| Purpose         | The clinician can view the client's data in a specific period                                                                                                                              |                                                    |       |                                                                                                                  |
| Prerequisite    | Successfully logged in to the website                                                                                                                                                      |                                                    |       |                                                                                                                  |
| Test Data       | Valid data from the AWARE smartphone sensing app in the MySQL                                                                                                                              |                                                    |       |                                                                                                                  |
| Tests           | Steps                                                                                                                                                                                      | Expected Results                                   | Pass? | Comments                                                                                                         |
|                 | <p>1. Then Matilda can select the data range by clicking the select data button</p> <p>2. After Matilda selects the data range that she wants, the figures should show on the website.</p> | The figures are generated with the selected period | Yes   | <p>Now the client could select the period that they want in each diagram so that they can analyse it easier.</p> |

| ID: PB037-S6-ST |                                                                                                      |
|-----------------|------------------------------------------------------------------------------------------------------|
| Purpose         | The clinician can check the day/hour combination heat map for screen usage data for the last 2 weeks |

| <b>Prerequisite</b> | Successfully logged in to the website                                                                                                                                                                                                                                                                                                                                  |                                                                                                                  |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Test Data</b>    | Valid data from the AWARE smartphone sensing app in the MySQL                                                                                                                                                                                                                                                                                                          |                                                                                                                  |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Tests               | Steps                                                                                                                                                                                                                                                                                                                                                                  | Expected Results                                                                                                 | Pass? | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                     | <ol style="list-style-type: none"> <li>1. Matilda clicks the view button to check the data of Tom Garcia</li> <li>2. Matilda clicks the communication button</li> <li>3. Then Matilda can select the data range by clicking the select data button</li> <li>4. After Matilda selects the data range that she wants, the figures should show on the website.</li> </ol> | The clinician could check the day/hour combination heat map for screen usage data so they can analyse it easier. | Yes   | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Date Range <input type="text" value="Select date"/> </p>  </div> <div style="width: 45%;"> <p>Date Range <input type="text" value="Select date"/> </p>  </div> </div><br><div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Date Range <input type="text" value="Select date"/> </p>  </div> </div> |

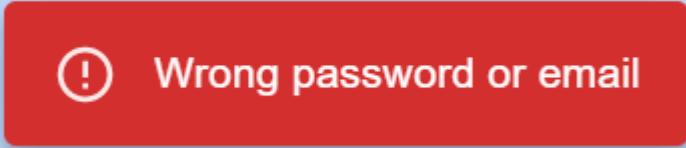
## Integration Testing

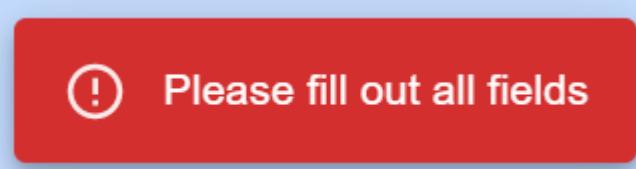
We use simple JWT to generate a token for authentication.

After each successful login, a token will be returned for security verification. So every time we want to test the APIs, in addition to the "login" API, we need to add a Token within 24 hours.

**API:** <https://digital-phenotyping.herokuapp.com/login/>

| Test                                                                                                     | Test case                              | Result | Fail analyse                     | Responses                                              |
|----------------------------------------------------------------------------------------------------------|----------------------------------------|--------|----------------------------------|--------------------------------------------------------|
| The input parameter is totally correct.<br><br>{<br>"username":"Matilda",<br>"password":"P@ssword2"<br>} | InterfaceErrorTest                     | Pass   | The output parameter is correct. |                                                        |
|                                                                                                          | Successful POST request                | Pass   |                                  |                                                        |
|                                                                                                          | The response should be okay to process | Pass   |                                  |                                                        |
|                                                                                                          | Correct output data format             | Pass   |                                  |                                                        |
|                                                                                                          | Response time is less than 500ms       | Pass   | Fix it in sprint 3               | We deploy the server again and change it to Australia. |
|                                                                                                          | The correct format of the token        | Pass   | The token is the correct format  |                                                        |

| Test                                                                                    | Test case                              | Result                                                                                | Fail analyse                                                    | Responses                                                                                                                                                             |
|-----------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The input password is wrong.<br><br>{<br>"username":"Matilda",<br>"password":"zzz"<br>} | InterfaceErrorTest                     | AssertionError: expected response to have status code 200 but got 401                 | The wrong input parameter would cause a 401 Unauthorized error. | <br><br>Every time the input ID or password is incorrect, there is a popup about it |
|                                                                                         | Successful POST request                | AssertionError: expected 401 to be one of [ 200, 202 ]                                |                                                                 |                                                                                                                                                                       |
|                                                                                         | The response should be okay to process | AssertionError: expected response code to not be 4XX or 5XX                           |                                                                 |                                                                                                                                                                       |
|                                                                                         | Correct output data format             | AssertionError: expected response to have status reason 'OK' but got 'UNAUTHORIZED'   |                                                                 |                                                                                                                                                                       |
|                                                                                         | Response time is less than 500ms       | AssertionError: expected 533 to be below 500                                          |                                                                 |                                                                                                                                                                       |
|                                                                                         | The correct format of token            | AssertionError: expected { Object (detail) } in response to contain property 'access' |                                                                 |                                                                                                                                                                       |

| Test                                                                            | Test case                              | Result                                                                              | Fail analyse                                                    | Responses                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The input password is wrong.<br><br>{<br>"username": "",<br>"password": ""<br>} | InterfaceErrorTest                     | AssertionError: expected response to have status code 200 but got 401               | The wrong input parameter would cause a 401 Unauthorized error. | <br><br>In FrontEnd, if we find that the user clicks the login button without inputting ID or password, there would be a popup. |
|                                                                                 | Successful POST request                | AssertionError: expected 401 to be one of [ 200, 202 ]                              |                                                                 |                                                                                                                                                                                                                     |
|                                                                                 | The response should be okay to process | AssertionError: expected response code to not be 4XX or 5XX                         |                                                                 |                                                                                                                                                                                                                     |
|                                                                                 | Correct output data format             | AssertionError: expected response to have status reason 'OK' but got 'UNAUTHORIZED' |                                                                 |                                                                                                                                                                                                                     |
|                                                                                 | Response time is less than 500ms       | AssertionError: expected 533 to be below 500                                        |                                                                 |                                                                                                                                                                                                                     |

|                             |                                                                                       |  |  |  |
|-----------------------------|---------------------------------------------------------------------------------------|--|--|--|
| The correct format of token | AssertionError: expected { Object (detail) } in response to contain property 'access' |  |  |  |
|-----------------------------|---------------------------------------------------------------------------------------|--|--|--|

We change the correct uid from 6 to 9 in the BackEnd.

API: <https://digital-phenotyping.herokuapp.com/appForeground/>

| Test1.1                                                                                                                    | Test case                              | Result | Fail analyse                     | Responses                                                                    |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------|----------------------------------|------------------------------------------------------------------------------|
| The input parameter is totally correct.<br><br>{<br>"uid":6,<br>"startDate":1641634738549,<br>"endDate":1641901876549<br>} | InterfaceErrorTest                     | Pass   | The output parameter is correct. |                                                                              |
|                                                                                                                            | Successful POST request                | Pass   |                                  |                                                                              |
|                                                                                                                            | The response should be okay to process | Pass   |                                  |                                                                              |
|                                                                                                                            | Correct output data format             | Pass   |                                  |                                                                              |
|                                                                                                                            | Response time is less than 500ms       | Pass   |                                  | Fix it in sprint 3<br>We deploy the server again and change it to Australia. |

| Test1.2                                                                                                                                            | Test case                              | Result                                                                      | Fail analyse                                                       | Responses                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change what is inside "")<br><br>{<br>"dhfshfk":6,<br>"stfdsffte":1641634738549,<br>"ezdfgaegge":1641901876549<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to have status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                    | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                |                                                                    |                                                          |
|                                                                                                                                                    | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX           |                                                                    |                                                          |
|                                                                                                                                                    | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:<!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                                    | Response time is less than 500ms       | Fail: AssertionError: expected 3820 to be below 500                         |                                                                    |                                                          |

| Test1.3                                                                                                                                           | Test case                              | Result                                              | Fail analyse                                             | Responses                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------|
| The input parameter is wrong. (change e to extremely number)<br><br>{<br>"uid":1343242343555,<br>"startDate":1641634738549,<br>"endDate":164<br>} | InterfaceErrorTest                     | Pass                                                | The output is fine with null with the correct format.    |                                                        |
|                                                                                                                                                   | Successful POST request                | Pass                                                |                                                          |                                                        |
|                                                                                                                                                   | The response should be okay to process | Pass                                                |                                                          |                                                        |
|                                                                                                                                                   | Correct output data format             | Pass                                                |                                                          |                                                        |
|                                                                                                                                                   | Response time is less than 500ms       | Fail: AssertionError: expected 3485 to be below 500 | Accidentally chose a US region for the Heroku deployment | We need to change it to Australia next sprint.         |
|                                                                                                                                                   |                                        | Pass                                                | Fix it in sprint 3                                       | We deploy the server again and change it to Australia. |

API: <https://digital-phenotyping.herokuapp.com/sms/>

| Test2.1                                                                                                                    | Test case                              | Result                                              | Fail analyse                                             | Responses                                              |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------|
| The input parameter is totally correct.<br><br>{<br>"uid":6,<br>"startDate":1641634738549,<br>"endDate":1641901876549<br>} | InterfaceErrorTest                     | Pass                                                | The output parameter is correct.                         |                                                        |
|                                                                                                                            | Successful POST request                | Pass                                                |                                                          |                                                        |
|                                                                                                                            | The response should be okay to process | Pass                                                |                                                          |                                                        |
|                                                                                                                            | Correct output data format             | Pass                                                |                                                          |                                                        |
|                                                                                                                            | Response time is less than 500ms       | Fail: AssertionError: expected 2284 to be below 500 | Accidentally chose a US region for the Heroku deployment | We need to change it to Australia next sprint.         |
|                                                                                                                            |                                        | Pass                                                | Fix it in sprint 3                                       | We deploy the server again and change it to Australia. |

| Test2.2                                                  | Test case          | Result                                                                        | Fail analyse                                                       | Responses                                                |
|----------------------------------------------------------|--------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change what is inside "") | InterfaceErrorTest | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |

|                                                                                     |                                        |                                                                   |  |  |
|-------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------|--|--|
| <pre>{   "dhfshfk":6,   "ffte":1641634738549,   "ezdfgaegge":1641901876 549 }</pre> | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]      |  |  |
|                                                                                     | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX |  |  |
|                                                                                     | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^    |  |  |
|                                                                                     | Response time is less than 500ms       | Fail: AssertionError: expected 3820 to be below 500               |  |  |

| Test2.3                                                                                                                                                        | Test case                              | Result                                                      | Fail analyse                                                                   | Responses                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| The input parameter is wrong.( <b>change to extremely number</b> ) <pre>{   "uid":1343242343555,   "startDate":1641634738549,   "endDate":164 }</pre> 549 6549 | InterfaceErrorTest                     | Pass                                                        | No connection issue.                                                           |                                                                                                          |
|                                                                                                                                                                | Successful POST request                | Pass                                                        |                                                                                |                                                                                                          |
|                                                                                                                                                                | The response should be okay to process | Pass                                                        |                                                                                |                                                                                                          |
|                                                                                                                                                                | Correct output data format             | Fail: AssertionError: expected 0 to deeply equal 3          | The output parameter is in the wrong format                                    | We may need to add error input judgment for the Backend.                                                 |
|                                                                                                                                                                | Response time is less than 500ms       | Fail: AssertionError: expected 1023 to be below 500<br>Pass | Accidentally chose a US region for the Heroku deployment<br>Fix it in sprint 3 | We need to change it to Australia next sprint.<br>We deploy the server again and change it to Australia. |

API: <https://digital-phenotyping.herokuapp.com/dataServer/calls>

| Test3.1                                                                                                                        | Test case                              | Result                                              | Fail analyse                                               | Responses                                      |
|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|------------------------------------------------------------|------------------------------------------------|
| The input parameter is totally correct. <pre>{   "uid":6,   "startDate":1641634738549,   "endDate":1641901877 549 6549 }</pre> | InterfaceErrorTest                     | Pass                                                | The output parameter is correct.                           |                                                |
|                                                                                                                                | Successful POST request                | Pass                                                |                                                            |                                                |
|                                                                                                                                | The response should be okay to process | Pass                                                |                                                            |                                                |
|                                                                                                                                | Correct output data format             | Pass                                                |                                                            |                                                |
|                                                                                                                                | Response time is less than 500ms       | Fail: AssertionError: expected 3089 to be below 500 | Accidentally chose a US region for the Heroku deployment   | We need to change it to Australia next sprint. |
|                                                                                                                                | Contain Keywords                       | Pass                                                | The output parameter is correct with "success" and "data". |                                                |

| Test3.2                                                                                                                                              | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. ( <b>change what is inside""</b> ) <pre>{   "dhfshfk":6,   "ffte":1641634738549,   "ezdfgaegge":1641901876 549 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                      | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                      | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                      | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                                      | Response time is less than 500ms       | Fail: AssertionError: expected 3525 to be below 500                           |                                                                    |                                                          |
|                                                                                                                                                      | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

| Test3.3                                                                                                                                                | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. ( <b>change to extremely number</b> ) <pre>{   "uid":1343242343555,   "startDate":1641634738549,   "endDate":164 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                        | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                        | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |

|                                  |                                                                |  |
|----------------------------------|----------------------------------------------------------------|--|
| Correct output data format       | Fail: AssertionError: expected 0 to deeply equal 4             |  |
| Response time is less than 500ms | Fail: AssertionError: expected 2985 to be below 500            |  |
| Contain Keywords                 | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^ |  |

