

P A C E U N I V E R S I T Y





**Computer Science Project I**

**CS 691**

**Team Name: Technocrats**

**Team 1**

**Professor: Henry Wong**



# **Covid-19 Safety Protocol Tracker**

# AGENDA



01

Measuring our progress toward our deadlines, coordinating our activities, addressing any difficulties, and resolving on the next steps as they apply to improvement are the highest priorities of this session.

02

Trying to keep track on significant dates. Add activities to a group calendar. Mention regarding timely submission.

03

Analyse and research all the components that our project would require from the client's point of view.

04

For something like the project to be effective, it needs to have interaction, attendance, cooperation, teamwork, as well as attention from each team member.



# TEAM MEMBER ROLES



**SAI SINDHU**  
**DEVELOPER**

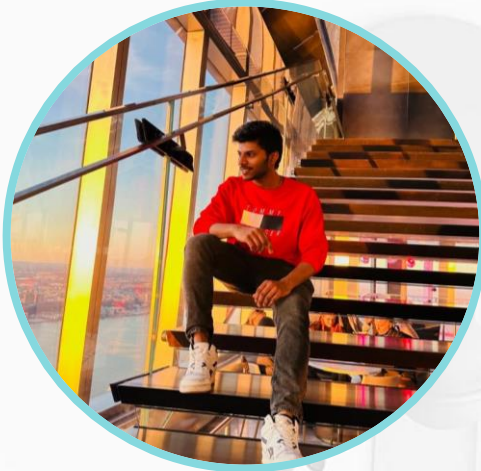


**ANIL BABU**  
**DEVELOPER**



**ANVI REDDY**  
**DEVELOPER**

# TEAM MEMBER ROLES



**SAHITH**  
**QUALITY**  
**ANALYST/TESTER**



**NIKHIL**  
**SCRUM MASTER &**  
**QUALITY ANALYST**



**BHARADWAJA**  
**DEVELOPER**

## IMPROVEMENTS MADE FROM PROFESSOR'S FEEDBACK



The professor provided input after the delivery of Deliverable 1, recommending us to put a statement above each bullet point we include on a presentation slide. Canva can be used to edit videos instead of Wonder share. While being recorded, we can take advantage of PowerPoint's presentation slideshow feature and missing the project schedule The following slides highlight the changes we made to our sprint plan by taking professor feedback into consideration.

# PROBLEM STATEMENT



Over the last two years, Social Distancing has become increasingly prevalent as a part of the Covid-19 pandemic outbreak. According to international health authorities, interpersonal communication is the principal primary contributor to the pandemic's spread. To avoid the spreading, it is therefore necessary to maintain the necessary spacing with some effort. In addition, developing an automated Contact Detection step that secures privacy would be beneficial to prevent further infection.

Today's smartphones are not just for communication; they can also detect numerous characteristics of their environment (movement, proximity, orientation, etc.). In addition, nowadays days practically everyone utilizes a smartphone. Reflect on these facts The issue is resolved by a mobile app that can notify users when it detects that a person is approaching from a closer distance than is advised.



# PROJECT DESCRIPTION



Our product is focused on COVID-19 safety Protocols. It is designed to ensure that people are adhering to social distancing guidelines. Ultimately, it can help make people and the community safer from the virus . This is a tracking app that uses a smartphone's GPS and Bluetooth features to track COVID-19 case. Bluetooth technology enables users to assess their risk of being exposed to the COVID-19 virus if they have been within six feet of a confirmed case. It is also able to detect specific locations that are deemed 'infected area's through location data analysis, and crowd sourcing. this data so it is easily accessible for decision making purpose. The idea behind the app was to make people aware of their risk, and give them the tools to protect themselves from contracting the virus. We developed a product that would be a cost-effective measure for protecting profits and human life. The idea for our product is based on the idea of a "control" to prevent COVID-19 from spreading. It would be an app that uses Bluetooth and GPS capabilities to track COVID-19 cases and would also provide alerts in case it detects COVID-19 in an area. This product was designed to be inexpensive, effective, providing information necessary for the public's awareness of where the virus is being spread. We designed this app as incentive to prevent someone from spreading the virus as they are able to see how close they are getting near people who have contacted it.



# PERSONA 1



## Profile

*Name: Christiana*

*Age: 24*

*Location: New York, NY*

*Job: Student*

*Family: Lives with her boyfriend*

## About

Christiana is a student who is perusing her masters in a public university.

## Goals

In the process of going to the college she will travel a lot and meet lot of random people who might got affected by covid virus.so ,she want to be careful for which she need to protect herself form covid and covid patients she use our app which was built for covid detection of covid effected persons nearby distances of 6ft with the help of location and Bluetooth tools .she gets notification that she was in danger zone that someone near to her is effected by covid in 6ft distance.so that she can take precautions. Like maintain proper social distances.

# PERSONA 2



## About

Maddy is a senior nurse she will makes regular bp and temperature of the patients.

## Goals

Maddy, a nurse in a public hospital, is often overwhelmed with multiple patients. It would be immensely useful if she had a mobile application that could detect who is within 6ft of her location. This would make her job much easier and safer. Both scenarios will require Maddy to do a set of certain tasks for the app to perform its intended action. For the scenario, she must create an account, install and activate her mobile application, use the app at work for it to detect where she is within 6ft of her current location. Maddy must store her account information, so the app can detect where she is within 6ft of her current location.

## Profile

*Name: Maddy*

*Age: 35*

*Location: New Jersey, NJ*

*Job: Senior nurse*

*Salary: \$74000/year*

*Family: Husband*

# PERSONA 3



## About

Sourabh was a chief security officer at a shopping complex who checks every customer at the entrances of the mall.

## Goals

Sourabh goal is to check each and everything of every single customer whether they are healthy or got effected by the covid. Through our app he gets the notification when any persons effected by the covid is near to him in 6 ft distances. so then he stops them and take the measures to get them the prescribed quarantine so that the other people in the mall doesn't get effected.

