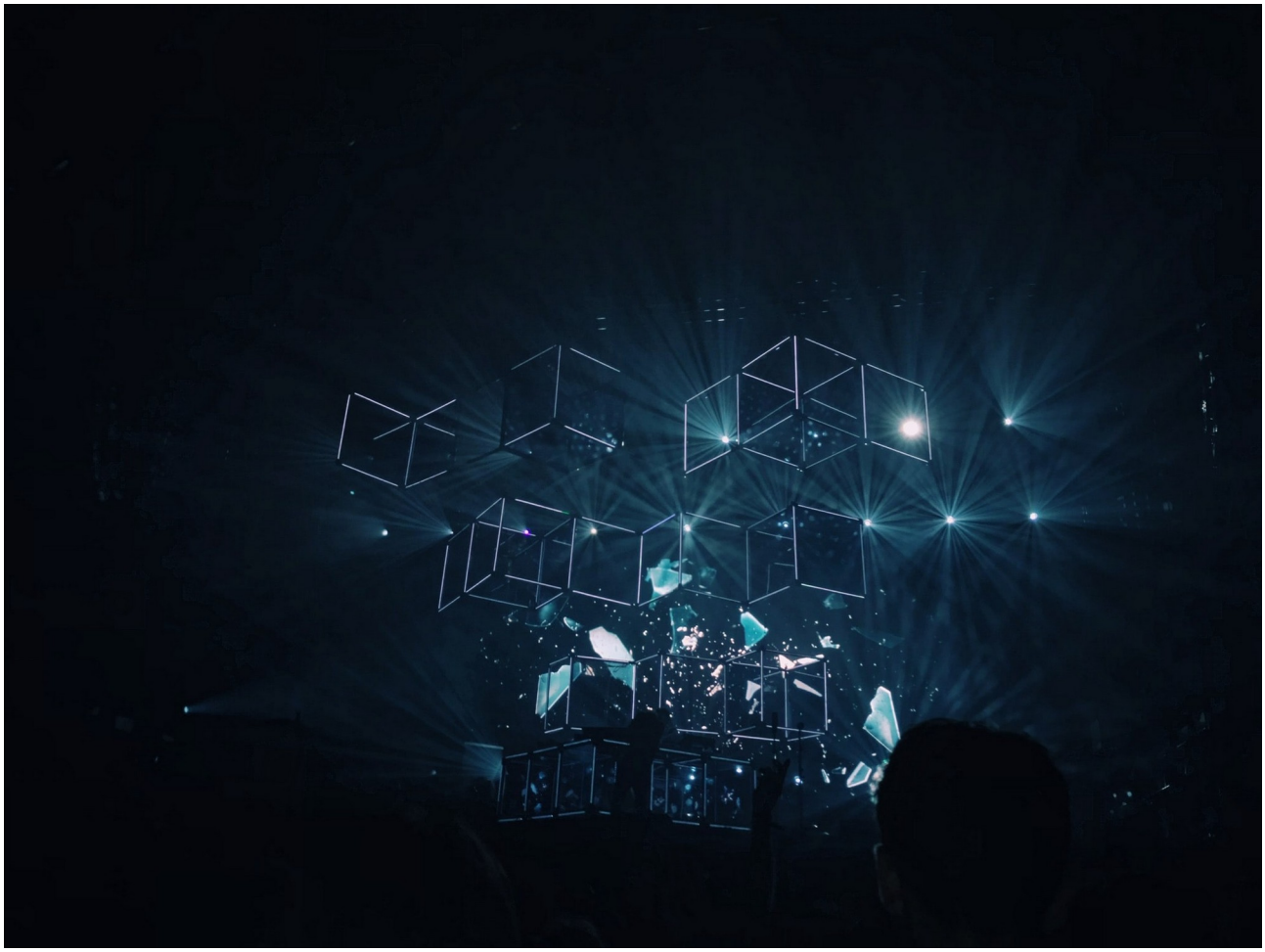
SDV-602 Milestone 1

Tutor: Todd Cochrane



SDV_602-Milestone 1_Noel-Williams

Introduction

Main purpose of this app is for learners of the stock market, A chart app that explains how to analyse stocks, but these skills are also transferrable into your own life, reading financial data at an understanding level could pay dividends in the long run.