API: <https://digital-phenotyping.herokuapp.com/NumbersOfLocation/>

| Test4.1                                                                                      | Test case                              | Result                                              | Fail analyse                     | Responses                                                                        |
|----------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|----------------------------------|----------------------------------------------------------------------------------|
| The input parameter is totally correct.<br><br>{<br>"uid":6,<br>"endDate":1641901876549<br>} | InterfaceErrorTest                     | Pass                                                | The output parameter is correct. |                                                                                  |
|                                                                                              | Successful POST request                | Pass                                                |                                  |                                                                                  |
|                                                                                              | The response should be okay to process | Pass                                                |                                  |                                                                                  |
|                                                                                              | Correct output data format             | Pass                                                |                                  |                                                                                  |
|                                                                                              | Response time is less than 500ms       | Fail: AssertionError: expected 1084 to be below 500 |                                  | We need to change it to Australia next sprint.                                   |
|                                                                                              |                                        | Pass                                                |                                  | Fix it in sprint 3<br><br>We deploy the server again and change it to Australia. |

| Test4.2                                                                                                                  | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|--------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change what is inside "")<br><br>{<br>"dhfshfk":6,<br>"ezdfdfdfgaegge":1641901876549<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                          | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                          | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                          | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                          | Response time is less than 500ms       | Fail: AssertionError: expected 1920 to be below 500                           |                                                                    |                                                          |

| Test4.3                                                                                                           | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|-------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change to extremely number)<br><br>{<br>"uid":1343242343555,<br>"endDate":164<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                   | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                   | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                   | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                   | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                                                                    |                                                          |

API: <https://digital-phenotyping.herokuapp.com/screenServer/ScreenUnlocked>

| Test5.1                                                                                      | Test case                              | Result | Fail analyse                     | Responses |
|----------------------------------------------------------------------------------------------|----------------------------------------|--------|----------------------------------|-----------|
| The input parameter is totally correct.<br><br>{<br>"uid":6,<br>"endDate":1641901876549<br>} | InterfaceErrorTest                     | Pass   | The output parameter is correct. |           |
|                                                                                              | Successful POST request                | Pass   |                                  |           |
|                                                                                              | The response should be okay to process | Pass   |                                  |           |
|                                                                                              | Correct output data format             | Pass   |                                  |           |
|                                                                                              | Response time is less than 500ms       | Pass   |                                  |           |

| Test5.2                                                  | Test case          | Result                                                                        | Fail analyse                                                       | Responses                                                |
|----------------------------------------------------------|--------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change what is inside "") | InterfaceErrorTest | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |

|                                                   |                                        |                                                                   |  |
|---------------------------------------------------|----------------------------------------|-------------------------------------------------------------------|--|
| <pre>{   "uid":6,   "dfsfe":1646409600000 }</pre> | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]      |  |
|                                                   | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX |  |
|                                                   | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^    |  |
|                                                   | Response time is less than 500ms       | Fail: AssertionError: expected 1920 to be below 500               |  |

| Test5.3                                                                                                                      | Test case                              | Result                                                                        | Fail analyse                                                                                                                   | Responses |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------|
| Test5.3                                                                                                                      | Test case                              | Result                                                                        | Fail analyse                                                                                                                   | Responses |
| The input parameter is wrong.( <b>change to extremely number</b> ) <pre>{   "uid":3782498,   "endDate":1646409600000 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error.<br>We may need to add error input judgment for the Backend. |           |
|                                                                                                                              | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                                                                                |           |
|                                                                                                                              | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                                                                                |           |
|                                                                                                                              | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                                                                                |           |
|                                                                                                                              | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                                                                                                                                |           |

AddClient

API: <https://digital-phenotyping.herokuapp.com/userServer/AddClient>

| Test6.1                                                                                                                                                                                                                                                                                           | Test case                              | Result | Fail analyse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Responses |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| The input parameter is totally correct. <pre>{   "clinicianId":1,   "clientTitle":"Mr",   "firstName":"Jay",   "lastName":"Wong",   "dateOfBirth":"1991-01-01",   "textNotes":"testing",   "twitterId:"PlayStation",   "facebookId":3",   "awareDeviceId":"asdas-asfagASF-asdasdas-adsas" }</pre> | InterfaceErrorTest                     | Pass   | Then we use the ClientInfo API can get the information of the client that we just added <pre>{   "uid": 36,   "clinician_id": "1",   "client_title": "Mr",   "first_name": "Jay",   "last_name": "Wong",   "date_of_birth": "1991-01-01",   "age": 31,   "text_notes": "testing",   "status": "Normal",   "twitter_id": "PlayStation",   "facebook_id": "3",   "aware_device_id": "asdas-asfagASF-asdasdas-adsas",   "last_update": "2022-08-31T23:31:45Z",   "twitter_id_int": 10671602 }</pre> |           |
|                                                                                                                                                                                                                                                                                                   | Successful POST request                | Pass   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |
|                                                                                                                                                                                                                                                                                                   | The response should be okay to process | Pass   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |
|                                                                                                                                                                                                                                                                                                   | Correct output data format             | Pass   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |
|                                                                                                                                                                                                                                                                                                   | Response time is less than 500ms       | Pass   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |

| Test6.2                                                                                                                                                                                                                                                                                                         | Test case                              | Result                                                                        | Fail analyse                                                               | Responses                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------|
| The input parameter is wrong. (The Twitter Id does not exist) <pre>{   "clinicianId":"aa",   "clientTitle":"Mr",   "firstName":"Jay",   "lastName":"Wong",   "dateOfBirth":"1991-01-01",   "textNotes":"testing",   "twitterId":1,   "facebookId":3",   "awareDeviceId":"asdas-asfagASF-asdasdas-adsas" }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The Twitter Id does not exist which means we cannot add such a new client. | Return "The Twitter Id does not exist" to remind the user |
|                                                                                                                                                                                                                                                                                                                 | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                            |                                                           |
|                                                                                                                                                                                                                                                                                                                 | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                            |                                                           |
|                                                                                                                                                                                                                                                                                                                 | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                            |                                                           |
|                                                                                                                                                                                                                                                                                                                 | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                                                                            |                                                           |

| Test6.3                                                                                                                                                                                                                                                                                                                                                                                              | Test case                              | Result | Fail analyse                        | Responses                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------|-------------------------------------|---------------------------------------------------------------|
| The input parameter is wrong. (The format of clinicianId is wrong) <pre>{         "clinicianId": "aa",         "clientTitle": "Mr",         "firstName": "Jay",         "lastName": "Wong",         "dateOfBirth": "1991-01-01",         "textNotes": "testing",         "twitterId": "PlayStation",         "facebookId": "3",         "awareDeviceId": "asdas-asfagasfasdadas-dadas"       }</pre> | InterfaceErrorTest                     | Pass   | Return 200 while it should be wrong | We should check the format of the clinicianId in the Backend. |
|                                                                                                                                                                                                                                                                                                                                                                                                      | Successful POST request                | Pass   |                                     |                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                      | The response should be okay to process | Pass   |                                     |                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                      | Correct output data format             | Pass   |                                     |                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                      | Response time is less than 500ms       | Pass   |                                     |                                                               |

## Client Info List

API:<https://digital-phenotyping.herokuapp.com/userServer/ClientInfoList>

| Test7.1                                                                      | Test case                              | Result | Fail analyse | Responses |
|------------------------------------------------------------------------------|----------------------------------------|--------|--------------|-----------|
| The input parameter is totally correct. <pre>{         "id": 1       }</pre> | InterfaceErrorTest                     | Pass   |              |           |
|                                                                              | Successful POST request                | Pass   |              |           |
|                                                                              | The response should be okay to process | Pass   |              |           |
|                                                                              | Correct output data format             | Pass   |              |           |
|                                                                              | Response time is less than 500 ms      | Pass   |              |           |

| Test7.2                                                                                       | Test case                              | Result                                                                        | Fail analyse        | Responses                                                |
|-----------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|---------------------|----------------------------------------------------------|
| The input parameter is wrong. (a large number of id) <pre>{         "id": 13434       }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | No data for such id | We may need to add error input judgment for the Backend. |
|                                                                                               | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                     |                                                          |
|                                                                                               | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                     |                                                          |
|                                                                                               | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                     |                                                          |
|                                                                                               | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                     |                                                          |

| Test7.3                                                                                            | Test case                              | Result                                                                        | Fail analyse        | Responses                                                |
|----------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|---------------------|----------------------------------------------------------|
| The input parameter is wrong. (The format of id is wrong) <pre>{         "id": "aaa"       }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | No data for such id | We may need to add error input judgment for the Backend. |
|                                                                                                    | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                     |                                                          |
|                                                                                                    | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                     |                                                          |
|                                                                                                    | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                     |                                                          |
|                                                                                                    | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                     |                                                          |

## Google map

API:<https://digital-phenotyping.herokuapp.com/locationServer/MapCoordinate>

| Test9.1                                 | Test case          | Result | Fail analyse                     | Responses |
|-----------------------------------------|--------------------|--------|----------------------------------|-----------|
| The input parameter is totally correct. | InterfaceErrorTest | Pass   | The output parameter is correct. |           |

|                                                                                  |                                        |      |                                                                             |  |
|----------------------------------------------------------------------------------|----------------------------------------|------|-----------------------------------------------------------------------------|--|
| <pre>{   "uid":6,   "startDate":1641634738549,   "endDate":1641901876549 }</pre> | Successful POST request                | Pass |                                                                             |  |
|                                                                                  | The response should be okay to process | Pass |                                                                             |  |
|                                                                                  | Correct output data format             | Pass |                                                                             |  |
|                                                                                  | Response time is less than 500ms       | Pass |                                                                             |  |
|                                                                                  | Contain Keywords                       | Pass | The output parameter is correct with "lat" and "long" for the location data |  |
|                                                                                  |                                        |      |                                                                             |  |

| Test9.2                                                                                                                                                      | Test case                              | Result                                                                        | Fail analyse                                                              | Responses                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------|
| <p>The input parameter is wrong.<br/><b>(change what is inside "")</b></p> <pre>{   "dhfshfk":6,   "fte":1641634738549,   "ezdfgaegge":1641901876549 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | <p>The wrong input parameter would cause a 500 internet server error.</p> | <p>We may need to add error input judgment for the Backend.</p> |
|                                                                                                                                                              | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                           |                                                                 |
|                                                                                                                                                              | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                           |                                                                 |
|                                                                                                                                                              | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                           |                                                                 |
|                                                                                                                                                              | Response time is less than 500ms       | Fail: AssertionError: expected 3525 to be below 500                           |                                                                           |                                                                 |
|                                                                                                                                                              | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                           |                                                                 |

| Test9.3                                                                                                                                                         | Test case                              | Result                                                                        | Fail analyse                                                              | Responses                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------|
| <p>The input parameter is wrong.<br/><b>(change to extremely number)</b></p> <pre>{   "uid":1343242343555,   "startDate":1641634738549,   "endDate":164 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | <p>The wrong input parameter would cause a 500 internet server error.</p> | <p>We may need to add error input judgment for the Backend.</p> |
|                                                                                                                                                                 | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                           |                                                                 |
|                                                                                                                                                                 | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                           |                                                                 |
|                                                                                                                                                                 | Correct output data format             | Fail: AssertionError: expected 0 to deeply equal 4                            |                                                                           |                                                                 |
|                                                                                                                                                                 | Response time is less than 500ms       | Fail: AssertionError: expected 2985 to be below 500                           |                                                                           |                                                                 |
|                                                                                                                                                                 | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                           |                                                                 |

# Sprint8&Sprint9 testing report

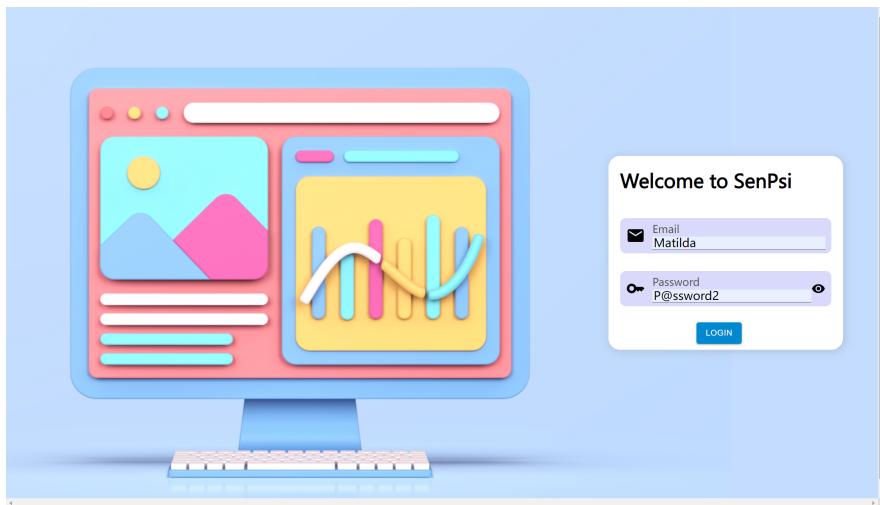
Because there is no functional user story about the project in the final sprint, we combine two testing reports together.

If the clinician wants to use our website, he/she needs an account for it.