## Profile

*Name: Sourabh*

*Age: 44*

*Location: Alabama, Ga*

*Job: Chief Security Officer*

*Salary: \$112000/year*

*Family: Two children and wife*



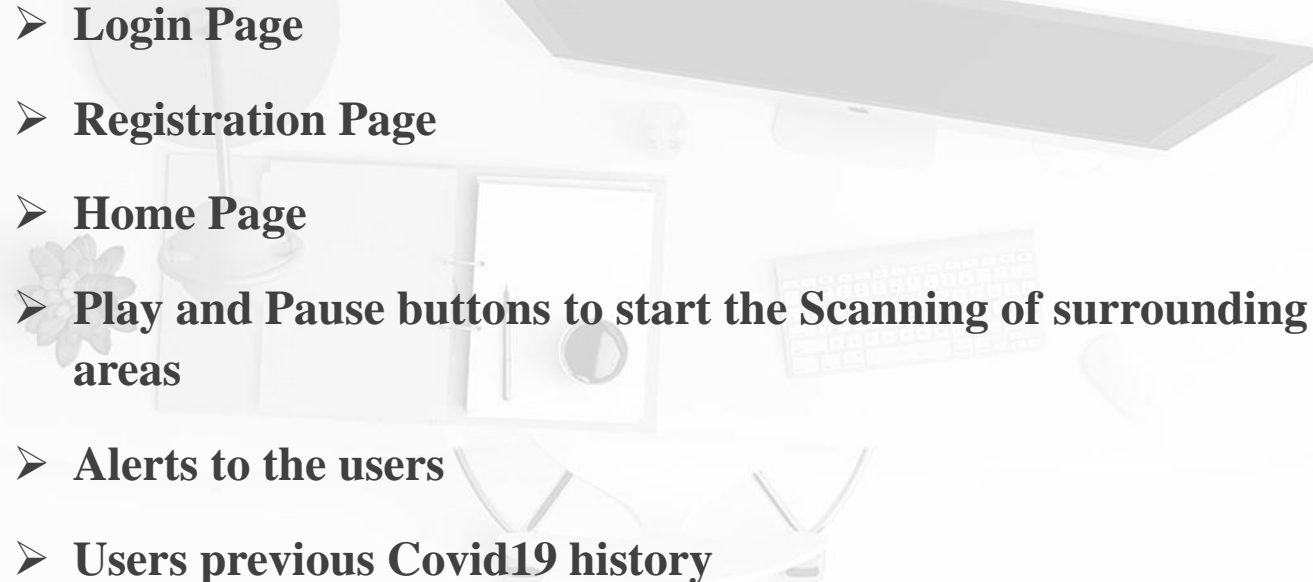
# MINIMAL VIABLE PRODUCT (MVP)

**MVP**



# MINIMAL VIABLE PRODUCT (MVP)

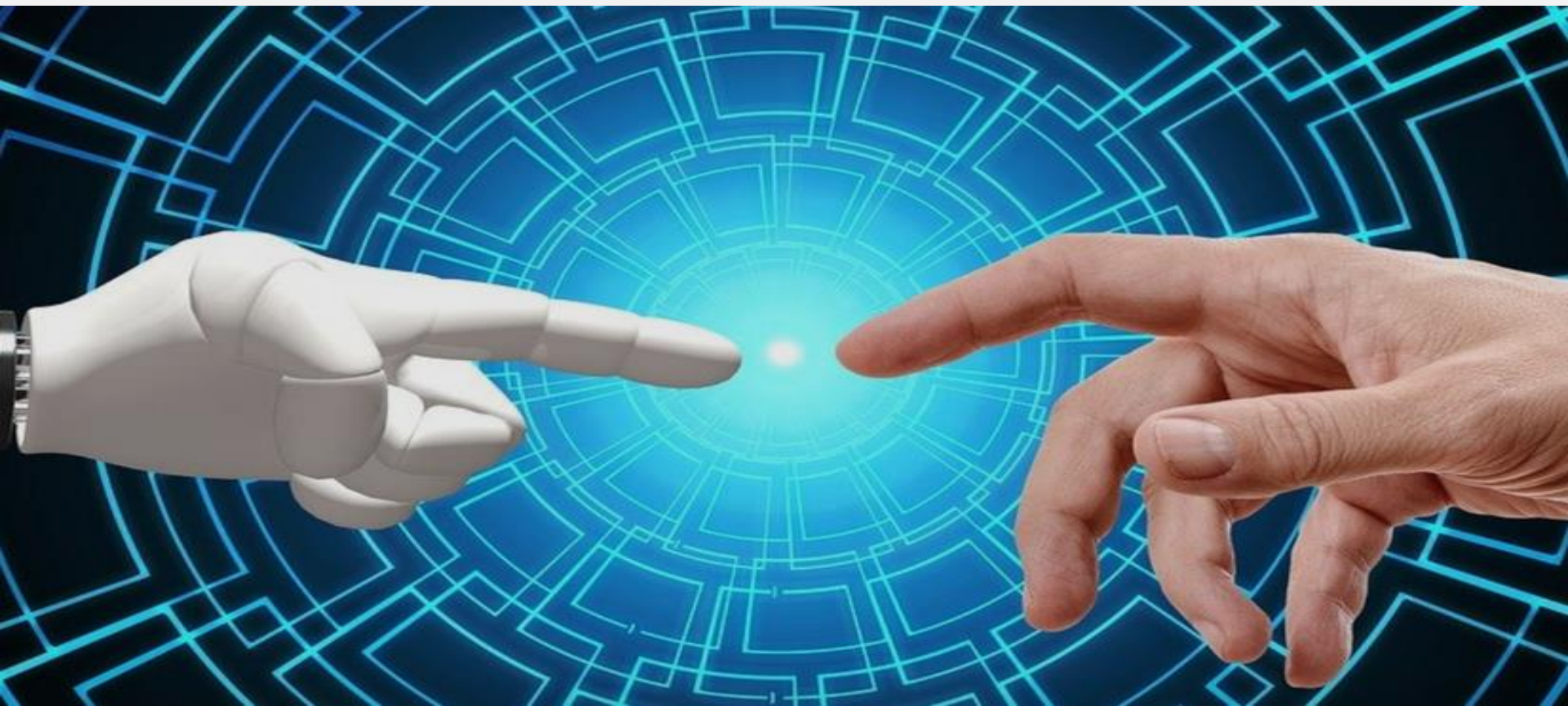
**The Following are the Features we are covering in our MVP**

- 
- A faint, light-colored background image of a desk setup. It includes a large computer monitor, a keyboard, a mouse, a desk lamp, a pen holder with pens, and some papers or a notebook. The image is semi-transparent and serves as a backdrop for the list of features.
- **Login Page**
  - **Registration Page**
  - **Home Page**
  - **Play and Pause buttons to start the Scanning of surrounding areas**
  - **Alerts to the users**
  - **Users previous Covid19 history**

