SDV602 Project Milestone 1

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# Description of Application

## Scientific Motivation

There has never been a more important time in history to pay attention to data and numbers, specifically in the case of the Covid 19 pandemic.

Watching the number count, eagerly awaiting the mid-day pressers held by Jacinda and Dr. Bloomfield to give us the daily update on the COVID-19 situation became normal in New Zealand in 2020, and again in 2021. All we wanted to know was anything about the situation and more importantly the numbers of cases.

Being able to view these numbers allows for scientists to extrapolate and build models to allow for predicting where services will be needed. These models and numbers can also be used by businesses to plan and prepare for lockdown situations. The numbers overall became something of common place discussion amongst people as well.

Having ways to display this information, to show trends and make accurate predictions is critical to not only scientists but everyone in society.

The application that I will be building will take data from Center for System Science and Engineering at Johns Hopkins University, specifically their repositories on github (<https://github.com/CSSEGISandData>) which is kept up to date with daily reporting of numbers from around the world.

The application will be built with Python and the framework for creating graphical interfaces called PySimpleGUI. The benefit of using this framework is that it provides methods and functions to interact with 4 different python interface builders using one set of combined methods. The 4 underlying interfaces that Py tkinter

## Login

As a requirement of the application, a login feature has been requested. A user will need to first register an account with at minimum a username and password. To access the data explorer, the user will have to enter the username and password. This username will be displayed on the chat window whenever the user chats.

Data Explorer

The requirements specify a minimum of 3 data explorer screens. These screens will display the data to the user in graphs or other visualizations. The graphs will be able to be displayed differently to the user based on different settings that they could adjust on the window such as dates, or country to view.

Chat Window

Having a chat system is also specified as a requirement of the application.

Scientific Motivation for the application

A brief description of the purpose of your application. (6 marks)

Text, table

Description automatically generated

# Storyboards

## Login

Data Explorer

Chat Window

Settings Menu

Table

Description automatically generated

# Test Scripts

Test Scripts

Input Validation

* Accepts correct input and displays correct information
* Chart Placeholder
* Navigation
* Console

Text

Description automatically generated

Table

Description automatically generated

# Coding Practices

Comments

Code formatting

Naming

Graphical user interface, text, application, email

Description automatically generated

* Constants
* Variables
* Procedures
* Classes
* Modules
* Established
* Programming System Conventions

# References

## Marking Schedule

A brief description of the purpose of your application. (6 marks)

Text, table

Description automatically generated

A set of storyboards depicting the working of the WHOLE application. Each storyboard is to include a table that details ALL interactions, inputs, and outputs. All actions and displays are labelled and described, must include how to move from one screen to another(12 marks)

Accepts correct input and displays correct information (12 marks)

Displays a place holder for the chart (12 marks)

Provides navigation to other DESs, must include a top command interface to display them all (12 marks)

deductions

Comments 2 marks

Formatting 2 marks

Naming conventions 2 marks

COVID 19 Data Explorer

Menus

1. Login

2. Data Explorer Screen

3. Chat Window

4. Settings Menu

5. Exit

## login pop up

Username

Password

Returns bool isLoggedIn() : failed