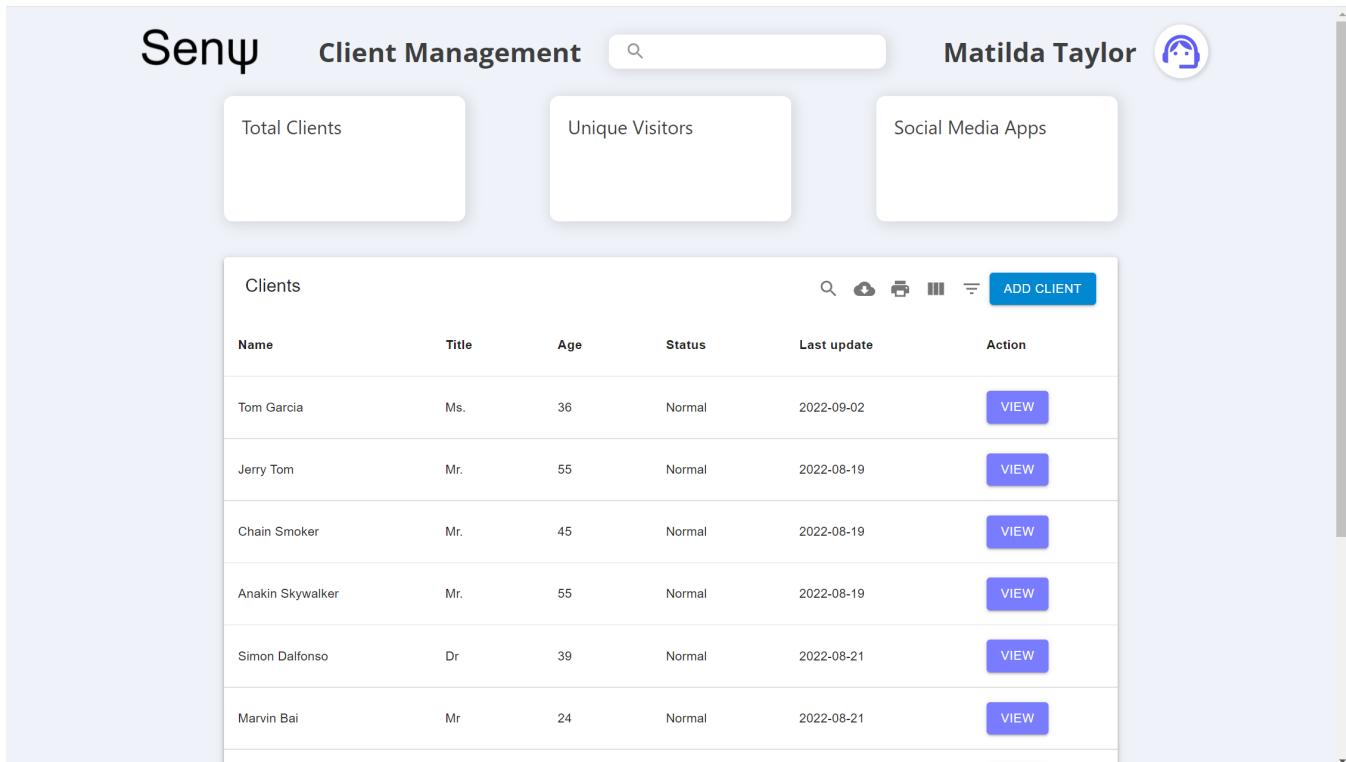
Clinician: Matilda

Matilda is a clinician and he wants to use this website to view data about his patient's cell phone usage.

Matilda landed on the homepage of the digital phenotyping platform. Then she inputs her Email address and password to log in.



After successful login, Matilda goes to the homepage to view the list of clients. We changed a lot about the homepage.



| Name             | Title | Age | Status | Last update | Action                |
|------------------|-------|-----|--------|-------------|-----------------------|
| Tom Garcia       | Ms.   | 36  | Normal | 2022-09-02  | <button>VIEW</button> |
| Jerry Tom        | Mr.   | 55  | Normal | 2022-08-19  | <button>VIEW</button> |
| Chain Smoker     | Mr.   | 45  | Normal | 2022-08-19  | <button>VIEW</button> |
| Anakin Skywalker | Mr.   | 55  | Normal | 2022-08-19  | <button>VIEW</button> |
| Simon Dalfonso   | Dr    | 39  | Normal | 2022-08-21  | <button>VIEW</button> |
| Marvin Bai       | Mr    | 24  | Normal | 2022-08-21  | <button>VIEW</button> |

Then she could one client to view the related data so that Matilda could analyse his specific patient.

← Client Details  Matilda Taylor 

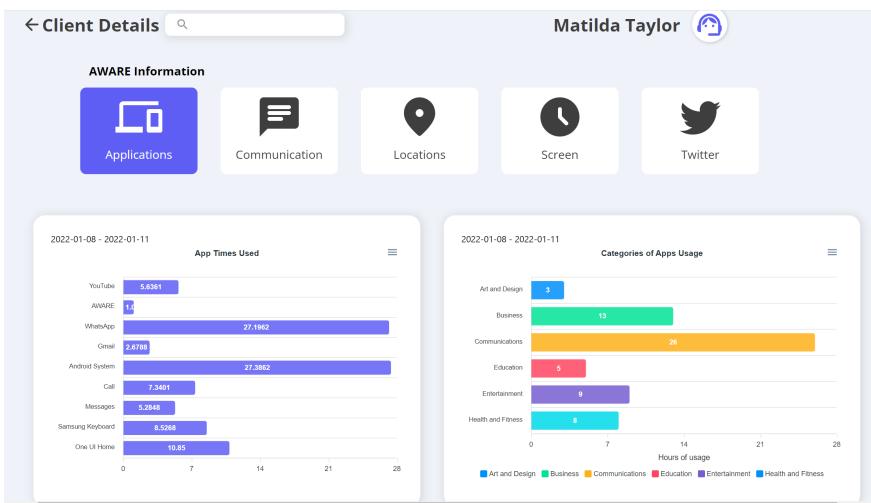
AWARE Information

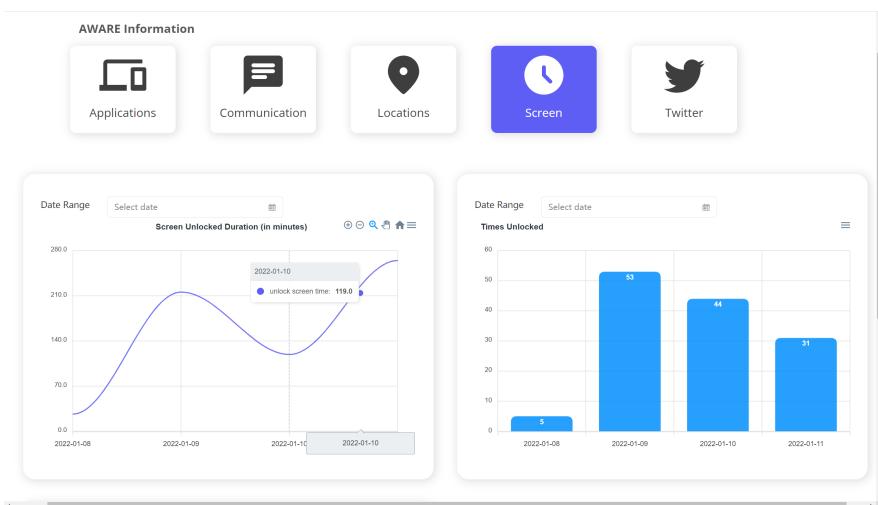
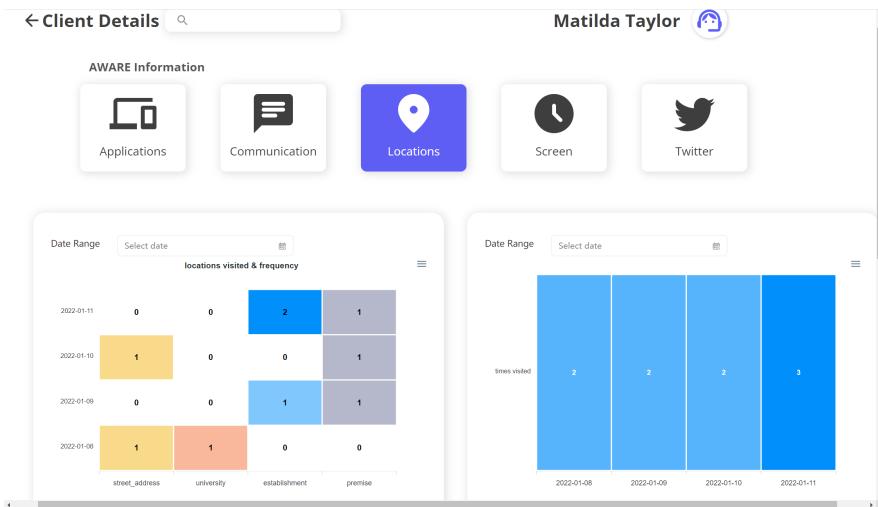
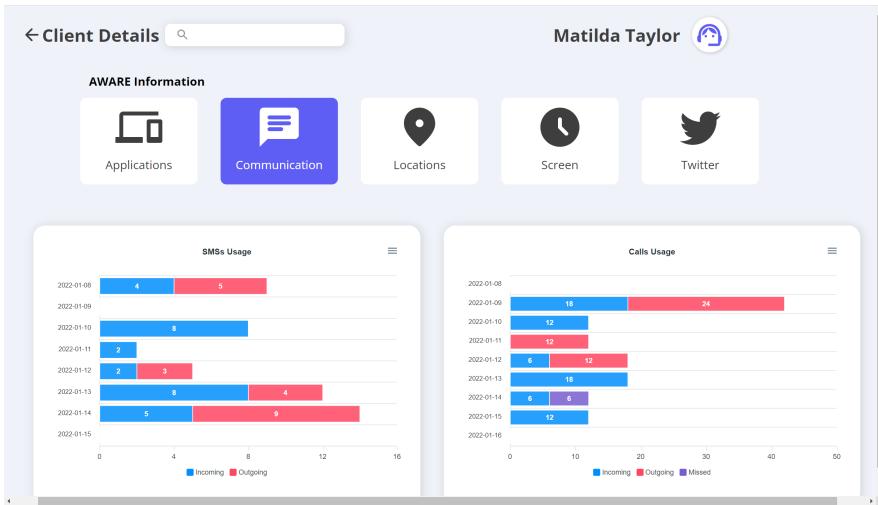
Applications Communication Locations Screen Twitter

Client Name: Tom Garcia  
Select an AWARE category to see more details.

There are 5 buttons that she could select, after Matilda clicks each button the following figures would show as follow.

She could choose the data range of each figure for a better view.



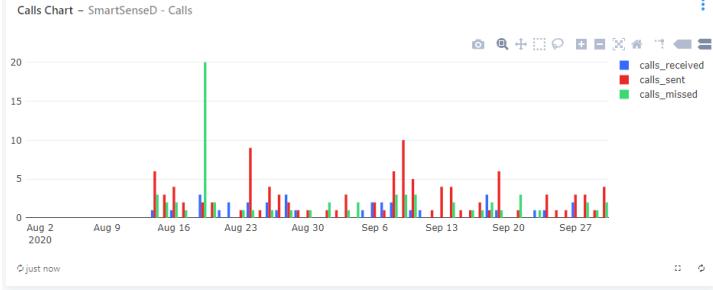
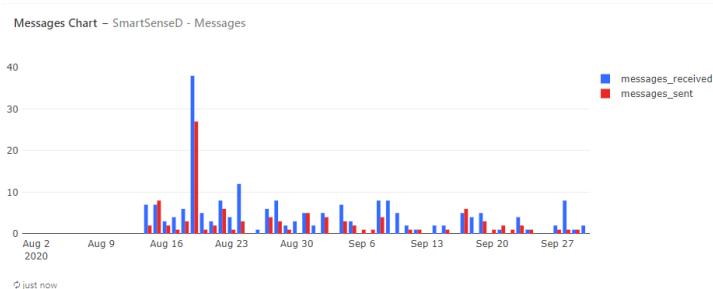
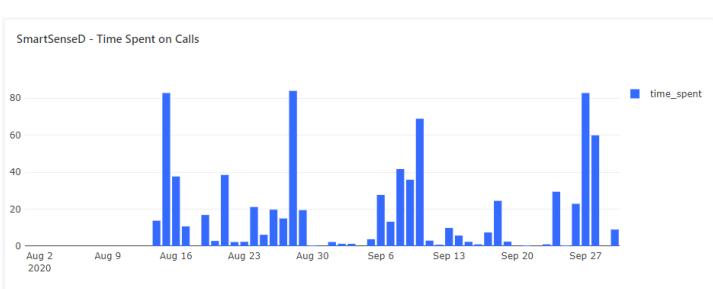


← Client Details  Matilda Taylor

AWARE Information

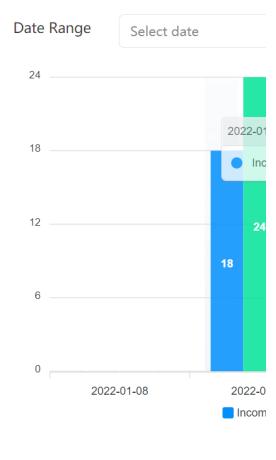
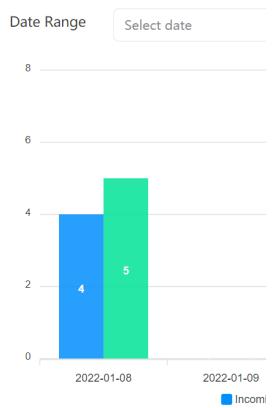
Applications Communication Locations Screen Twitter