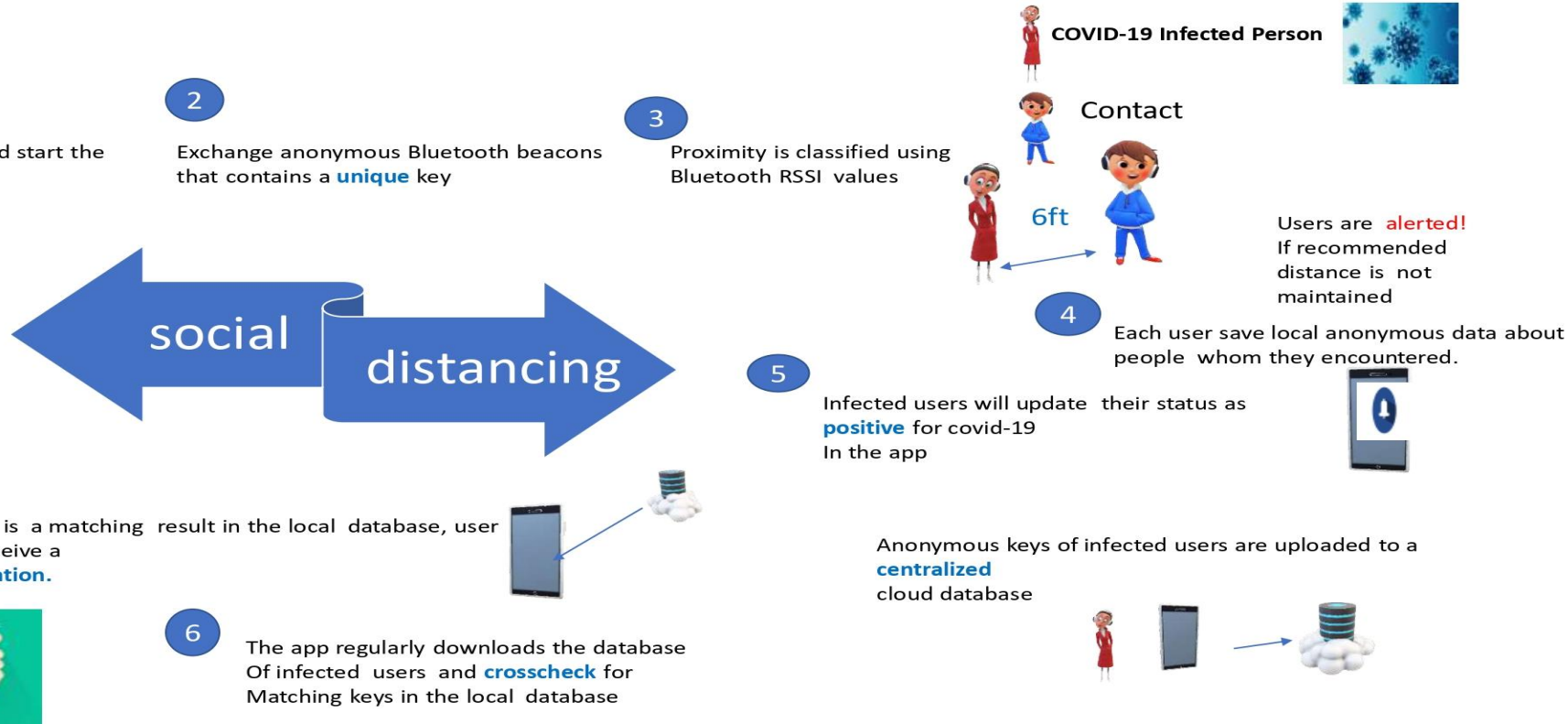
# TECHNOLOGIES



# ARCHITECTURE DIAGRAM

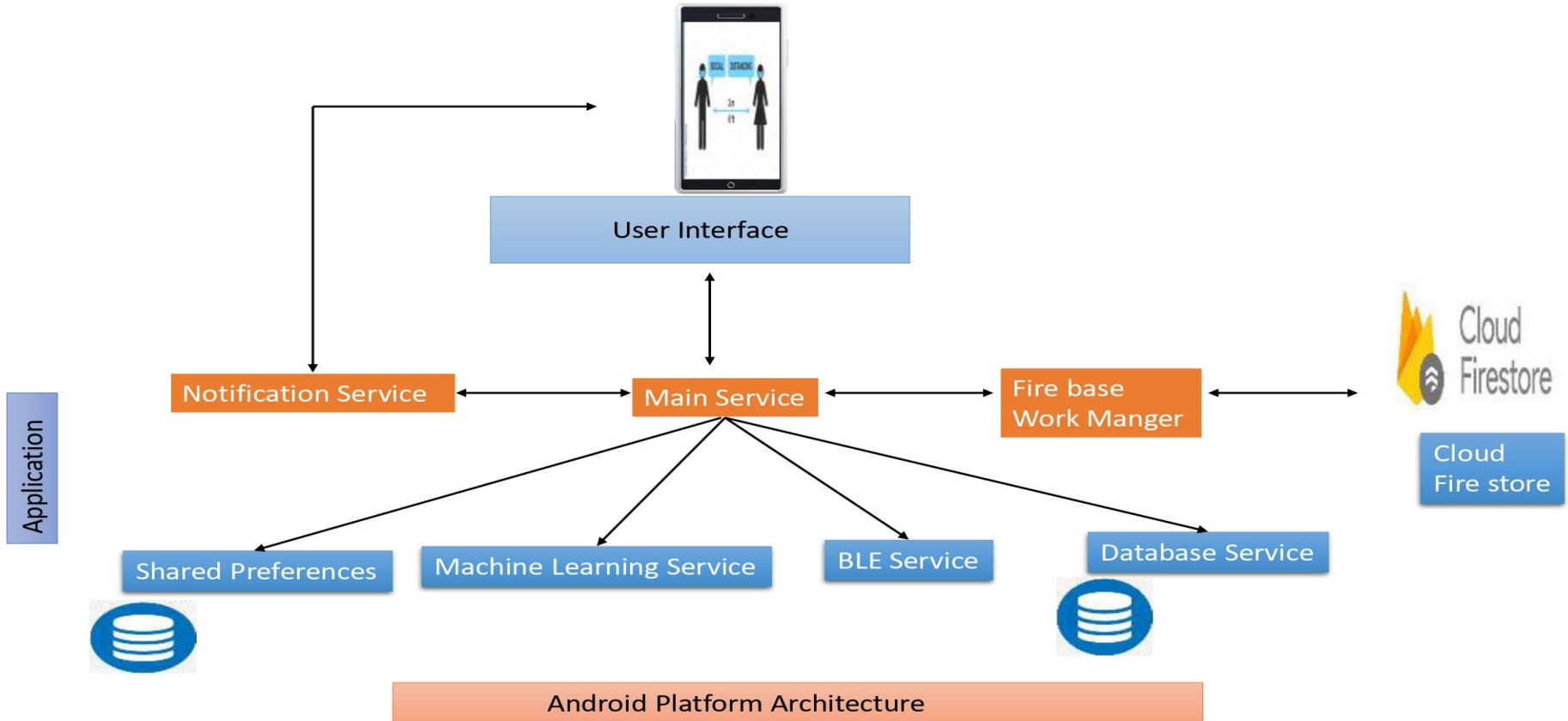


# CONCEPTUAL ARCHITECTURE DIAGRAM





# SEQUENCE ARCHITECTURE DIAGRAM



# PRODUCT BACKLOG



# PRODUCT BACKLOG

Projects / Covid19 Safety Protocol Tracker1 / COV board

## Backlog

Share



Search backlog



Only My Issues

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Insights

To gather all the requirements for the project	SJ	COV-1	=	5
As a Team we should have team work agreement with all the rules and regulations	SN	COV-2	=	1
As a Team we should divide roles and responsibilities among our selves to develop the project	BV	COV-3	=	1
As a team we should develop required technical and functional knowledge required to complete the project.	AB	COV-4	=	3
As a team we should plan the product requirements and development plan for the project	A	COV-5	=	3
As a user I should have a Apk file which can be installed in mobile with basic functionalities.	AB	COV-6	=	-
As a user I should be able to see the welcome page for Application.	SJ	COV-7	=	-
As a user I should be able to see the Knowledge page after welcome page , which has information of how application	AB	COV-8	=	-
As a user I should be able to give all the required permissions to application to access the required data in mobile.	AB	COV-9	=	-
As a user I should be able to reset the permissions for application anytime.	A	COV-10	=	-
As a user I should be able to see the Registration page for the application.	A	COV-11	=	-
As a user I should be able to the user name and get registered in the application.	BV	COV-12	=	-

# PRODUCT BACKLOG

Projects / Covid19 Safety Protocol Tracker1 / COV board

## Backlog

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












Search backlog



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Insights

 As a user I should be able to get pop up notification to turn on bluetooth if application is being used.	 COV-13		
 As a user I should be able to get pop up notification, asking required permissions for the application.	 COV-14		
 As a registered user I should be able to see the home page, once I login in to the application.	 COV-15		
 As a registered user I should be able to see the play the button in the home page.	COV-16		
 As a registered user I should be able to see the pause button in the home page.	COV-17		
 As a registered user I should be able to start the play button and search for infected person in the bluetooth range.	COV-18		
 As a registered user I should be able to add my friends through QR code.	COV-19		
 As a registered user I should be able to send my application QR code to my friend to add in the friend list.	COV-20		