I want to get a better broader view of the life of the stock and the possible trajectory of its future years, visualizing the data gives us a glimpse of what ‘could’ be, although I may add a couple extra screens if I have the time, or after hand-in as I quite like the idea.

Connecting like minds with chat functionality for those looking at the same charts and maybe a general room for the sake of discussions, ability to upload csv files to the program and re-render the graphs with the uploaded data as the current dataset, at the top will be a navigation bar to navigate to all other data explorer screens.

Requirements

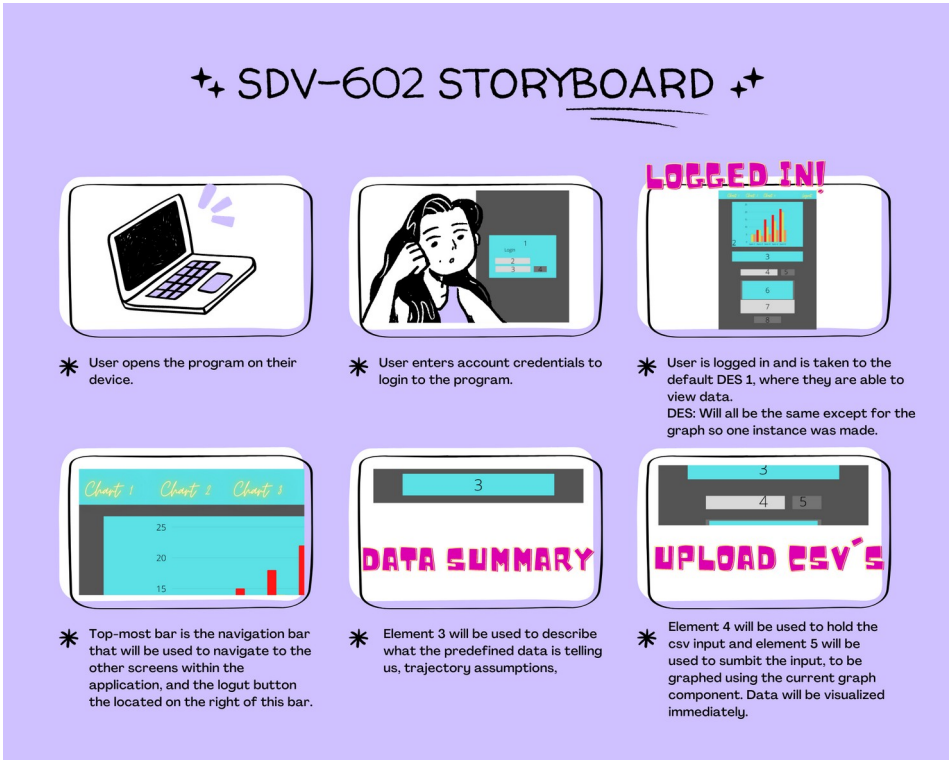
For this milestone the requirements for the application are as follows:

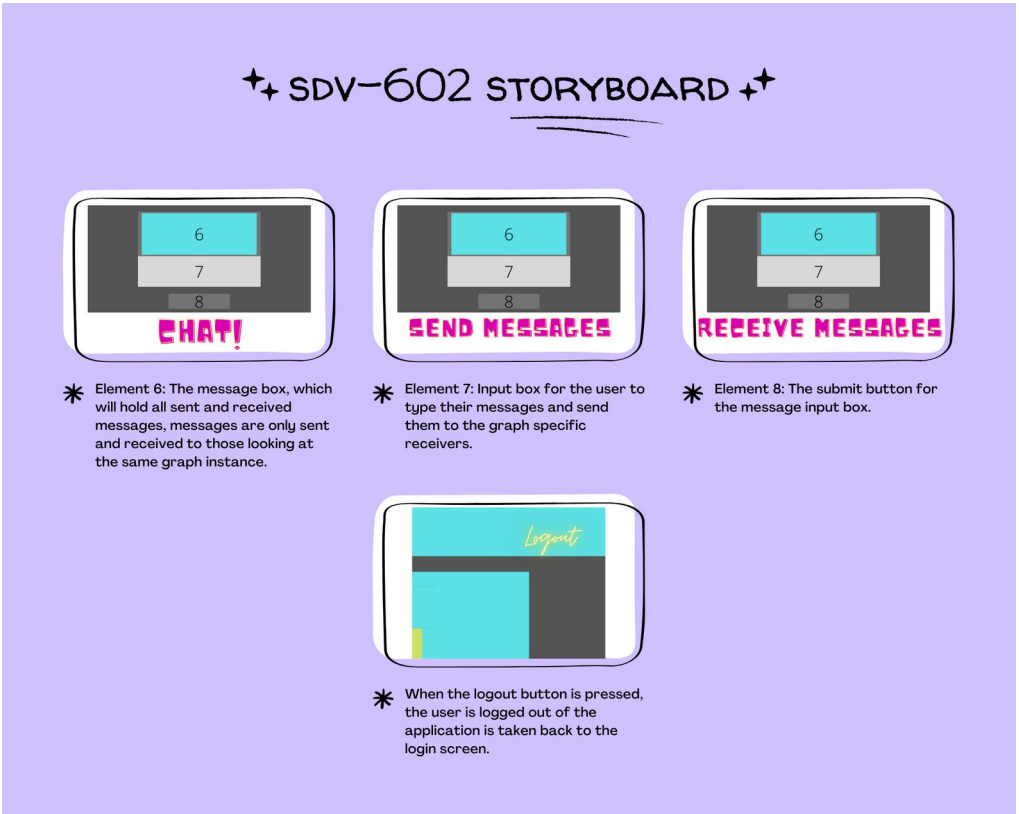
- 3 data explorer screens
    - that show correct information
- displays a place holder for the chart
- provides navigation to the other screens with a top command interface to display them all.

Other requirements include:

- story board depicting all the screens and interactions in the application.