## System Testing

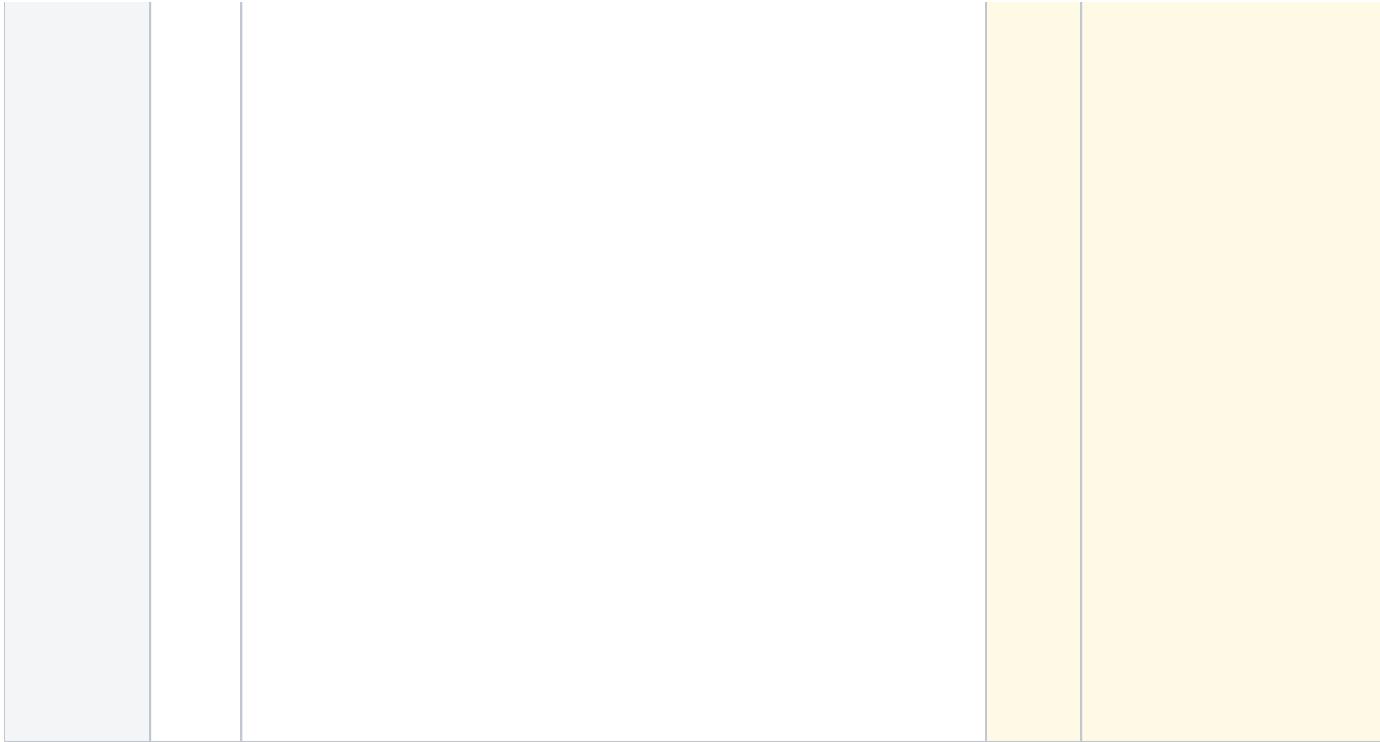
| ID: PB033-S8-ST |                                                                                                              |                                                                                                                                                                                                                                                                      |                                                         |          |
|-----------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|----------|
| Purpose         | The clinician can view multiple parallel bars showing incoming, outgoing and missed calls                    |                                                                                                                                                                                                                                                                      |                                                         |          |
| Prerequisite    | Successfully logged in to the website                                                                        |                                                                                                                                                                                                                                                                      |                                                         |          |
| Test Data       | Valid data from the AWARE smartphone sensing app in the MySQL                                                |                                                                                                                                                                                                                                                                      |                                                         |          |
| Tests           | Steps                                                                                                        | Expected Results                                                                                                                                                                                                                                                     | Pass?                                                   | Comments |
|                 | 1. Matilda clicks the view button to check the data of Tom Garcia.<br>2. Matilda clicks the location button. | <br><br> | Partially passed, we don't have phone time data for now |          |

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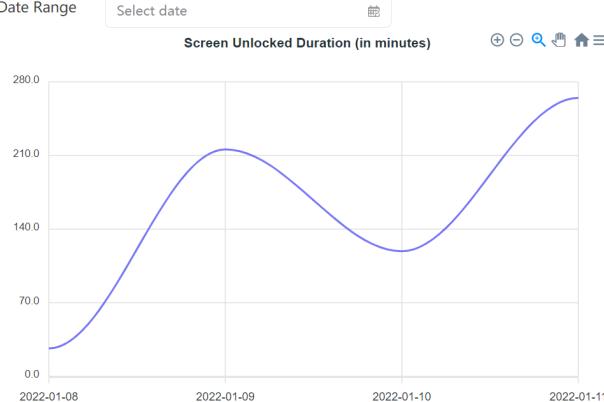
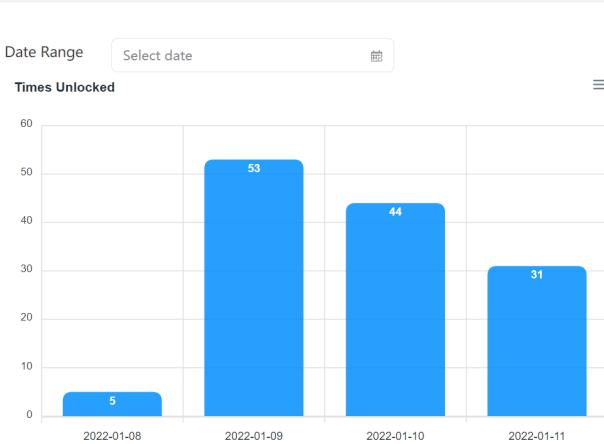
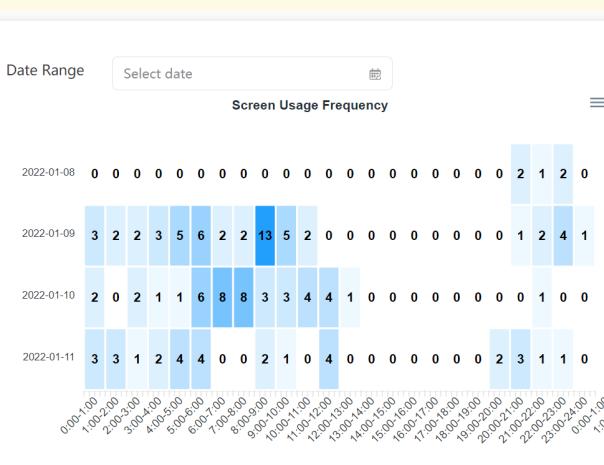
ID: PB034-S8-ST

| Purpose      | The clinician can check a google map diagram for location data |                  |       |          |
|--------------|----------------------------------------------------------------|------------------|-------|----------|
| Prerequisite | Successfully logged in to the website                          |                  |       |          |
| Test Data    | Valid data from the AWARE smartphone sensing app in the MySQL  |                  |       |          |
| Tests        | Steps                                                          | Expected Results | Pass? | Comments |
|              |                                                                |                  |       |          |

|  |                                                                                                                                                                                                                                                                                                                       |                                                                                      |     |  |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----|--|
|  | <p>1. Matilda clicks the view button to check the data of Tom Garcia</p> <p>2. Matilda clicks the communication button</p> <p>3. Then Matilda can select the data range by clicking the select data button</p> <p>4. After Matilda selects the data range that she wants, the figures should show on the website.</p> | The Google map should be shown and the locations should be marked on the Google map. | Yes |  |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----|--|

| ID: PB011-S8-ST |                                                                                                                                                                                            |                                                    |       |                                                                                                                  |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------|------------------------------------------------------------------------------------------------------------------|
| Purpose         | The clinician can view the client's data in a specific period                                                                                                                              |                                                    |       |                                                                                                                  |
| Prerequisite    | Successfully logged in to the website                                                                                                                                                      |                                                    |       |                                                                                                                  |
| Test Data       | Valid data from the AWARE smartphone sensing app in the MySQL                                                                                                                              |                                                    |       |                                                                                                                  |
| Tests           | Steps                                                                                                                                                                                      | Expected Results                                   | Pass? | Comments                                                                                                         |
|                 | <p>1. Then Matilda can select the data range by clicking the select data button</p> <p>2. After Matilda selects the data range that she wants, the figures should show on the website.</p> | The figures are generated with the selected period | Yes   | <p>Now the client could select the period that they want in each diagram so that they can analyse it easier.</p> |

| ID: PB037-S8-ST |                                                                                                      |
|-----------------|------------------------------------------------------------------------------------------------------|
| Purpose         | The clinician can check the day/hour combination heat map for screen usage data for the last 2 weeks |

| <b>Prerequisite</b> | Successfully logged in to the website                                                                                                                                                                                                                                                                                                                                  |                                                                                                                  |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Test Data</b>    | Valid data from the AWARE smartphone sensing app in the MySQL                                                                                                                                                                                                                                                                                                          |                                                                                                                  |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Tests               | Steps                                                                                                                                                                                                                                                                                                                                                                  | Expected Results                                                                                                 | Pass? | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                     | <ol style="list-style-type: none"> <li>1. Matilda clicks the view button to check the data of Tom Garcia</li> <li>2. Matilda clicks the communication button</li> <li>3. Then Matilda can select the data range by clicking the select data button</li> <li>4. After Matilda selects the data range that she wants, the figures should show on the website.</li> </ol> | The clinician could check the day/hour combination heat map for screen usage data so they can analyse it easier. | Yes   | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Date Range <input type="text" value="Select date"/> </p>  </div> <div style="width: 45%;"> <p>Date Range <input type="text" value="Select date"/> </p>  </div> </div><br><div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Date Range <input type="text" value="Select date"/> </p>  </div> </div> |

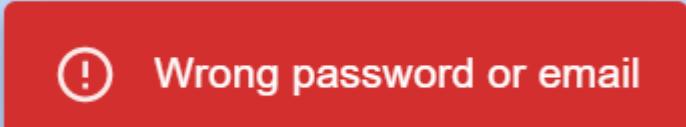
## Integration Testing

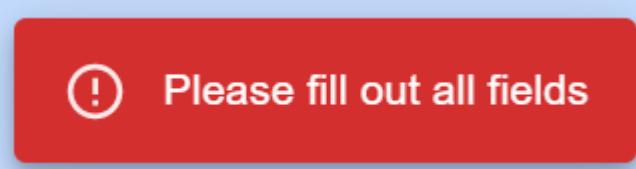
We use simple JWT to generate a token for authentication.

After each successful login, a token will be returned for security verification. So every time we want to test the APIs, in addition to the "login" API, we need to add a Token within 24 hours.

**API:** <https://digital-phenotyping.herokuapp.com/login/>

| Test                                                                                                     | Test case                              | Result | Fail analyse                     | Responses                                              |
|----------------------------------------------------------------------------------------------------------|----------------------------------------|--------|----------------------------------|--------------------------------------------------------|
| The input parameter is totally correct.<br><br>{<br>"username":"Matilda",<br>"password":"P@ssword2"<br>} | InterfaceErrorTest                     | Pass   | The output parameter is correct. |                                                        |
|                                                                                                          | Successful POST request                | Pass   |                                  |                                                        |
|                                                                                                          | The response should be okay to process | Pass   |                                  |                                                        |
|                                                                                                          | Correct output data format             | Pass   |                                  |                                                        |
|                                                                                                          | Response time is less than 500ms       | Pass   | Fix it in sprint 3               | We deploy the server again and change it to Australia. |
|                                                                                                          | The correct format of the token        | Pass   | The token is the correct format  |                                                        |

| Test                                                                                    | Test case                              | Result                                                                                | Fail analyse                                                    | Responses                                                                                                                                                             |
|-----------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The input password is wrong.<br><br>{<br>"username":"Matilda",<br>"password":"zzz"<br>} | InterfaceErrorTest                     | AssertionError: expected response to have status code 200 but got 401                 | The wrong input parameter would cause a 401 Unauthorized error. | <br><br>Every time the input ID or password is incorrect, there is a popup about it |
|                                                                                         | Successful POST request                | AssertionError: expected 401 to be one of [ 200, 202 ]                                |                                                                 |                                                                                                                                                                       |
|                                                                                         | The response should be okay to process | AssertionError: expected response code to not be 4XX or 5XX                           |                                                                 |                                                                                                                                                                       |
|                                                                                         | Correct output data format             | AssertionError: expected response to have status reason 'OK' but got 'UNAUTHORIZED'   |                                                                 |                                                                                                                                                                       |
|                                                                                         | Response time is less than 500ms       | AssertionError: expected 533 to be below 500                                          |                                                                 |                                                                                                                                                                       |
|                                                                                         | The correct format of token            | AssertionError: expected { Object (detail) } in response to contain property 'access' |                                                                 |                                                                                                                                                                       |

| Test                                                                            | Test case                              | Result                                                                              | Fail analyse                                                    | Responses                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The input password is wrong.<br><br>{<br>"username": "",<br>"password": ""<br>} | InterfaceErrorTest                     | AssertionError: expected response to have status code 200 but got 401               | The wrong input parameter would cause a 401 Unauthorized error. | <br><br>In FrontEnd, if we find that the user clicks the login button without inputting ID or password, there would be a popup. |
|                                                                                 | Successful POST request                | AssertionError: expected 401 to be one of [ 200, 202 ]                              |                                                                 |                                                                                                                                                                                                                     |
|                                                                                 | The response should be okay to process | AssertionError: expected response code to not be 4XX or 5XX                         |                                                                 |                                                                                                                                                                                                                     |
|                                                                                 | Correct output data format             | AssertionError: expected response to have status reason 'OK' but got 'UNAUTHORIZED' |                                                                 |                                                                                                                                                                                                                     |
|                                                                                 | Response time is less than 500ms       | AssertionError: expected 533 to be below 500                                        |                                                                 |                                                                                                                                                                                                                     |

|                             |                                                                                       |  |  |  |
|-----------------------------|---------------------------------------------------------------------------------------|--|--|--|
| The correct format of token | AssertionError: expected { Object (detail) } in response to contain property 'access' |  |  |  |
|-----------------------------|---------------------------------------------------------------------------------------|--|--|--|

We change the correct uid from 6 to 9 in the BackEnd.