# ACCEPTANCE CRITERIA & USER STORIES

		Acceptance Criteria	
Issue Type	ID	Summary	Place
Acceptance criteria	COV-6	<b>As a user</b> <b>I should</b> have a Apk file with basic functionalities <b>So that</b> I can install in mobile.	Mobile
		<b>Scenario:</b> User installs application in mobile using APK file <b>"Given</b> I'm a user of the application <b>When</b> I try to install the application using APK file <b>Then</b> I should be able to install the application with out any errors.	Mobile
Acceptance criteria	COV-7	<b>As a user</b> <b>I should</b> be able to see the welcome page <b>So that</b> I can see message in the welcome page and show the continue button.	Welcome Page
		<b>Scenario:</b> User opens application after installation <b>"Given</b> I'm a user of the application <b>When</b> I try to open the application after the installation <b>Then</b> I should be able to see the message in the welcome page <b>And</b> continue button to proceed further.	Welcome Page
Acceptance criteria	COV-8	<b>As a user</b> <b>I should</b> be able to see the Knowledge page after welcome page <b>So that</b> I can see information of the application and see the continue button.	Knowledge Page
		<b>Scenario:</b> User opens application after installation <b>"Given</b> I'm a user of the application <b>When</b> I click on the continue button in welcome page <b>Then</b> I should be able to see the Knowledge page after welcome page <b>And</b> continue button to proceed further.	Knowledge Page



# ACCEPTANCE CRITERIA & USER STORIES

Acceptance criteria	COV-9	<p><b>As a user</b>  <b>I should</b> be able to give all the required permissions  <b>So that</b> application can access the required data in mobile.</p>	Home Page
		<p><b>Scenario:</b> User opens application after installation  <b>"Given</b> I'm a user of the application  <b>When</b> I click on the continue button in knowledge page  <b>Then</b> I should be able to see the pop up meesage for asking permissions  <b>And</b> user can allow/deny the permissions.</p>	Home Page
Acceptance criteria	COV-10	<p><b>As a user</b>  <b>I should</b> be able to reset the permissions for application anytime  <b>So that</b> application can not access the user data.</p>	Home Page
		<p><b>Scenario:</b> User opens application after installation  <b>"Given</b> I'm a user of the application  <b>When</b> I try to modify the seetings of the application  <b>Then</b> I should be able to reset the permissions of the application  <b>And</b> user can adeny the permissions.</p>	Home Page
Acceptance criteria	COV-11	<p><b>As a user</b>  <b>I should</b> be able to see the Registration page for the application.  <b>So that</b> I can register in the application.</p>	Knowledge Page
		<p><b>Scenario:</b> User opens application after installation  <b>"Given</b> I'm a user of the application  <b>When</b> I click on the continue button in knowledge page  <b>Then</b> I should be able to see the registration page  <b>And</b> user can enter their details.</p>	Knowledge Page

# ACCEPTANCE CRITERIA & USER STORIES

Acceptance criteria	COV-12	<p><b>As a user</b> I should be able to enter the user name and get registered in the application. <b>So that</b> I can register in the application.</p>	Registration Page
		<p><b>Scenario:</b> User opens application after installation "Given I'm a user of the application <b>When</b> I enter username in registration page <b>Then</b> I should be able to click on the register button <b>And</b> get registered in the application.</p>	Registration Page
Acceptance criteria	COV-13	<p><b>As a user</b> I should be able to get pop up notification to turn on bluetooth if application is being used. <b>So that</b> I can turn on the bluetooth for identifying location.</p>	Home Page
		<p><b>Scenario:</b> User opens application after installation "Given I'm a user of the application <b>When</b> I start the play button in the application <b>Then</b> I should be able to see the pop up notification <b>And</b> has the message to turn on the bluetooth in the pop up message</p>	Home Page
Acceptance criteria	COV-14	<p><b>As a user</b> I should be able to get pop up notification, asking required permissions for the application. <b>So that</b> I can give all the required permissions.</p>	Home Page
		<p><b>Scenario:</b> User opens application after installation "Given I'm a user of the application <b>When</b> I complete the registration in the application <b>Then</b> I should be able to see the pop up notification asking for required permissions.</p>	Home Page
Acceptance criteria	COV-15	<p><b>As a user</b> I should be able to see the home page, once I login in to the application. <b>So that</b> I can see the features of the application.</p>	Home Page
		<p><b>Scenario:</b> User opens application after installation "Given I'm a user of the application <b>When</b> I complete the registration and gave all the required permissions <b>Then</b> I should be able to see the home page <b>And</b> features of the application.</p>	Home Page

# TEST CASES

Test ID	User Story	Test Cases	Actual Result	Expected Result	Pass/Fail
1	As a user I should have a Apk file which can be installed in mobile with basic functionalities.	1. When the user attempts to install the application on a mobile device then the application should install correctly and display the application should be compatible with the device's operating system and the installation should not be blocked due to incompatibility.	Same	Application will be installed and displays basic functionalities	Pass
2			Same	The application should be successfully installed on the device.	Pass
3	As a user I should be able to see the welcome page for Application.	1. When the user is on the welcome page then the user should see a welcome message, a login button, and a register button	Same	The user should see a welcome message, a login button, and a register button	Pass
4		2. When the user attempts to login then the user should be directed to the login page.	Same	The user should be directed to the login page.	Pass
5	As a user I should be able to see the Knowledge page after welcome page, which has information of how to use the application.	1. When user clicks on the Knowledge page then the Knowledge page should be displayed, with information about how the application works.	Same	User should be able to view the Knowledge page with information about how to use the application.	Pass
6		2. When user refreshes the page then user should be able to see the content of Knowledge page which includes information on various topics.	Same	User should be able to see the content of Knowledge page which includes information on various topics.	Pass
7	As a user I should be able to give all the required permissions to application to access the required data.	1. When user opens the application then user should be able to see a list of permissions the application requires, and a button to grant permissions.	Same	User should be able to give the required permissions to the application.	Pass
8		2. When user clicks the permission button then user should be able to see a pop-up window with a list of permission options.	Same	User should be able to select the permission options and successfully grant permissions.	Pass
9	As a user I should be able to reset the permissions for application anytime.	1. When the user selects the "Reset Permissions" option then all permissions for the application should be reset to the default settings.	Same	Permissions are reset to the default settings.	Pass
10		2. When the user selects the "Reset Permissions" option then all user roles and profiles are removed.	Same	All user roles and profiles are removed and the application is reset to its default state.	Pass
11	As a user I should be able to see the Registration page for the application.	1. When user clicks on the "Register" button then user should be directed to the Registration page.	Same	User should be on the Registration page.	Pass
12		2. When user clicks on the "Go Back" button then user should be directed to the homepage.	Same	User should be on the homepage.	Pass
13	As a user I should be able to enter the user name and get registered in the application.	1. When the user clicks the submit button after entering a valid username then the user should be registered in the application.	Same	User should be successfully registered in the application.	Pass
14		2. When the user clicks the submit button then the user should not be registered in the application.	Same	User should receive an error message notifying them that the username is already taken.	Pass
15	As a user I should be able to get pop up notification to turn on bluetooth if application is being used.	1. When user opens application then a pop up notification appears asking user to turn on bluetooth.	Same	Bluetooth is successfully enabled.	Pass
16		2. When user opens application after bluetooth is enabled then no pop up notification appears.	Same	Application launches normally and bluetooth stays enabled.	Investigating
17	As a user I should be able to get pop up notification, asking required permissions for the application.	1. When user clicks on the "Allow" button then a pop up notification should appear, asking permission for the application to access location.	Same	The application should be granted access to the device location.	Pass
18		2. When user clicks on the "Deny" button then a pop up notification should appear, asking permission for the application to access location.	Same	The application should not be granted access to the device camera.	Pass
19	As a registered user I should be able to see the home page, once I login in to the application.	1. When user enters their login credentials correctly then user should be taken to the home page.	Same	User is successfully taken to the home page.	Pass
20		2. When User enters their login credentials incorrectly then user should be denied access to the home page.	Same	User is denied access to the home page.	Pass