Storyboards

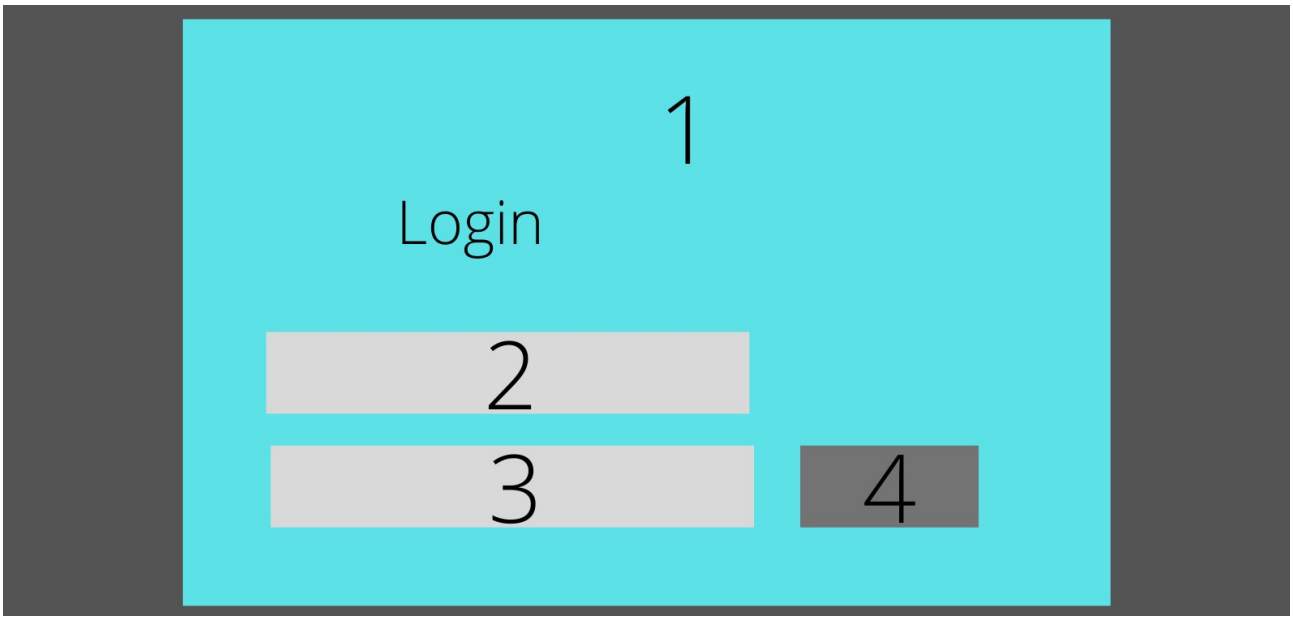




Storyboard Descriptions

Screen 1: Login

1 Parent element that holds all other elements that relate to the login
2 Input element that takes input that is presumed to be the username for an account on this application.
3 Input element that takes input that is presumed to be the password for the account relative to the username account if one exists on this applications database.
4 Submit button to fire an event with the input values readily avaiable for comparison.



Screen 2: DES Screen

1 Navigation Bar
1.1 Interaction - Renders DES 1
1.2 Interaction - Renders DES 2
1.3 Interaction - Renders DES 3
1,4 Logs the user out of the application and closes any ports that are being used for comms.

2. A graph that is put together with matplotlib.
3 A Description box describing the data what and why.
4 Input element to take a file path, so that the user can uplad a file to be graphed by the built in graph.
5 Interaction - The button to fire the upload file and re render
6 Message box – Holds all messages being received by a logged in user from another logged in user
7 User input for messaging
8 Interaction - Submit button for messaging