API: <https://digital-phenotyping.herokuapp.com/appForeground/>

| Test1.1                                                                                                                    | Test case                              | Result | Fail analyse                     | Responses                                                                    |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------|----------------------------------|------------------------------------------------------------------------------|
| The input parameter is totally correct.<br><br>{<br>"uid":6,<br>"startDate":1641634738549,<br>"endDate":1641901876549<br>} | InterfaceErrorTest                     | Pass   | The output parameter is correct. |                                                                              |
|                                                                                                                            | Successful POST request                | Pass   |                                  |                                                                              |
|                                                                                                                            | The response should be okay to process | Pass   |                                  |                                                                              |
|                                                                                                                            | Correct output data format             | Pass   |                                  |                                                                              |
|                                                                                                                            | Response time is less than 500ms       | Pass   |                                  | Fix it in sprint 3<br>We deploy the server again and change it to Australia. |

| Test1.2                                                                                                                                            | Test case                              | Result                                                                      | Fail analyse                                                       | Responses                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change what is inside "")<br><br>{<br>"dhfshfk":6,<br>"stfdsffte":1641634738549,<br>"ezdfgaegge":1641901876549<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to have status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                    | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                |                                                                    |                                                          |
|                                                                                                                                                    | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX           |                                                                    |                                                          |
|                                                                                                                                                    | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:<!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                                    | Response time is less than 500ms       | Fail: AssertionError: expected 3820 to be below 500                         |                                                                    |                                                          |

| Test1.3                                                                                                                                           | Test case                              | Result                                              | Fail analyse                                             | Responses                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------|
| The input parameter is wrong. (change e to extremely number)<br><br>{<br>"uid":1343242343555,<br>"startDate":1641634738549,<br>"endDate":164<br>} | InterfaceErrorTest                     | Pass                                                | The output is fine with null with the correct format.    |                                                        |
|                                                                                                                                                   | Successful POST request                | Pass                                                |                                                          |                                                        |
|                                                                                                                                                   | The response should be okay to process | Pass                                                |                                                          |                                                        |
|                                                                                                                                                   | Correct output data format             | Pass                                                |                                                          |                                                        |
|                                                                                                                                                   | Response time is less than 500ms       | Fail: AssertionError: expected 3485 to be below 500 | Accidentally chose a US region for the Heroku deployment | We need to change it to Australia next sprint.         |
|                                                                                                                                                   |                                        | Pass                                                | Fix it in sprint 3                                       | We deploy the server again and change it to Australia. |

API: <https://digital-phenotyping.herokuapp.com/sms/>

| Test2.1                                                                                                                    | Test case                              | Result                                              | Fail analyse                                             | Responses                                              |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------|
| The input parameter is totally correct.<br><br>{<br>"uid":6,<br>"startDate":1641634738549,<br>"endDate":1641901876549<br>} | InterfaceErrorTest                     | Pass                                                | The output parameter is correct.                         |                                                        |
|                                                                                                                            | Successful POST request                | Pass                                                |                                                          |                                                        |
|                                                                                                                            | The response should be okay to process | Pass                                                |                                                          |                                                        |
|                                                                                                                            | Correct output data format             | Pass                                                |                                                          |                                                        |
|                                                                                                                            | Response time is less than 500ms       | Fail: AssertionError: expected 2284 to be below 500 | Accidentally chose a US region for the Heroku deployment | We need to change it to Australia next sprint.         |
|                                                                                                                            |                                        | Pass                                                | Fix it in sprint 3                                       | We deploy the server again and change it to Australia. |

| Test2.2                                                  | Test case          | Result                                                                        | Fail analyse                                                       | Responses                                                |
|----------------------------------------------------------|--------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change what is inside "") | InterfaceErrorTest | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |

|                                                                                     |                                        |                                                                   |  |  |
|-------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------|--|--|
| <pre>{   "dhfshfk":6,   "ffte":1641634738549,   "ezdfgaegge":1641901876 549 }</pre> | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]      |  |  |
|                                                                                     | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX |  |  |
|                                                                                     | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^    |  |  |
|                                                                                     | Response time is less than 500ms       | Fail: AssertionError: expected 3820 to be below 500               |  |  |

| Test2.3                                                                                                                                               | Test case                              | Result                                                      | Fail analyse                                                                   | Responses                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| The input parameter is wrong.( <b>change to extremely number</b> ) <pre>{   "uid":1343242343555,   "startDate":1641634738549,   "endDate":164 }</pre> | InterfaceErrorTest                     | Pass                                                        | No connection issue.                                                           |                                                                                                          |
|                                                                                                                                                       | Successful POST request                | Pass                                                        |                                                                                |                                                                                                          |
|                                                                                                                                                       | The response should be okay to process | Pass                                                        |                                                                                |                                                                                                          |
|                                                                                                                                                       | Correct output data format             | Fail: AssertionError: expected 0 to deeply equal 3          | The output parameter is in the wrong format                                    | We may need to add error input judgment for the Backend.                                                 |
|                                                                                                                                                       | Response time is less than 500ms       | Fail: AssertionError: expected 1023 to be below 500<br>Pass | Accidentally chose a US region for the Heroku deployment<br>Fix it in sprint 3 | We need to change it to Australia next sprint.<br>We deploy the server again and change it to Australia. |

API: <https://digital-phenotyping.herokuapp.com/dataServer/calls>

| Test3.1                                                                                                                   | Test case                              | Result                                              | Fail analyse                                               | Responses                                      |
|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|------------------------------------------------------------|------------------------------------------------|
| The input parameter is totally correct. <pre>{   "uid":6,   "startDate":1641634738549,   "endDate":1641901876 549 }</pre> | InterfaceErrorTest                     | Pass                                                | The output parameter is correct.                           |                                                |
|                                                                                                                           | Successful POST request                | Pass                                                |                                                            |                                                |
|                                                                                                                           | The response should be okay to process | Pass                                                |                                                            |                                                |
|                                                                                                                           | Correct output data format             | Pass                                                |                                                            |                                                |
|                                                                                                                           | Response time is less than 500ms       | Fail: AssertionError: expected 3089 to be below 500 | Accidentally chose a US region for the Heroku deployment   | We need to change it to Australia next sprint. |
|                                                                                                                           | Contain Keywords                       | Pass                                                | The output parameter is correct with "success" and "data". |                                                |

| Test3.2                                                                                                                                              | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. ( <b>change what is inside""</b> ) <pre>{   "dhfshfk":6,   "ffte":1641634738549,   "ezdfgaegge":1641901876 549 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                      | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                      | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                      | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                                      | Response time is less than 500ms       | Fail: AssertionError: expected 3525 to be below 500                           |                                                                    |                                                          |
|                                                                                                                                                      | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

| Test3.3                                                                                                                                               | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.( <b>change to extremely number</b> ) <pre>{   "uid":1343242343555,   "startDate":1641634738549,   "endDate":164 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                       | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                       | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |

|                                  |                                                                |  |
|----------------------------------|----------------------------------------------------------------|--|
| Correct output data format       | Fail: AssertionError: expected 0 to deeply equal 4             |  |
| Response time is less than 500ms | Fail: AssertionError: expected 2985 to be below 500            |  |
| Contain Keywords                 | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^ |  |

API: <https://digital-phenotyping.herokuapp.com/NumbersOfLocation/>

| Test4.1                                                                                      | Test case                              | Result                                              | Fail analyse                                             | Responses                                              |
|----------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------|
| The input parameter is totally correct.<br><br>{<br>"uid":6,<br>"endDate":1641901876549<br>} | InterfaceErrorTest                     | Pass                                                | The output parameter is correct.                         |                                                        |
|                                                                                              | Successful POST request                | Pass                                                |                                                          |                                                        |
|                                                                                              | The response should be okay to process | Pass                                                |                                                          |                                                        |
|                                                                                              | Correct output data format             | Pass                                                |                                                          |                                                        |
|                                                                                              | Response time is less than 500ms       | Fail: AssertionError: expected 1084 to be below 500 | Accidentally chose a US region for the Heroku deployment | We need to change it to Australia next sprint.         |
|                                                                                              |                                        | Pass                                                | Fix it in sprint 3                                       | We deploy the server again and change it to Australia. |

| Test4.2                                                                                                                  | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|--------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change what is inside "")<br><br>{<br>"dhfshfk":6,<br>"ezdfdfdfgaegge":1641901876549<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                          | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                          | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                          | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                          | Response time is less than 500ms       | Fail: AssertionError: expected 1920 to be below 500                           |                                                                    |                                                          |

| Test4.3                                                                                                           | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|-------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change to extremely number)<br><br>{<br>"uid":1343242343555,<br>"endDate":164<br>} | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                   | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                   | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                   | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                   | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                                                                    |                                                          |

API: <https://digital-phenotyping.herokuapp.com/screenServer/ScreenUnlocked>

| Test5.1                                                                                      | Test case                              | Result | Fail analyse                     | Responses |
|----------------------------------------------------------------------------------------------|----------------------------------------|--------|----------------------------------|-----------|
| The input parameter is totally correct.<br><br>{<br>"uid":6,<br>"endDate":1641901876549<br>} | InterfaceErrorTest                     | Pass   | The output parameter is correct. |           |
|                                                                                              | Successful POST request                | Pass   |                                  |           |
|                                                                                              | The response should be okay to process | Pass   |                                  |           |
|                                                                                              | Correct output data format             | Pass   |                                  |           |
|                                                                                              | Response time is less than 500ms       | Pass   |                                  |           |

| Test5.2                                                  | Test case          | Result                                                                        | Fail analyse                                                       | Responses                                                |
|----------------------------------------------------------|--------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong. (change what is inside "") | InterfaceErrorTest | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |

|                                                   |                                        |                                                                   |  |
|---------------------------------------------------|----------------------------------------|-------------------------------------------------------------------|--|
| <pre>{   "uid":6,   "dfsfe":1646409600000 }</pre> | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]      |  |
|                                                   | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX |  |
|                                                   | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^    |  |
|                                                   | Response time is less than 500ms       | Fail: AssertionError: expected 1920 to be below 500               |  |

| Test5.3                                                                                                                      | Test case                              | Result                                                                        | Fail analyse                                                                                                                   | Responses |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------|
| Test5.3                                                                                                                      | Test case                              | Result                                                                        | Fail analyse                                                                                                                   | Responses |
| The input parameter is wrong.( <b>change to extremely number</b> ) <pre>{   "uid":3782498,   "endDate":1646409600000 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error.<br>We may need to add error input judgment for the Backend. |           |
|                                                                                                                              | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                                                                                |           |
|                                                                                                                              | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                                                                                |           |
|                                                                                                                              | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                                                                                |           |
|                                                                                                                              | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                                                                                                                                |           |

AddClient

API: <https://digital-phenotyping.herokuapp.com/userServer/AddClient>

| Test6.1                                                                                                                                                                                                                                                                                           | Test case                              | Result | Fail analyse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Responses |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| The input parameter is totally correct. <pre>{   "clinicianId":1,   "clientTitle":"Mr",   "firstName":"Jay",   "lastName":"Wong",   "dateOfBirth":"1991-01-01",   "textNotes":"testing",   "twitterId:"PlayStation",   "facebookId":3",   "awareDeviceId":"asdas-asfagASF-asdasdas-adsas" }</pre> | InterfaceErrorTest                     | Pass   | Then we use the ClientInfo API can get the information of the client that we just added <pre>{   "uid": 36,   "clinician_id": "1",   "client_title": "Mr",   "first_name": "Jay",   "last_name": "Wong",   "date_of_birth": "1991-01-01",   "age": 31,   "text_notes": "testing",   "status": "Normal",   "twitter_id": "PlayStation",   "facebook_id": "3",   "aware_device_id": "asdas-asfagASF-asdasdas-adsas",   "last_update": "2022-08-31T23:31:45Z",   "twitter_id_int": 10671602 }</pre> |           |
|                                                                                                                                                                                                                                                                                                   | Successful POST request                | Pass   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |
|                                                                                                                                                                                                                                                                                                   | The response should be okay to process | Pass   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |
|                                                                                                                                                                                                                                                                                                   | Correct output data format             | Pass   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |
|                                                                                                                                                                                                                                                                                                   | Response time is less than 500ms       | Pass   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |

| Test6.2                                                                                                                                                                                                                                                                                                         | Test case                              | Result                                                                        | Fail analyse                                                               | Responses                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------|
| The input parameter is wrong. (The Twitter Id does not exist) <pre>{   "clinicianId":"aa",   "clientTitle":"Mr",   "firstName":"Jay",   "lastName":"Wong",   "dateOfBirth":"1991-01-01",   "textNotes":"testing",   "twitterId":1,   "facebookId":3",   "awareDeviceId":"asdas-asfagASF-asdasdas-adsas" }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The Twitter Id does not exist which means we cannot add such a new client. | Return "The Twitter Id does not exist" to remind the user |
|                                                                                                                                                                                                                                                                                                                 | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                            |                                                           |
|                                                                                                                                                                                                                                                                                                                 | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                            |                                                           |
|                                                                                                                                                                                                                                                                                                                 | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                            |                                                           |
|                                                                                                                                                                                                                                                                                                                 | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                                                                            |                                                           |

| Test6.3                                                                                                                                                                                                                                                                                                                                                                                                | Test case                              | Result | Fail analyse                        | Responses                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------|-------------------------------------|---------------------------------------------------------------|
| The input parameter is wrong. (The format of clinicianId is wrong) <pre>{         "clinicianId": "aa",         "clientTitle": "Mr",         "firstName": "Jay",         "lastName": "Wong",         "dateOfBirth": "1991-01-01",         "textNotes": "testing",         "twitterId": "PlayStation",         "facebookId": "3",         "awareDeviceId": "asdas-asfagASF-asdasdas-asdas"       }</pre> | InterfaceErrorTest                     | Pass   | Return 200 while it should be wrong | We should check the format of the clinicianId in the Backend. |
|                                                                                                                                                                                                                                                                                                                                                                                                        | Successful POST request                | Pass   |                                     |                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                        | The response should be okay to process | Pass   |                                     |                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                        | Correct output data format             | Pass   |                                     |                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                        | Response time is less than 500ms       | Pass   |                                     |                                                               |

## Client Info List

API:<https://digital-phenotyping.herokuapp.com/userServer/ClientInfoList>

| Test7.1                                                                      | Test case                              | Result | Fail analyse | Responses |
|------------------------------------------------------------------------------|----------------------------------------|--------|--------------|-----------|
| The input parameter is totally correct. <pre>{         "id": 1       }</pre> | InterfaceErrorTest                     | Pass   |              |           |
|                                                                              | Successful POST request                | Pass   |              |           |
|                                                                              | The response should be okay to process | Pass   |              |           |
|                                                                              | Correct output data format             | Pass   |              |           |
|                                                                              | Response time is less than 500ms       | Pass   |              |           |

| Test7.2                                                                                       | Test case                              | Result                                                                        | Fail analyse        | Responses                                                |
|-----------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|---------------------|----------------------------------------------------------|
| The input parameter is wrong. (a large number of id) <pre>{         "id": 13434       }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | No data for such id | We may need to add error input judgment for the Backend. |
|                                                                                               | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                     |                                                          |
|                                                                                               | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                     |                                                          |
|                                                                                               | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                     |                                                          |
|                                                                                               | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                     |                                                          |

| Test7.3                                                                                            | Test case                              | Result                                                                        | Fail analyse        | Responses                                                |
|----------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|---------------------|----------------------------------------------------------|
| The input parameter is wrong. (The format of id is wrong) <pre>{         "id": "aaa"       }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | No data for such id | We may need to add error input judgment for the Backend. |
|                                                                                                    | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                     |                                                          |
|                                                                                                    | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                     |                                                          |
|                                                                                                    | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                     |                                                          |
|                                                                                                    | Response time is less than 500ms       | Fail: AssertionError: expected 2913 to be below 500                           |                     |                                                          |