# SPRINT BACKLOG

# SPRINT BACKLOG

## SPRINT 2

Projects / Covid19 Safety Protocol Tracker1 / COV board

### Backlog

Share



Search backlog



SJ

AB

A

BV

SN

SR



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Insights

#### COV Sprint 2 10 issues

To Develop login Page and basic functionalities for the application  
16/Feb/23 12:23 PM • 09/Mar/23 12:00 AM

VERSIONS

EPICS

AB

A

BV

SN

SR

SJ

...

VERSIONS

EPICS

View linked pages

	As a user I should have a Apk file which can be installed in mobile with basic functionalities.	AB	COV-6	=	-
	As a user I should be able to see the welcome page for Application.	SJ	COV-7	=	-
	As a user I should be able to see the Knowledge page after welcome page , which has information of how application	AB	COV-8	=	-
	As a user I should be able to give all the required permissions to application to access the required data in mobile.	AB	COV-9	=	-
	As a user I should be able to reset the permissions for application anytime.	A	COV-10	=	-
	As a user I should be able to see the Registration page for the application.	A	COV-11	=	-
	As a user I should be able to the user name and get registered in the application.	BV	COV-12	=	-
	As a user I should be able to get pop up notification to turn on bluetooth if application is being used.	SN	COV-13	=	-
	As a user I should be able to get pop up notification, asking required permissions for the application.	SN	COV-14	=	-
	As a registered user I should be able to see the home page, once I login in to the application.	SR	COV-15	=	-



# SPRINT BACKLOG

## SPRINT 3
















▼ COV Sprint 3 8 issues

 Add dates

Start sprint

...

[View linked pages](#)

- |   |        |   |   |
|---|--------|---|---|
|  As a registered user I should be able to see the play the button in the home page.                                    | COV-16 |    |    |
|  As a registered user I should be able to see the pause button in the home page.                                       | COV-17 |    |    |
|  As a registered user I should be able to start the play button and search for infected person in the bluetooth range. | COV-18 |    |    |
|  As a registered user I should be able to add my friends through QR code.  | COV-19 |    |    |
|  As a registered user I should be able to send my application QR code to my friend to add in the friend list.        | COV-20 |  |  |

# STROIES COMPLETED

COV-6

1



As a user I should have a Apk file which can be installed in mobile with basic functionalities.



Done

✓ Done

COV-7

1



As a user I should be able to see the welcome page for Application.



Done

✓ Done

Description

COV-8

1



As a user I should be able to see the Knowledge page after welcome page , which has information of how application works.



Done

✓ Done

COV-9

1



As a user I should be able to give all the required permissions to application to access the required data in mobile.



Done

✓ Done

Description

COV-10

1



As a user I should be able to reset the permissions for application anytime.



Done

✓ Done

Description

Add a description...

# STORIES COMPLETED

COV-11 1

As a user I should be able to see the Registration page for the application.



Done

✓ Done

COV-12

1

As a user I should be able to the user name and get registered in the application.



Done

✓ Done

COV-13

1

As a user I should be able to get pop up notification to turn on bluetooth if application is being used.



Done

✓ Done

COV-14

1

As a user I should be able to get pop up notification, asking required permissions for the application.



Done

✓ Done

COV-15

1

As a registered user I should be able to see the home page, once I login in to the application.