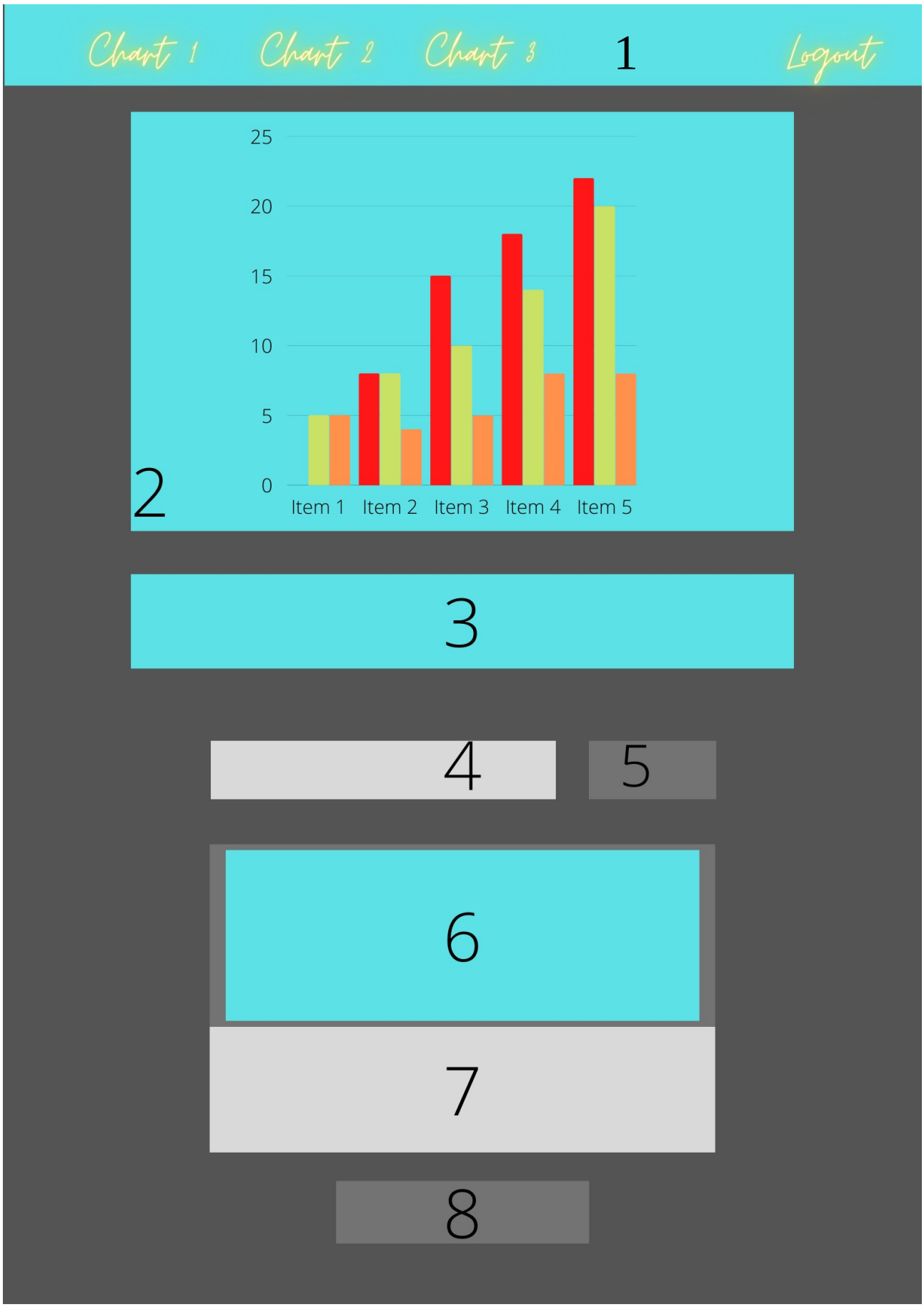


Chart 1
Chart 2
Chart 3
1
Logout
25
20
15
10
5
0
Item 1
Item 2
Item 3
Item 4
Item 5
2
3
4
5
6
7
8

Components

Component Descriptions

Top Bar Navigation	Will include all 3 headers for the other data exploration screens.
Start-up Graphed Data (.csv)	Pre-defined data that is graphed, different on each of the data exploration screen, and gives a hint to what type of data the upload component takes, but instructions on use of the upload component will be provided. I also want to add a function utilizing the read_html method with pandas to enable web scraping similar data for visualizing based on predefined urls. Data will be obtained from yahoo finance.
Upload Csv Input and Button	An upload button and input bar for the file, will be used to read and visualize data using the graphs plotted with matplotlib. Library: • Tkinter
Chat Component	Will have a display bar that displays messages, an input field to capture message content and a send button to confirm a submission of the input field data to be sent to everyone within the same chat room and they receive that within the display bar. Will include a server and client to handle multiple connections between rooms, and tkinter will visualize the rest. Library: • Sockets • Threading • Tkinter
Graph Container Component	A container component to hold the graph instance, with a ternary operator with graph types depending on graph type state if state in this way is possible in python.

	May not be needed if the graph code is run through an if statement filtering the graph type that is needed and dynamically rendering the data at the beginning of the graph render function, and also changing the chat room configurations to match the specific graph chatroom Library: • Pandas • Numpy • Matplotlib
Graph Descriptor	An element that holds a description of what the graph is plotting and or why collecting and visualizing data like this is useful to us.
Main menu screen or menu or navigation bar	To hold navigation for the other graph views, and possibly other settings such as data instance amount limits,
Login/ Logout Functionality	For the addition of security, login and logout functionality before the app can be used.