## Google map

API:<https://digital-phenotyping.herokuapp.com/locationServer/MapCoordinate>

| Test9.1                                 | Test case          | Result | Fail analyse                     | Responses |
|-----------------------------------------|--------------------|--------|----------------------------------|-----------|
| The input parameter is totally correct. | InterfaceErrorTest | Pass   | The output parameter is correct. |           |

|                                                                                  |                                        |      |                                                                             |  |
|----------------------------------------------------------------------------------|----------------------------------------|------|-----------------------------------------------------------------------------|--|
| <pre>{   "uid":6,   "startDate":1641634738549,   "endDate":1641901876549 }</pre> | Successful POST request                | Pass |                                                                             |  |
|                                                                                  | The response should be okay to process | Pass |                                                                             |  |
|                                                                                  | Correct output data format             | Pass |                                                                             |  |
|                                                                                  | Response time is less than 500ms       | Pass |                                                                             |  |
|                                                                                  | Contain Keywords                       | Pass | The output parameter is correct with "lat" and "long" for the location data |  |
|                                                                                  |                                        |      |                                                                             |  |

| Test9.2                                                                                                                                           | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| <p>The input parameter is wrong. (change what is inside“”)</p> <pre>{   "dhfshfk":6,   "ffte":1641634738549,   "ezdfgaegge":1641901876549 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                   | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                   | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                   | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                                   | Response time is less than 500ms       | Fail: AssertionError: expected 3525 to be below 500                           |                                                                    |                                                          |
|                                                                                                                                                   | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

| Test9.3                                                                                                                                              | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| <p>The input parameter is wrong. (change to extremely number)</p> <pre>{   "uid":1343242343555,   "startDate":1641634738549,   "endDate":164 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                      | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                      | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                      | Correct output data format             | Fail: AssertionError: expected 0 to deeply equal 4                            |                                                                    |                                                          |
|                                                                                                                                                      | Response time is less than 500ms       | Fail: AssertionError: expected 2985 to be below 500                           |                                                                    |                                                          |
|                                                                                                                                                      | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

## Client Twitter Word Cloud

API:<https://digital-phenotyping.herokuapp.com/twitterDataServer/twitterWordCloud>

| Test10.1                                                                   | Test case                              | Result | Fail analyse                                                                    | Responses |
|----------------------------------------------------------------------------|----------------------------------------|--------|---------------------------------------------------------------------------------|-----------|
| <p>The input parameter is totally correct.</p> <pre>{   "uid": 6 , }</pre> | InterfaceErrorTest                     | Pass   | The output parameter is correct.                                                |           |
|                                                                            | Successful POST request                | Pass   |                                                                                 |           |
|                                                                            | The response should be okay to process | Pass   |                                                                                 |           |
|                                                                            | Correct output data format             | Pass   |                                                                                 |           |
|                                                                            | Response time is less than 500ms       | Pass   |                                                                                 |           |
|                                                                            | Contain Keywords                       | Pass   | The output parameter is correct with "success" and "data" for the location data |           |

| Test10.2                                                                                   | Test case               | Result                                                                        | Fail analyse                                                       | Responses                                                |
|--------------------------------------------------------------------------------------------|-------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| <p>The input parameter is wrong. (change what is inside“”)</p> <pre>{   "uid": 1 , }</pre> | InterfaceErrorTest      | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                            | Successful POST request | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |

|                                        |                                                                   |
|----------------------------------------|-------------------------------------------------------------------|
| The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX |
| Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^    |
| Response time is less than 500ms       | Fail: AssertionError: expected 3525 to be below 500               |
| Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^    |

| Test10.3                                                                                    | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|---------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.( <b>change to extremely number</b> )<br><br>{ "uid": 6453535, | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                             | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                             | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                             | Correct output data format             | Fail: AssertionError: expected 0 to deeply equal 4                            |                                                                    |                                                          |
|                                                                                             | Response time is less than 500ms       | Fail: AssertionError: expected 2985 to be below 500                           |                                                                    |                                                          |
|                                                                                             | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

## Client Twitter Hashtag

API:<https://digital-phenotyping.herokuapp.com/twitterDataServer/twitterHashtag>

| Test11.1                                                    | Test case                              | Result | Fail analyse                     | Responses |
|-------------------------------------------------------------|----------------------------------------|--------|----------------------------------|-----------|
| The input parameter is totally correct.<br><br>{ "uid": 13, | InterfaceErrorTest                     | Pass   | The output parameter is correct. |           |
|                                                             | Successful POST request                | Pass   |                                  |           |
|                                                             | The response should be okay to process | Pass   |                                  |           |
|                                                             | Correct output data format             | Pass   |                                  |           |
|                                                             | Response time is less than 500ms       | Pass   |                                  |           |
|                                                             | Contain Keywords                       | Pass   |                                  |           |

| Test11.2                                                                              | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|---------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.( <b>change what is inside"uid"</b> )<br><br>{ "uid": 0, | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                       | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                       | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                       | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                       | Response time is less than 500ms       | Fail: AssertionError: expected 3525 to be below 500                           |                                                                    |                                                          |
|                                                                                       | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

| Test11.3                                                                                    | Test case               | Result                                                                        | Fail analyse                                                       | Responses                                                |
|---------------------------------------------------------------------------------------------|-------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.( <b>change to extremely number</b> )<br><br>{ "uid": 6453535, | InterfaceErrorTest      | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                             | Successful POST request | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |

|                                        |                                                                   |  |
|----------------------------------------|-------------------------------------------------------------------|--|
| The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX |  |
| Correct output data format             | Fail: AssertionError: expected 0 to deeply equal 4                |  |
| Response time is less than 500ms       | Fail: AssertionError: expected 2985 to be below 500               |  |
| Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^    |  |

## client Twitter Topics

API:<https://digital-phenotyping.herokuapp.com/twitterDataServer/twitterTopics>

| Test13.1                                                      | Test case                              | Result | Fail analyse                     | Responses |
|---------------------------------------------------------------|----------------------------------------|--------|----------------------------------|-----------|
| The input parameter is totally correct.<br><br>{ "uid": 13, } | InterfaceErrorTest                     | Pass   | The output parameter is correct. |           |
|                                                               | Successful POST request                | Pass   |                                  |           |
|                                                               | The response should be okay to process | Pass   |                                  |           |
|                                                               | Correct output data format             | Pass   |                                  |           |
|                                                               | Response time is less than 500ms       | Pass   |                                  |           |
|                                                               | Contain Keywords                       | Pass   |                                  |           |

| Test13.2                                                                                | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|-----------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.( <b>change what is inside"uid"</b> )<br><br>{ "uid": 1, } | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                         | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                         | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                         | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                         | Response time is less than 500ms       | Fail: AssertionError: expected 3525 to be below 500                           |                                                                    |                                                          |
|                                                                                         | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

| Test13.3                                                                                      | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|-----------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.( <b>change to extremely number</b> )<br><br>{ "uid": 6453535, } | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                               | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                               | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                               | Correct output data format             | Fail: AssertionError: expected 0 to deeply equal 4                            |                                                                    |                                                          |
|                                                                                               | Response time is less than 500ms       | Fail: AssertionError: expected 2985 to be below 500                           |                                                                    |                                                          |
|                                                                                               | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

## App Category

API:<https://digital-phenotyping.herokuapp.com/twitterDataServer/appForeground/AppCategory>

| Test14.1 | Test case | Result | Fail analyse | Responses |
|----------|-----------|--------|--------------|-----------|
|----------|-----------|--------|--------------|-----------|

|                                                                                                                                        |                                        |      |                                  |                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------|----------------------------------|-----------------------------------------------------------------------------------|
| The input parameter is totally correct.<br><pre>{     "uid": 6,     "startDate": 164163473 8549,     "endDate": 16419018765 49 }</pre> | InterfaceErrorTest                     | Pass | The output parameter is correct. |                                                                                   |
|                                                                                                                                        | Successful POST request                | Pass |                                  |                                                                                   |
|                                                                                                                                        | The response should be okay to process | Pass |                                  |                                                                                   |
|                                                                                                                                        | Correct output data format             | Pass |                                  |                                                                                   |
|                                                                                                                                        | Response time is less than 500ms       | Pass |                                  |                                                                                   |
|                                                                                                                                        | Contain Keywords                       | Pass |                                  | The output parameter is correct with "category" and "count" for the location data |

| Test14.2                                                                                                                                                          | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.( <b>change what is inside"uid"</b> )<br><pre>{     "uid": 0,     "startDate": 164163 4738549,     "endDate": 16419018 76549 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                                   | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                                   | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                                   | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                                                   | Response time is less than 500ms       | Fail: AssertionError: expected 3525 to be below 500                           |                                                                    |                                                          |
|                                                                                                                                                                   | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

| Test14.3                                                                                                                                                                  | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.( <b>change to extremely number</b> )<br><pre>{     "uid": 6,     "startDate": 1641634 738549,     "endDate": 164190187 643728473849 }</pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                                           | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                                           | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                                           | Correct output data format             | Fail: AssertionError: expected 0 to deeply equal 4                            |                                                                    |                                                          |
|                                                                                                                                                                           | Response time is less than 500ms       | Fail: AssertionError: expected 2985 to be below 500                           |                                                                    |                                                          |
|                                                                                                                                                                           | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

## SMS trace

API:<https://digital-phenotyping.herokuapp.com/sms/smsTrace>

| Test15.1                                                                                                                               | Test case                              | Result | Fail analyse                     | Responses |
|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------|----------------------------------|-----------|
| The input parameter is totally correct.<br><pre>{     "uid": 6,     "startDate": 164163473 8549,     "endDate": 16419018765 49 }</pre> | InterfaceErrorTest                     | Pass   | The output parameter is correct. |           |
|                                                                                                                                        | Successful POST request                | Pass   |                                  |           |
|                                                                                                                                        | The response should be okay to process | Pass   |                                  |           |
|                                                                                                                                        | Correct output data format             | Pass   |                                  |           |
|                                                                                                                                        | Response time is less than 500ms       | Pass   |                                  |           |
|                                                                                                                                        | Contain Keywords                       | Pass   |                                  |           |

| Test15.2                                                                                      | Test case               | Result                                                                        | Fail analyse                                                       | Responses                                                |
|-----------------------------------------------------------------------------------------------|-------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.( <b>change what is inside"uid"</b> ) <pre>{     "uid": 0,</pre> | InterfaceErrorTest      | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                               | Successful POST request | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |

|                                                                                           |                                        |                                                                   |  |  |
|-------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------|--|--|
| <pre>         "startDate": 164163 4738549,         "endDate": 16419018 76549     } </pre> | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX |  |  |
|                                                                                           | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^    |  |  |
|                                                                                           | Response time is less than 500ms       | Fail: AssertionError: expected 3525 to be below 500               |  |  |
|                                                                                           | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^    |  |  |

| Test15.3                                                                                                                                    | Test case                              | Result                                                                        | Fail analyse | Responses                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------|----------------------------------------------------------|
| The input parameter is wrong.( <b>change to extremely number</b> ) <pre> {     "uid": 6,     "startDate": 164149,     "endDate": 9 } </pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | return null  | We may need to add error input judgment for the Backend. |
|                                                                                                                                             | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |              |                                                          |
|                                                                                                                                             | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |              |                                                          |
|                                                                                                                                             | Correct output data format             | Fail: AssertionError: expected 0 to deeply equal 4                            |              |                                                          |
|                                                                                                                                             | Response time is less than 500ms       | Fail: AssertionError: expected 2985 to be below 500                           |              |                                                          |
|                                                                                                                                             | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |              |                                                          |

## Calls trace

API:<https://digital-phenotyping.herokuapp.com/callServer/callsTrace>

| Test15.1                                                                                                                              | Test case                              | Result | Fail analyse                     | Responses |
|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------|----------------------------------|-----------|
| The input parameter is totally correct. <pre> {     "uid": 6,     "startDate": 164163473 8549,     "endDate": 16419018765 49 } </pre> | InterfaceErrorTest                     | Pass   | The output parameter is correct. |           |
|                                                                                                                                       | Successful POST request                | Pass   |                                  |           |
|                                                                                                                                       | The response should be okay to process | Pass   |                                  |           |
|                                                                                                                                       | Correct output data format             | Pass   |                                  |           |
|                                                                                                                                       | Response time is less than 500ms       | Pass   |                                  |           |
|                                                                                                                                       | Contain Keywords                       | Pass   |                                  |           |

| Test15.2                                                                                                                                                         | Test case                              | Result                                                                        | Fail analyse                                                       | Responses                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|
| The input parameter is wrong.( <b>change what is inside"uid"</b> ) <pre> {     "uid": 0,     "startDate": 164163 4738549,     "endDate": 16419018 76549 } </pre> | InterfaceErrorTest                     | Fail: AssertionError: expected response to having status code 200 but got 500 | The wrong input parameter would cause a 500 internet server error. | We may need to add error input judgment for the Backend. |
|                                                                                                                                                                  | Successful POST request                | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |                                                                    |                                                          |
|                                                                                                                                                                  | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX             |                                                                    |                                                          |
|                                                                                                                                                                  | Correct output data format             | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |
|                                                                                                                                                                  | Response time is less than 500ms       | Fail: AssertionError: expected 3525 to be below 500                           |                                                                    |                                                          |
|                                                                                                                                                                  | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^                |                                                                    |                                                          |

| Test15.3                                                                                          | Test case               | Result                                                                        | Fail analyse | Responses                                                |
|---------------------------------------------------------------------------------------------------|-------------------------|-------------------------------------------------------------------------------|--------------|----------------------------------------------------------|
| The input parameter is wrong.( <b>change to extremely number</b> ) <pre> {     "uid": 6, } </pre> | InterfaceErrorTest      | Fail: AssertionError: expected response to having status code 200 but got 500 | return null  | We may need to add error input judgment for the Backend. |
|                                                                                                   | Successful POST request | Fail: AssertionError: expected 500 to be one of [ 200, 202 ]                  |              |                                                          |

|                                                                      |                                        |                                                                   |  |
|----------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------|--|
| <pre>         "startDate": 164149,         "endDate": 9     } </pre> | The response should be okay to process | Fail: AssertionError: expected response code to not be 4XX or 5XX |  |
|                                                                      | Correct output data format             | Fail: AssertionError: expected 0 to deeply equal 4                |  |
|                                                                      | Response time is less than 500ms       | Fail: AssertionError: expected 2985 to be below 500               |  |
|                                                                      | Contain Keywords                       | Fail: JSONError: Unexpected token '<' at 1:1 <!DOCTYPE html> ^    |  |