Done

✓ Done

# METRICS

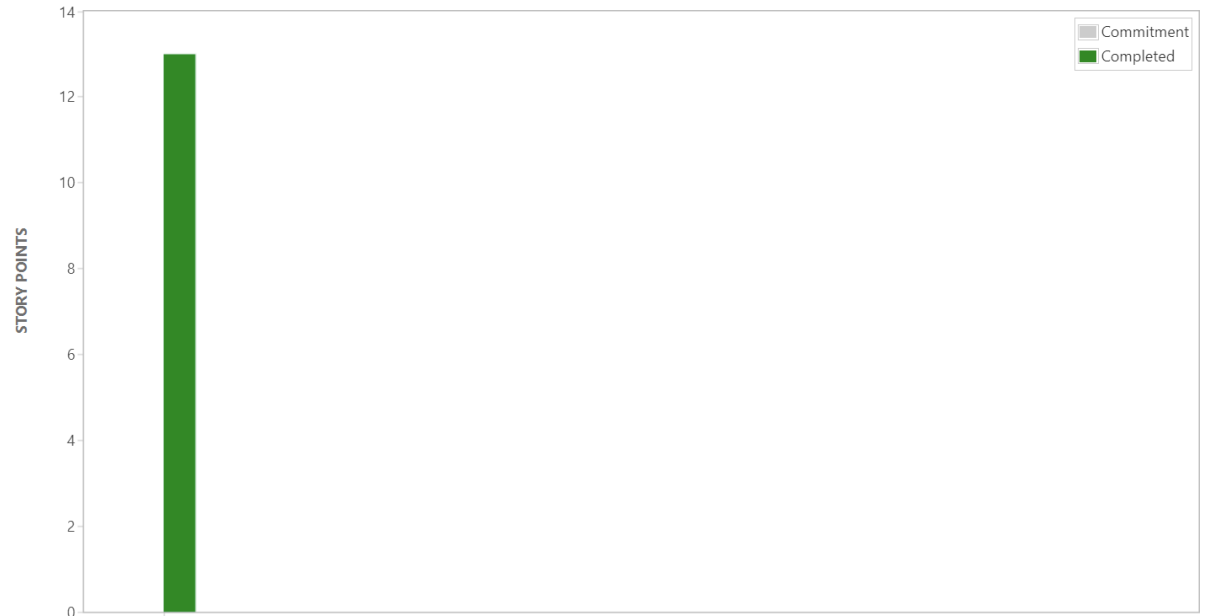


# METRICS

## VELOCITY REPORT

Projects / Covid19 Safety Protocol Tracker1 / COV board / Reports

### Velocity Chart





# TEAM MEMBERS VELOCITY REPORT



← Insights

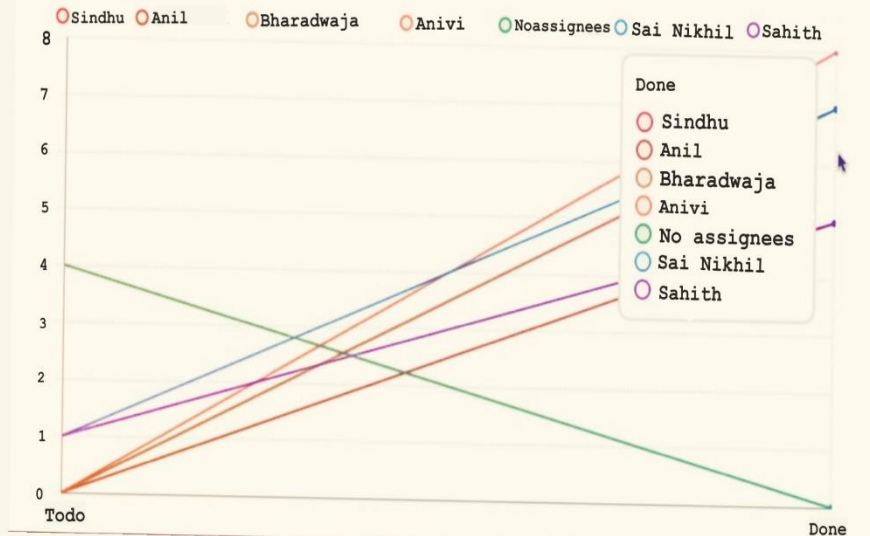
📊 Status chart

Custom charts

📊 Chart 1

+ New chart

🔍 Filter by keyword or by field

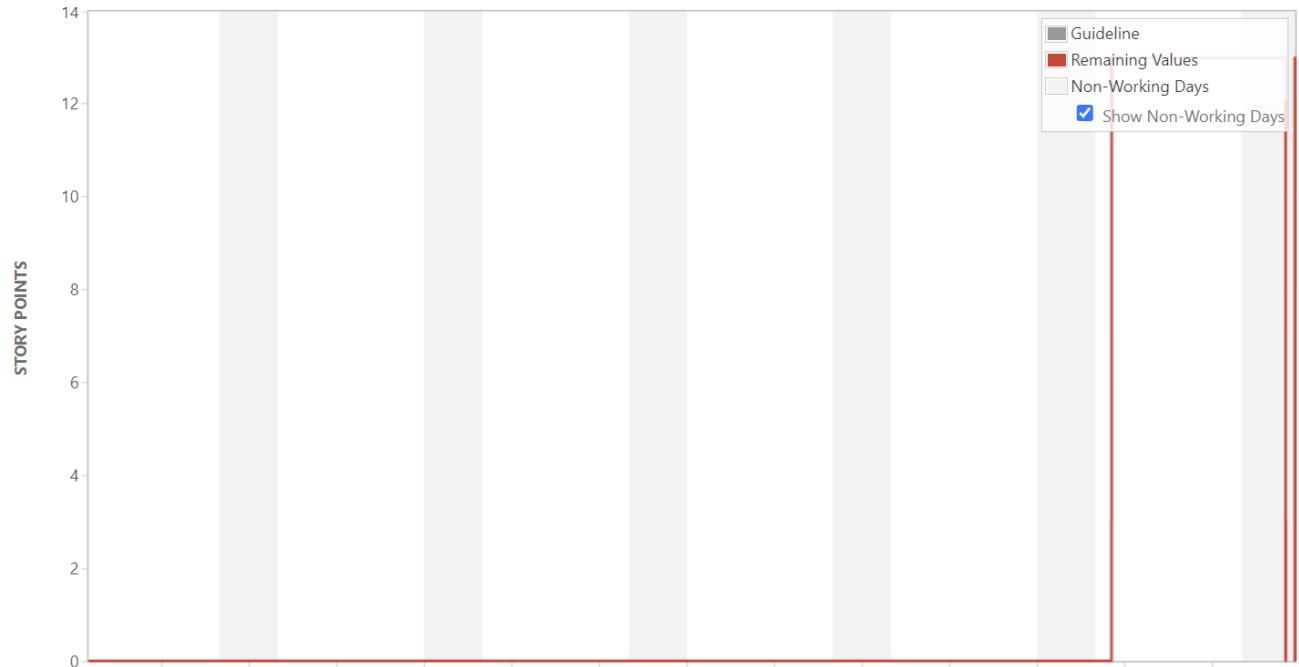


# METRICS

## SPRINT BURNDOWN CHART

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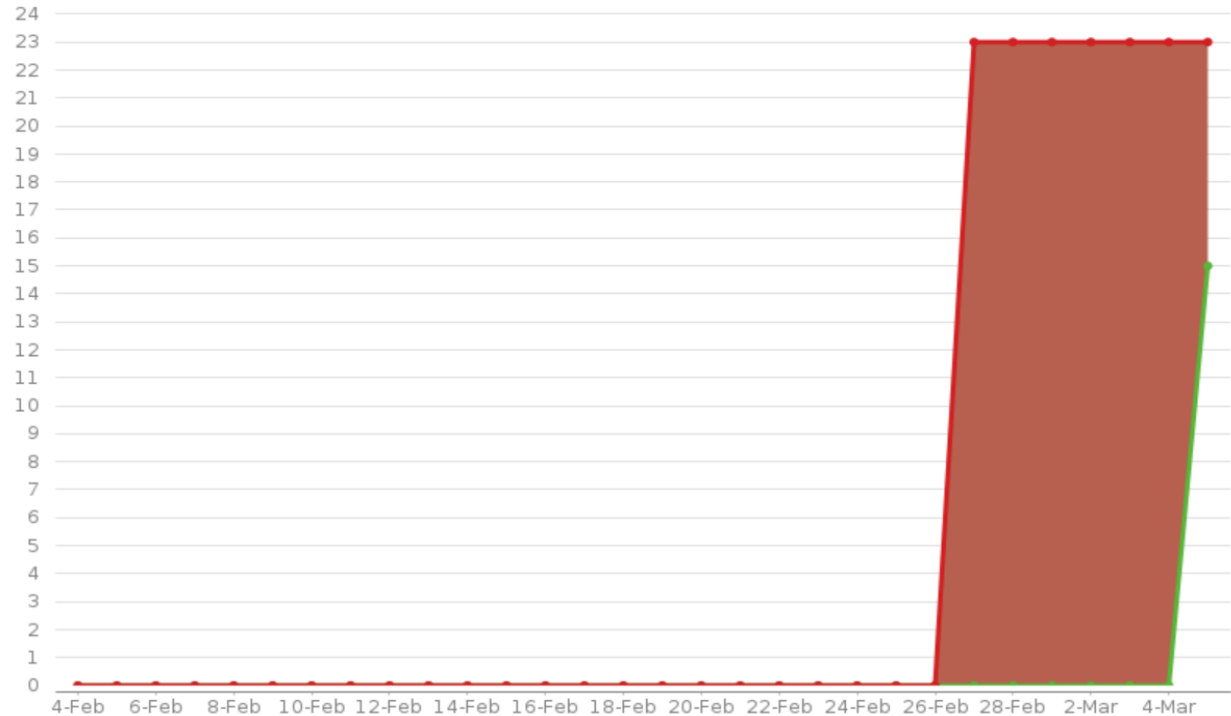
### Burndown Chart



# METRICS

## COMPLETED vs COMMITTED RATIO

This chart shows the number of issues **created** vs. the number of issues **resolved** in the last 30 days.



# RETROSPECTIVE

## What went well

As we are using Microsoft Teams for daily communication and for team meetings, Communication and updates between team members was in more organized way in this sprint.

## What needs improvement

Team members should discuss if they have any doubts regarding their assigned user stories in team meetings, rather than asking the doubts on the day of submission.

## Next Steps

In the next sprint we should make sure that work load is same for every team member, so that one should not be overwhelmed with their assigned work Page.

# SPRINT 3





# SPRINT 3

Projects / Covid19 Safety Protocol Tracker1 / COV board

## Backlog

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Insights

VERSIONS  
EPICS

▼ **COV Sprint 3** 8 issues

Add dates

Start sprint



[View linked pages](#)

	As a registered user I should be able to see the play the button in the home page.	COV-16	=	-
	As a registered user I should be able to see the pause button in the home page.	COV-17	=	-
	As a registered user I should be able to start the play button and search for infected person in the bluetooth range.	COV-18	=	-
	As a registered user I should be able to add my friends through QR code.	COV-19	=	-
	As a registered user I should be able to send my application QR code to my friend to add in the friend list.	COV-20	=	-
	As a registered user I should be able to see my friend list.	COV-21	=	-
	As a registered user I should be able to white list my trusted friends.	COV-22	=	-
	As a registered user I should be able to remove the friends from white list.	COV-23	=	-

# STORIES PLANNED AND COMMITTED FOR SPRINT 3











## ▼ COV Sprint 3 8 issues

 Add dates

Start sprint



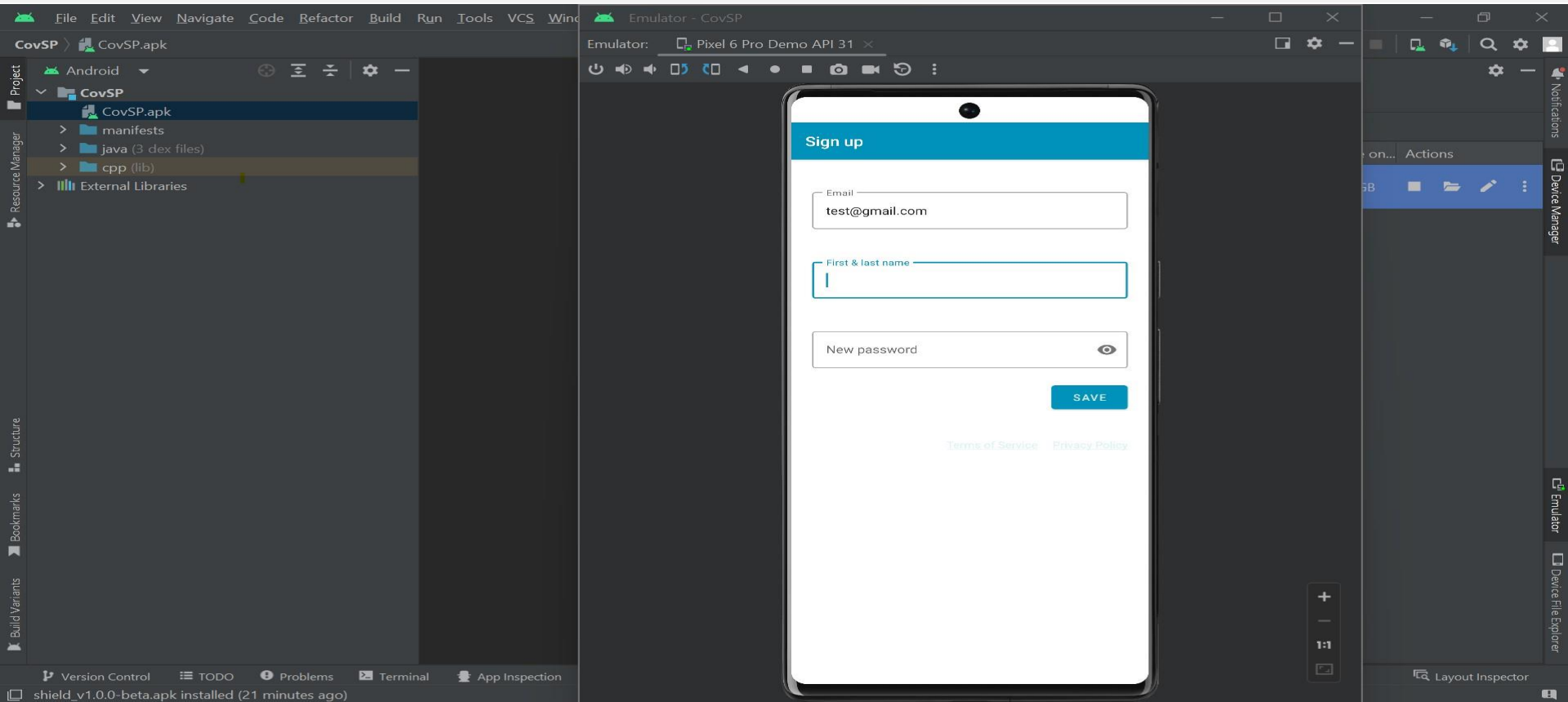
[View linked pages](#)

- |   |        |   |  |
|---|--------|---|--|
|  As a registered user I should be able to see the play the button in the home page.                                    | COV-16 | = |   |
|  As a registered user I should be able to see the pause button in the home page.                                       | COV-17 | = |   |
|  As a registered user I should be able to start the play button and search for infected person in the bluetooth range. | COV-18 | = |   |
|  As a registered user I should be able to add my friends through QR code.  | COV-19 | = |   |
|  As a registered user I should be able to send my application QR code to my friend to add in the friend list.        | COV-20 | = |  |