## Unit Testing

The backend mainly does the coverage test.

```

parallel auto -v 2 --keepdb
Found 22 test(s).
Using existing test database for alias 'default' ('test_swen90013')...
Operations to perform:
  Synchronize unmigrated apps: corsheaders, messages, rest_framework, staticfiles
  Apply all migrations: admin, appForeground, auth, contenttypes, dataServer, locationServer, screenServer, sessions, sms
Synchronizing apps without migrations:
  Creating tables...
    Running deferred SQL...
Running migrations:
  No migrations to apply.
System check identified no issues (0 silenced).
test_aware_device_id_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_client_title_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_clinician_id_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_date_of_birth_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_email_address_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_facebook_id_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_first_name_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_last_name_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_password_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_twitter_id_max_length (locationServer.tests.test_models.TbClientModelTest) ... ok
test_post (locationServer.tests.test_views.NumerbsLocationTests) ... ok
test_get (locationServer.tests.test_views.PreProcessLocationTests) ... ok
test_getCheckTime (locationServer.tests.test_views.PreProcessLocationTests) ... ok
test_getDateFromTimestamp (locationServer.tests.test_views.PreProcessLocationTests) ... ok
test_getDatePremeters (locationServer.tests.test_views.PreProcessLocationTests) ... ok
test_getFutureDate (locationServer.tests.test_views.PreProcessLocationTests)
getFutureDate() returns value days after input date in datetime. ... ok
test_getNextDate (locationServer.tests.test_views.PreProcessLocationTests) ... ok
test_getStartAndEndTimestamp (locationServer.tests.test_views.PreProcessLocationTests) ... ok
test_getTimestampFromDate (locationServer.tests.test_views.PreProcessLocationTests) ... ok
test_getUserLatlng (locationServer.tests.test_views.PreProcessLocationTests) ... ok
test_getZeroDate (locationServer.tests.test_views.PreProcessLocationTests) ... ok
test_initialProcessLocation (locationServer.tests.test_views.PreProcessLocationTests) ... ok

-----
Ran 22 tests in 9.456s
OK

```

| Test content                                    | Attributes           | Pass or not | To do |
|-------------------------------------------------|----------------------|-------------|-------|
| check the format(mainly the max length of data) | aware_device_id      | Pass        |       |
|                                                 | client_title         | Pass        |       |
|                                                 | clinician_id         | Pass        |       |
|                                                 | date_of_birth        | Pass        |       |
|                                                 | email_address        | Pass        |       |
|                                                 | facebook_id          | Pass        |       |
|                                                 | first_name           | Pass        |       |
|                                                 | last_name            | Pass        |       |
|                                                 | password             | Pass        |       |
|                                                 | twotter_id           | Pass        |       |
| Get the correct data                            | get                  | Pass        |       |
|                                                 | getCheckTime         | Pass        |       |
|                                                 | getDateFromTimestamp | Pass        |       |
|                                                 | getDatePremeters     | Pass        |       |
|                                                 | getFutureDate        | Pass        |       |

|                                          |                         |      |  |
|------------------------------------------|-------------------------|------|--|
|                                          | getNextDate             | Pass |  |
|                                          | getStartAndEndTimeStamp | Pass |  |
|                                          | getUserLatLang          | Pass |  |
|                                          | GetzeroDate             | Pass |  |
| check the location data in the beginning | initialProcessLocation  | Pass |  |

The frontEnd unit testings are all passed.

```
- DDDDD
PASS  src/testing/Loginpage.test.tsx (6.804 s)
● Console

PASS  src/testing/AddClientPage.test.tsx (7.049 s)
● Console

PASS  src/testing/Homepage.test.tsx (7.887 s)
● Console

PASS  src/testing/InfoDetailsPage.test.tsx (10.879 s)
```

## Resolution Testing

Because our client Simon wants our website could fit different devices to use. Although the priority of this non-functional requirement is really low, our website could work well for different devices.

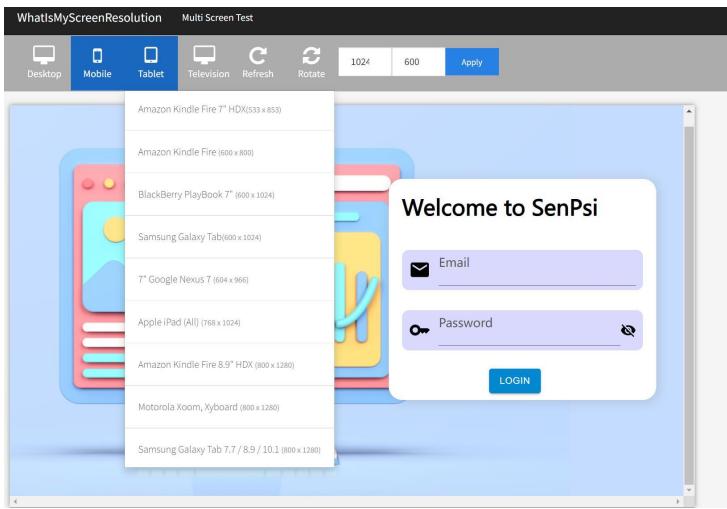
So we tested the performance of our website for different devices.

We use an online testing tool, the Multiscreen test, to check if our website can be used on different tablets or phones.

The link: <http://whatismyscreenresolution.net/multi-screen-test>

The result is that clinicians could browse our website by tablet or phone, though they need to rotate the screen and view it in the landscape.

| device name                                            | device type | pass/fail |
|--------------------------------------------------------|-------------|-----------|
| 5.5" Apple iPhone 6 Plus (414 x 736)                   | Mobile      | pass      |
| BlackBerry Z30, HTC One, EVO LTE (360 x 640)           | Mobile      | pass      |
| Google Nexus S, LG Optimus 2X / 3D / Black (320 x 533) | Mobile      | pass      |
| Samsung Galaxy Note (400 x 640)                        | Mobile      | pass      |
| LG Optimus One (213 x 320)                             | Mobile      | pass      |
| Sony Xperia Sola, U (480 x 854)                        | Mobile      | pass      |
| Motorola Droid Razr HD (720 x 1280)                    | Mobile      | pass      |
| Amazon Kindle Fire 7" HDX(533 x 853)                   | Tablet      | pass      |
| BlackBerry PlayBook 7" (600 x 1024)                    | Tablet      | pass      |
| 7" Google Nexus 7 (604 x 966)                          | Tablet      | pass      |
| Apple iPad (All) (768 x 1024)                          | Tablet      | pass      |
| Motorola Xoom, Xyboard (800 x 1280)                    | Tablet      | pass      |



# **Decisions**

# Architecture Review

## Architecture Page

1. Display the architecture diagram and the explanation in the same page.
2. Create a deployment page separated from the architecture page entailed of deployment details.
3. Terminologies should be explained further as confluence pages are not for field specialists.
4. Explain Data Monitoring / Data Preprocessing in details.

## Frontend Improvement

1. improves the readme.md to make it specific to our project (like configs need to do to get it running)
2. Refactor the code
  - a. create higher-order components,
  - b. using CSS classes so the style can be maintained in one place
  - c. imports, too many import files which create a clutter, need to extract all of the imports, put them in their own import file (import.js), then only need one import of that file. Can also put all the constants (const) in the import file as well

## Backend Improvement

1. The class diagram does not fit in the current system. It should be renewed.
2. The architecture diagram does not explained the django MTV well enough.

## Recording

[https://unimelb.zoom.us/rec/share/0zQeKMDG5Vun3GhfVUM3jaCzDIAIx20SI\\_AoChUs-446igI28YxzL1IYhbYGFRh.1inZcE3zGGleQM4q](https://unimelb.zoom.us/rec/share/0zQeKMDG5Vun3GhfVUM3jaCzDIAIx20SI_AoChUs-446igI28YxzL1IYhbYGFRh.1inZcE3zGGleQM4q)  
Passcode: =wN=bX74

# Change Control

## Change Record

| Action ID | Proposed Date | Proposer | Description                                                                                                                                                                       | Result   | Reviewer | Approved Date | Change Action                                                                                                         |
|-----------|---------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|---------------|-----------------------------------------------------------------------------------------------------------------------|
| ACT001    | -             | PO       | Re-estimates the story points based on the latest feedback.                                                                                                                       | Approved | PO       | -             | According to the feedback from our client, the story points have been changed from 7 to 16 under the group agreement. |
| ACT002    | 14 May 2022   | Zhongyi  | Add task:<br><br>FE / Add layout for social media<br><br>Story Point: 1                                                                                                           | Deferred | PO       | 15 May 2022   | This task belongs to PB017.                                                                                           |
| ACT003    | 14 May 2022   | Zhongyi  | Add task:<br><br>FE / Add dummy data for the Twitter category<br><br>Story Point: 1                                                                                               | Deferred | PO       | 15 May 2022   | Not in Sprint 3                                                                                                       |
| ACT004    | 14 May 2022   | Zhongyi  | Add task:<br><br>FE / Add request for Screen time (duration)<br><br>Story Point: 1                                                                                                | Declined | PO       | 15 May 2022   | Merged with integration-                                                                                              |
| ACT005    | 14 May 2022   | Zhongyi  | Add task:<br><br>FE / Add request for Screen time (unlocked times)<br><br>Story Point: 1                                                                                          | Declined | PO       | 15 May 2022   |                                                                                                                       |
| ACT006    | 14 May 2022   | Zhongyi  | Add task:<br><br>FE / Integrate API for Screen time (duration)<br><br>Story Point: 1                                                                                              | Approved | PO       | 15 May 2022   | -                                                                                                                     |
| ACT007    | 14 May 2022   | Zhongyi  | Add task:<br><br>FE / Integrate API for Screen time (unlocked times)<br><br>Story Point: 1                                                                                        | Approved | PO       | 15 May 2022   | -                                                                                                                     |
| ACT008    | 14 May 2022   | Zhongyi  | Add task:<br><br>Confluence / Review all pages and note down what needs to be improved based on the comments and feedback<br><br>Story Point: 2                                   | Approved | PO       | 15 May 2022   | -                                                                                                                     |
| ACT009    | 14 May 2022   | Zhongyi  | Add task:<br><br>Confluence / Update confluence<br><br>Story Point: 1                                                                                                             | Approved | PO       | 15 May 2022   | -                                                                                                                     |
| ACT010    | 14 May 2022   | Bing     | Add task:<br><br>Swap the backend Heroku deployment to an AWS Australia region<br><br>Story Point: 1                                                                              | Approved | PO       | 15 May 2022   | PB028 added. -                                                                                                        |
| ACT011    | 14 May 2022   | Bing     | Add task:<br><br>Automate Deployment - Builldout the Heroku CD pipeline for the backend Django deployment<br><br>Story Point: 1                                                   | Approved | PO       |               |                                                                                                                       |
| ACT012    | 14 May 2022   | Bing     | Add task:<br><br>Convert sensitive API keys/Application data to be read from a .env file rather than be hardcoded into the source code<br><br>Story Point: 1                      | Approved | PO       |               |                                                                                                                       |
| ACT013    | 14 May 2022   | Shuo     | Add task:<br><br>Test response time of 4 API after we swap the backend Heroku deployment to an AWS Australia region. And update the related confluence page<br><br>Story Point: 1 | Approved | PO       | 15 May 2022   |                                                                                                                       |

|        |             |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |    |             |                                                                                                               |
|--------|-------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----|-------------|---------------------------------------------------------------------------------------------------------------|
| ACT014 | 14 May 2022 | Shuo       | Add task:<br><br>Update the testing plan confluence page(such as how to run our test)<br><br>Story Point: 1                                                                                                                                                                                                                                                                                                                                                                     | declined | PO | 15 May 2022 | Merged with the previous one.                                                                                 |
| ACT015 | 25 Jul 2022 | PO         | Priority change:<br><br>Increase the priority of the login page and home page.                                                                                                                                                                                                                                                                                                                                                                                                  | Approved | PO | 25 Jul 2022 | Update US010 and US011.                                                                                       |
| ACT016 | 25 Jul 2022 | PO         | Add task:<br><br>Add a task for deployment and migration                                                                                                                                                                                                                                                                                                                                                                                                                        | Approved | PO | 25 Jul 2022 | Update PB029                                                                                                  |
| ACT017 | 08 Aug 2022 | Xiang      | Add task:<br><br>Add a task for database client table refactoring<br><br>Story Point: 3                                                                                                                                                                                                                                                                                                                                                                                         | Approved | PO | 08 Aug 2022 | Update PB030                                                                                                  |
| ACT018 | 08 Aug 2022 | PO         | Re-estimate the story points of PB007. Change from 13 to 15.                                                                                                                                                                                                                                                                                                                                                                                                                    | Approved | PO | 08 Aug 2022 | Update PB007                                                                                                  |
| ACT019 | 09 Aug 2022 | Bing       | Add task:<br><br>Add a task to deploy the application on the client's EC2 instance.<br><br>Story Point: 3                                                                                                                                                                                                                                                                                                                                                                       | Approved | PO | 09 Aug 2022 | Update                                                                                                        |
| ACT020 | 22 Aug 2022 | Simon      | 1. Deploy the system on EC2 and collect data with Android phones<br>2. Calls should have multiple parallel bars showing incoming, outgoing and missed calls<br>3. Add a google map diagram for location data<br>4. Application usage time should have a two decimal format and have a % sign<br>5. Present Keywords, Topics, and Hashtags of Twitter contents<br>6. Day/Hour combination heat map for screen usage data<br>7. Formal documentation for handover<br>8. Moodboard | Approved | PO | 22 Aug 2022 | 1. Add PB032<br>2. Add PB033<br>3. Add PB034<br>4. Too small for a PB<br>5. Add PB035 & PB036<br>6. Add PB037 |
| ACT021 | 05 Sep 2022 | PO         | 1. Add a backlog for the deployment of sprint 7<br>2. Add a backlog for frontend improvement<br>3. Improve the application category diagram                                                                                                                                                                                                                                                                                                                                     | Approved | PO | 05 Sep 2022 | 1. Add PB038<br>2. Add PB039<br>3. Add PB040                                                                  |
| ACT022 | 05 Sep 2022 | Simon      | 1. Priorities the client's profile management                                                                                                                                                                                                                                                                                                                                                                                                                                   | Approved | PO | 05 Sep 2022 | 1. Change the priority from 2 to 3                                                                            |
| ACT023 | 19 Sep 2022 | PO & Simon | 1. Add a backlog for the deployment of sprint 8<br>2. Improve the communication diagram to analyse how many different people the patient has communicate with.                                                                                                                                                                                                                                                                                                                  | Approved | PO | 19 Sep 2022 | 1. Add PB041<br>2. Add PB042                                                                                  |
| ACT024 | 10 Oct 2022 | Marvin     | Add task:<br><br>1. Frontend CSS refactoring<br>2. Frontend type refactoring<br><br>Story Point: 3 for each                                                                                                                                                                                                                                                                                                                                                                     | Approved | PO | 10 Oct 2022 | 1. Add PB043<br>2. Add PB044                                                                                  |
| ACT025 | 11 Oct 2022 | PO         | 1. Code review<br>2. Architecture review<br>3. Documents prepare<br>4. README file<br>5. Endeavour exhibition<br>6. Team video                                                                                                                                                                                                                                                                                                                                                  | Approved | PO | 11 Oct 2022 | 1. Add PB045 - PB050                                                                                          |