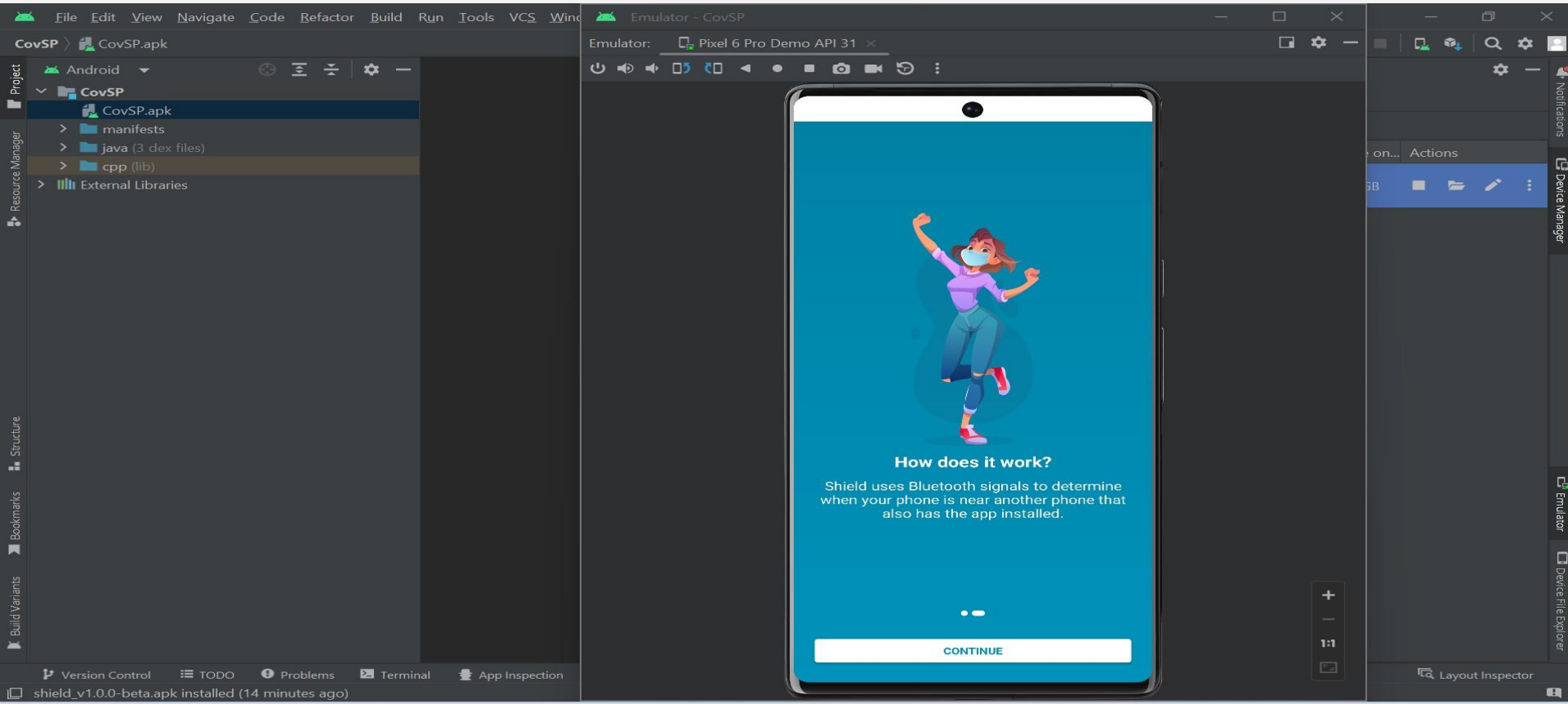
## PROJECT DEMO SPRINT 2



# PROJECT DEMO – SPRINT 2

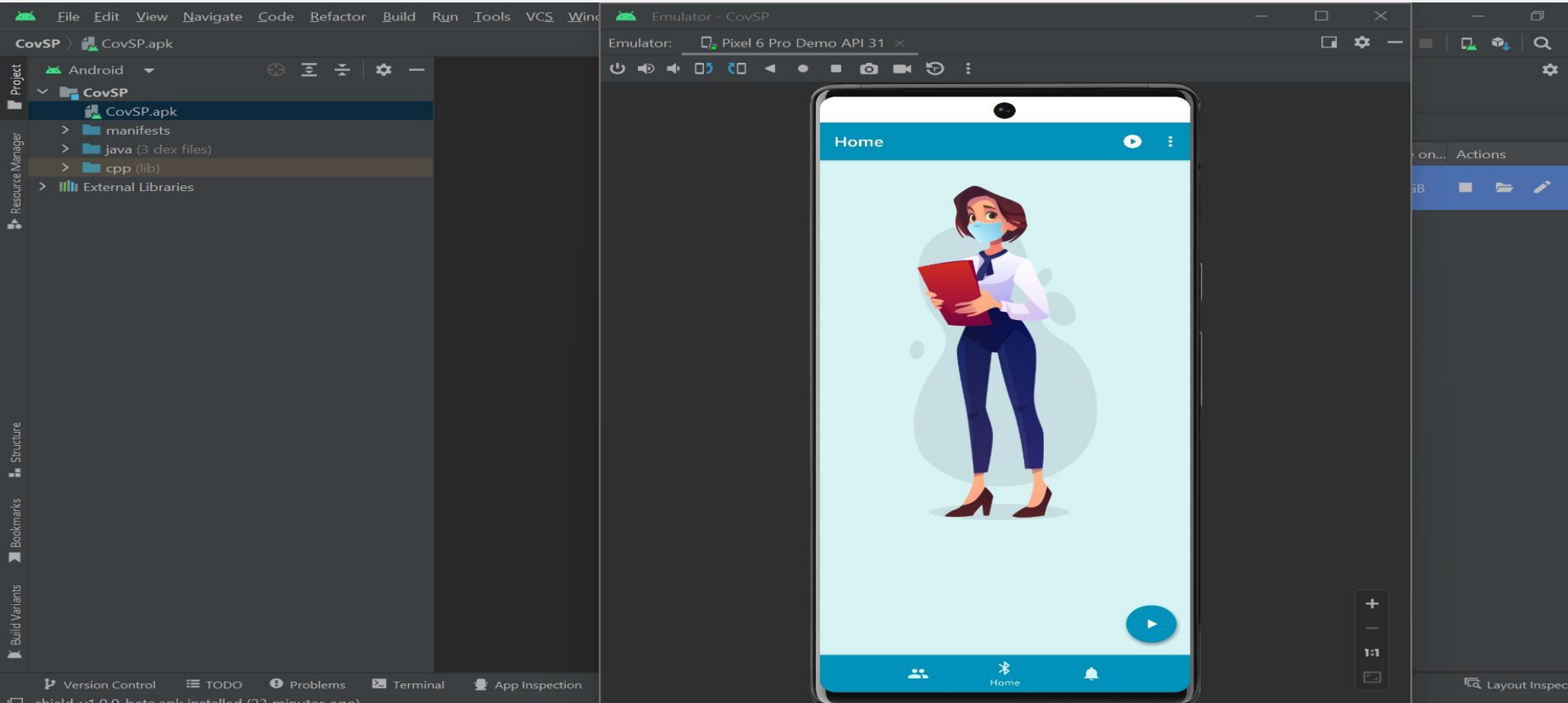


# PROJECT DEMO – SPRINT 2





# PROJECT DEMO – SPRINT 2



## GITHUB LINK



<https://github.com/htmw/2023S-Team1>

# LIVE APPLICATION DEMO

The screenshot shows the Android Studio IDE interface. The top toolbar includes menus like File, Edit, View, Navigate, Code, Refactor, Build, Run, Tools, VCS, Window, and Help. The title bar indicates the active file is 'shield\_v1.0.0-beta - AndroidManifest.xml'.

The left sidebar contains the Resource Manager, Project, and Bookmarks panels. The Project panel shows the structure of the 'shield\_v1.0.0-beta' app, including 'manifests', 'java (3 dex files)', 'cpp (lib)', and 'External Libraries'.

The main editor displays the 'AndroidManifest.xml' file with the following content:

```
<?xml version="1.0" encoding="utf-8" >
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    android:versionCode="1"
    android:versionName="1.0.0-beta"
    android:compileSdkVersion="31"
    android:compileSdkVersionCodename="12"
    package="com.nova.android.shield"
    platformBuildVersionCode="31"
    platformBuildVersionName="12">

    <uses-sdk
        android:minSdkVersion="21"
        android:targetSdkVersion="30" />

    <uses-permission
        android:name="android.permission.FOREGROUND_SERVICE" />

    <uses-permission
        android:name="android.permission.ACCESS_NETWORK_STATE" />

</manifest>
```

The right sidebar shows the 'Emulator' panel, which displays a virtual device with the Google logo on its screen. The status bar at the bottom indicates the device is 'virtual device1 API 31'.

The bottom status bar shows the command: '03/06 21:16:23: Launching 'shield\_v1.0.0-beta' on virtual device1 API 31.'



**THANK  
YOU!**