## Version 3.1

\*Priority: 1 - 5; Risk: 1 - 5; Status: Not allocated Sprint No. Testing Completed

Total story points: 156

Estimated velocity: 20

| User Story ID | Product Backlog ID | Description                                             | Story Points | Priority | Responsible | Status   | Comments |
|---------------|--------------------|---------------------------------------------------------|--------------|----------|-------------|----------|----------|
| US001         | PB001              | Present the data of the client's usage time of each app | 7            | 5        |             | Sprint 4 |          |
|               | PB002              | Present the categories the apps belong                  | 3            | 5        |             | Sprint 4 |          |
|               | PB040              | Improve the application category diagram                | 2            | 3        |             | Sprint 7 |          |

|       |       |                                                                                         |               |                |  |                                       |                   |
|-------|-------|-----------------------------------------------------------------------------------------|---------------|----------------|--|---------------------------------------|-------------------|
| US002 | PB003 | Present the data of the client's calls (incoming, outgoing, and missed)                 | 5             | 5              |  | <del>Sprint 1</del>                   |                   |
|       | PB033 | Calls should have multiple parallel bars showing incoming, outgoing and missed calls    | 1             | 4              |  | <del>Sprint 6</del>                   |                   |
|       | PB004 | Present the data of the client's SMSs (incoming and outgoing)                           | 5             | 5              |  | <del>Sprint 1</del>                   |                   |
|       | PB042 | Communication Variety (Analyse how many different people the patient communicates with) | 5             | 3              |  | <del>Sprint 8</del>                   |                   |
| US003 | PB005 | Present the location and the time when the client visits the place                      | <del>16</del> | 5              |  | <del>Sprint 2</del>                   |                   |
|       | PB034 | Add a google map diagram for location data                                              | 5             | 4              |  | <del>Sprint 6</del>                   |                   |
| US004 | PB006 | Present the client's device usage data                                                  | 6             | 5              |  | <del>Sprint 2–Sprint 3</del>          |                   |
|       | PB037 | Day/Hour combination heat map for screen usage data                                     | 5             | 4              |  | <del>Sprint 6</del>                   |                   |
| US005 | PB007 | Collect and analyze the keywords of the client's Twitter contents once a week           | 13–15         | 4              |  | <del>Sprint 4–Sprint 5–Sprint 6</del> |                   |
|       | PB008 | Present the keywords                                                                    | 4             | 4              |  | <del>Sprint 4–Sprint 5–Sprint 6</del> |                   |
|       | PB035 | Present Topics of Twitter contents                                                      | 8             | 3              |  | <del>Sprint 8</del>                   |                   |
|       | PB036 | Present Hashtags of Twitter contents                                                    | 8             | 3              |  | <del>Sprint 7</del>                   |                   |
| US006 | PB009 | Collect and analyze the keywords of the client's Facebook contents once a week          | 15            | 3              |  | Not allocated                         |                   |
|       | PB010 | Present the keywords                                                                    | 4             | 3              |  | Not allocated                         |                   |
| US007 | PB011 | View the client's data in a specific period                                             | 4             | 4              |  | <del>Sprint 6</del>                   |                   |
| US008 | PB012 | Manage Clients' personal profile                                                        | 4             | 3              |  | <del>Sprint 7</del>                   |                   |
|       | PB013 | Add Clients                                                                             | 4             | 4              |  | <del>Sprint 5</del>                   |                   |
|       | PB014 | Delete Clients                                                                          | 2             | 3              |  | <del>Sprint 7</del>                   |                   |
|       | PB015 | Present a sorted client list                                                            | 1             | 3              |  | <del>Sprint 7</del>                   |                   |
|       | PB016 | Search for a client                                                                     | 4             | 3              |  | <del>Sprint 7</del>                   |                   |
|       | PB017 | View the client's personal page                                                         | 5             | 3              |  | <del>Sprint 8</del>                   | Limited real data |
|       | PB030 | Database client table refactoring                                                       | 3             | 4              |  | <del>Sprint 5</del>                   |                   |
| US009 | PB018 | Present the client's own data to the client                                             | 4             | 2              |  | Not allocated                         |                   |
| US010 | PB019 | Create clinician accounts                                                               | 4             | 3              |  | Not allocated                         |                   |
|       | PB020 | Delete clinician accounts                                                               | 4             | 2              |  | Not allocated                         |                   |
|       | PB021 | Manage the clinician's profile                                                          | 6             | 1              |  | Not allocated                         |                   |
|       | PB022 | View the list of clinicians                                                             | 3             | 2              |  | Not allocated                         |                   |
|       | PB023 | View the list of clients                                                                | 3             | <del>2–4</del> |  | <del>Sprint 5</del>                   |                   |
| US011 | PB024 | Log in to the website                                                                   | 5             | <del>3–4</del> |  | <del>Sprint 4</del>                   |                   |
|       | PB025 | Show dashboard based on the identity of the account                                     | 6             | <del>3–2</del> |  | Not allocated                         |                   |
| US012 | PB026 | Connect to AWARE                                                                        | 7             | 1              |  | Not allocated                         |                   |
|       | PB028 | Improve the deployment of the system                                                    | 4             | 4              |  | <del>Sprint 3</del>                   |                   |
|       | PB029 | Deployment and migration of the system completed in semester 1                          | 5             | 4              |  | <del>Sprint 4</del>                   |                   |
|       | PB031 | Add a task to deploy the application on the client's EC2 instance.                      | 3             | 4              |  | <del>Sprint 5</del>                   |                   |
|       | PB032 | Deploy the system on EC2 and collect data with Android phones                           | 4             | 4              |  | <del>Sprint 6–Sprint 7</del>          |                   |
|       | PB038 | Deployment of Sprint 7                                                                  | 3             | 3              |  | <del>Sprint 7</del>                   |                   |
|       | PB041 | Deployment of Sprint 8                                                                  | 3             | 3              |  | <del>Sprint 8</del>                   |                   |
| US013 | PB027 | Customizable dashboard. Adjust the order of the charts                                  | 12            | 1              |  | Not allocated                         |                   |
|       | PB039 | Frontend improvement (design style change)                                              | 1             | 3              |  | <del>Sprint 7–Sprint 8</del>          |                   |
|       | PB043 | Frontend CSS refactoring                                                                | 3             | 3              |  | Sprint 9                              |                   |
|       | PB044 | Frontend type refactoring                                                               | 3             | 3              |  | Sprint 9                              |                   |
|       | PB045 | Code review                                                                             | 2             | 3              |  | Sprint 9                              |                   |
|       | PB046 | Architecture review                                                                     | 2             | 3              |  | Sprint 9                              |                   |
|       | PB047 | Documents prepare                                                                       | 4             | 3              |  | Sprint 9                              |                   |
|       | PB048 | README file                                                                             | 2             | 3              |  | Sprint 9                              |                   |
|       | PB049 | Endeavour exhibition                                                                    | 6             | 3              |  | Sprint 9                              |                   |
|       | PB050 | Team video                                                                              | 2             | 3              |  | Sprint 9                              |                   |

## Version 3.0

\*Priority: 1 - 5; Risk: 1 - 5; Status: Not allocated Sprint No. Testing Completed

Total story points: 156

Estimated velocity: 20

| User Story ID | Product Backlog ID | Description                                                                    | Story Point | Priority | Responsible | Status        |
|---------------|--------------------|--------------------------------------------------------------------------------|-------------|----------|-------------|---------------|
| US001         | PB001              | Present the data of the client's usage time of each app                        | 7           | 5        |             | Sprint 1      |
|               | PB002              | Present the categories the apps belong                                         | 3           | 5        |             | Sprint 1      |
| US002         | PB003              | Present the data of the client's calls (incoming, outgoing, and missed)        | 5           | 5        |             | Sprint 1      |
|               | PB004              | Present the data of the client's SMSs (incoming and outgoing)                  | 5           | 5        |             | Sprint 1      |
| US003         | PB005              | Present the location and the time when the client visits the place             | 7           | 5        |             | Not allocated |
| US004         | PB006              | Present the client's device usage data                                         | 6           | 5        |             | Not allocated |
| US005         | PB007              | Collect and analyze the keywords of the client's Twitter contents once a week  | 13          | 4        |             | Not allocated |
|               | PB008              | Present the keywords                                                           | 4           | 4        |             | Not allocated |
| US006         | PB009              | Collect and analyze the keywords of the client's Facebook contents once a week | 15          | 3        |             | Not allocated |
|               | PB010              | Present the keywords                                                           | 4           | 3        |             | Not allocated |
| US007         | PB011              | View the client's data in a specific period                                    | 6           | 2        |             | Not allocated |
| US008         | PB012              | Manage Clients' personal profile                                               | 4           | 4        |             | Not allocated |
|               | PB013              | Add Clients                                                                    | 4           | 4        |             | Not allocated |
|               | PB014              | Delete Clients                                                                 | 4           | 3        |             | Not allocated |
|               | PB015              | Present a sorted client list                                                   | 5           | 3        |             | Not allocated |
|               | PB016              | Search for a client                                                            | 5           | 2        |             | Not allocated |
|               | PB017              | View the client's personal page                                                | 5           | 4        |             | Not allocated |
| US009         | PB018              | Present the client's own data to the client                                    | 4           | 2        |             | Not allocated |
| US010         | PB019              | Create clinician accounts                                                      | 4           | 3        |             | Not allocated |
|               | PB020              | Delete clinician accounts                                                      | 4           | 2        |             | Not allocated |
|               | PB021              | Manage the clinician's profile                                                 | 6           | 1        |             | Not allocated |
|               | PB022              | View the list of clinicians                                                    | 3           | 2        |             | Not allocated |
|               | PB023              | View the list of clients                                                       | 3           | 2        |             | Not allocated |
| US011         | PB024              | Log in to the website                                                          | 5           | 3        |             | Not allocated |
|               | PB025              | Show dashboard based on the identity of the account                            | 6           | 3        |             | Not allocated |
| US012         | PB026              | Connect to AWARE                                                               | 7           | 1        |             | Not allocated |

|       |       |                                                        |    |   |  |               |
|-------|-------|--------------------------------------------------------|----|---|--|---------------|
| US013 | PB027 | Customizable dashboard. Adjust the order of the charts | 12 | 1 |  | Not allocated |
|-------|-------|--------------------------------------------------------|----|---|--|---------------|

# Development

| Type                | Name                  | Reasons                                                                                                                                                                                                                                             | Status  |
|---------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Front-end Framework | React (TypeScript)    | <ul style="list-style-type: none"> <li>▪ Most of us more familiar with React.js</li> <li>▪ React is more popular in Au</li> <li>▪ Easier to build a mobile version with React Native in the future</li> <li>▪ Rich open-source libraries</li> </ul> | DECIDED |
| Back-end Framework  | Django (Python)       | <ul style="list-style-type: none"> <li>▪ Python is good for data mining or data analysis</li> <li>▪ Client preference</li> <li>▪ Built-in admin dashboard</li> <li>▪ Easy to deploy</li> </ul>                                                      | DECIDED |
| IDE                 | VS code               | <ul style="list-style-type: none"> <li>▪ Free to use</li> <li>▪ Easy to use</li> <li>▪ Rich extensions</li> </ul>                                                                                                                                   | DECIDED |
| Database            | MySQL                 | <ul style="list-style-type: none"> <li>▪ AWARE data is stored in MySQL</li> <li>▪ Easier to import AWARE data</li> <li>▪ Open-source</li> <li>▪ High performance</li> <li>▪ Widely used</li> </ul>                                                  | DECIDED |
| VCS                 | GitHub                | <ul style="list-style-type: none"> <li>▪ Supports CI/CD by Actions</li> <li>▪ Widely used</li> <li>▪ Active Pro membership with school email</li> </ul>                                                                                             | DECIDED |
| UI Design Tool      | Figma                 | <ul style="list-style-type: none"> <li>▪ Supports cross-platform (web, desktop, Mac)</li> <li>▪ Diverse materials and templates in the community</li> <li>▪ Shared project</li> </ul>                                                               | DECIDED |
| UI Pattern          | Material Design       | <ul style="list-style-type: none"> <li>▪ Widely used</li> <li>▪ Rich components</li> <li>▪ Customized theme</li> </ul>                                                                                                                              | DECIDED |
| Charts Library      | Apex Charts           | <ul style="list-style-type: none"> <li>▪ Easy to use</li> </ul>                                                                                                                                                                                     | DECIDED |
| Interface Test Tool | Postman               | <ul style="list-style-type: none"> <li>• Free to use</li> <li>• Widely used</li> </ul>                                                                                                                                                              | DECIDED |
| FrontEnd Test Tool  | Jest                  | <ul style="list-style-type: none"> <li>• Popular testing tool</li> <li>• Free to use</li> </ul>                                                                                                                                                     | DECIDED |
| FrontEnd Test Tool  | React-testing-library | <ul style="list-style-type: none"> <li>• Just in React</li> </ul>                                                                                                                                                                                   | DECIDED |