

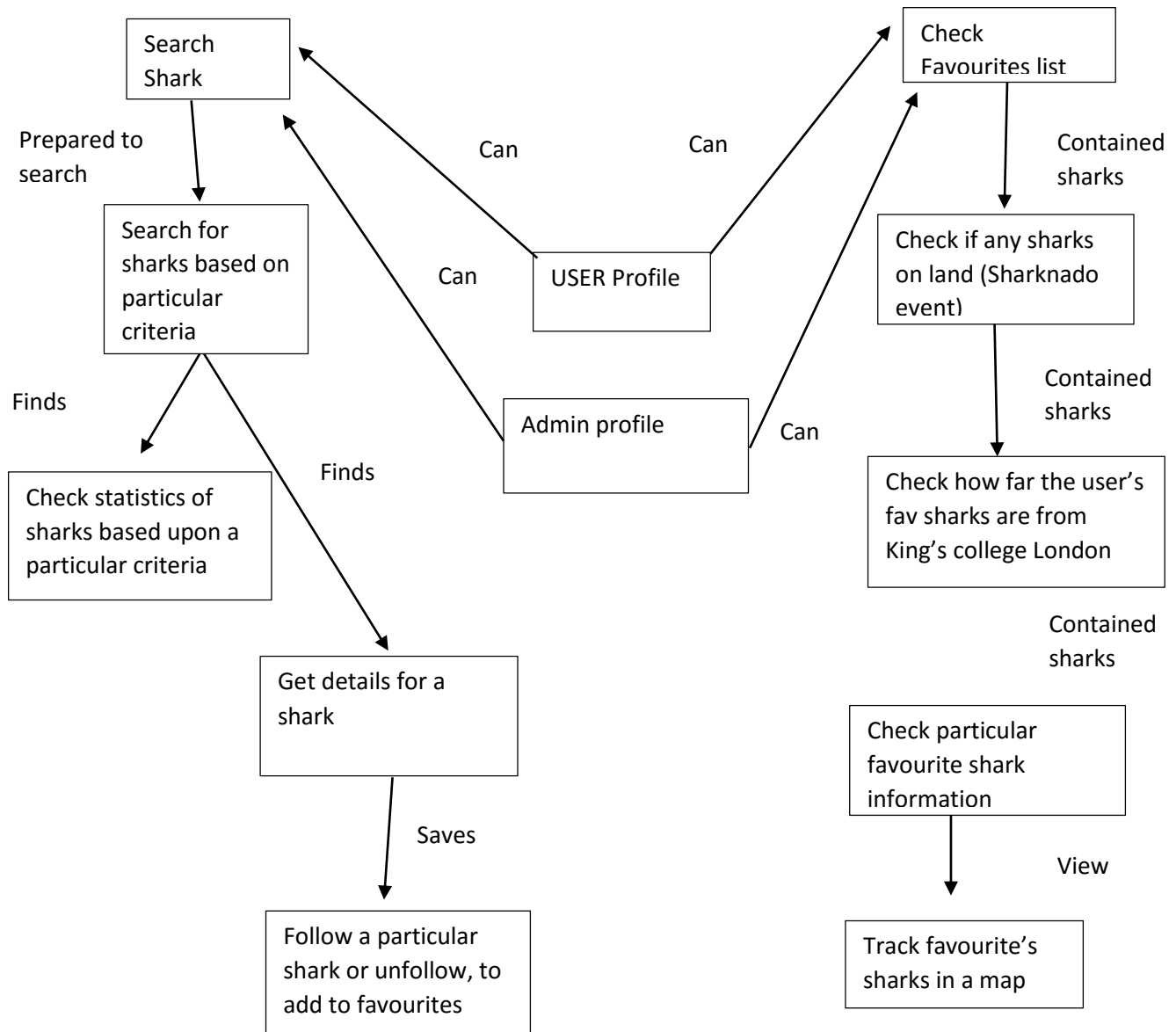
PRA Coursework Report

Introduction:

For this project, this report will summarise and give an idea about the Shark Tracker application. The report will talk about how the program works and the processes in the program. The report will talk about the domain model of the program, and the contexts of the program. The whole idea for the program is to be able to search for a shark and get information about the shark. Our shark tracker programs runs using an external API, which for our program is called JAWS. This API will bring all relevant information to the user wants. The API will get information from an external server, which there is a KEY for the API to connect. Our program has a feature to save certain shark information, for later check of information. This information will basically be linked to a user, which in the program there is a feature to login, and if a user saves sharks there will be feature to save the sharks to that certain user profile. So later when the user logs in again into the program, the user will be able to save it. For this implementation to save a favourite shark, we have created a Text file, where when a user will press follow, the name of the shark will be stored there. If the user wants to click and get information about the shark, the program will access the Jaws API to get the information of the shark, and to get the date of the shark, there is a class where the program can use to get the latest date of the shark, so that all updated information shows about the shark, even after a month or week.

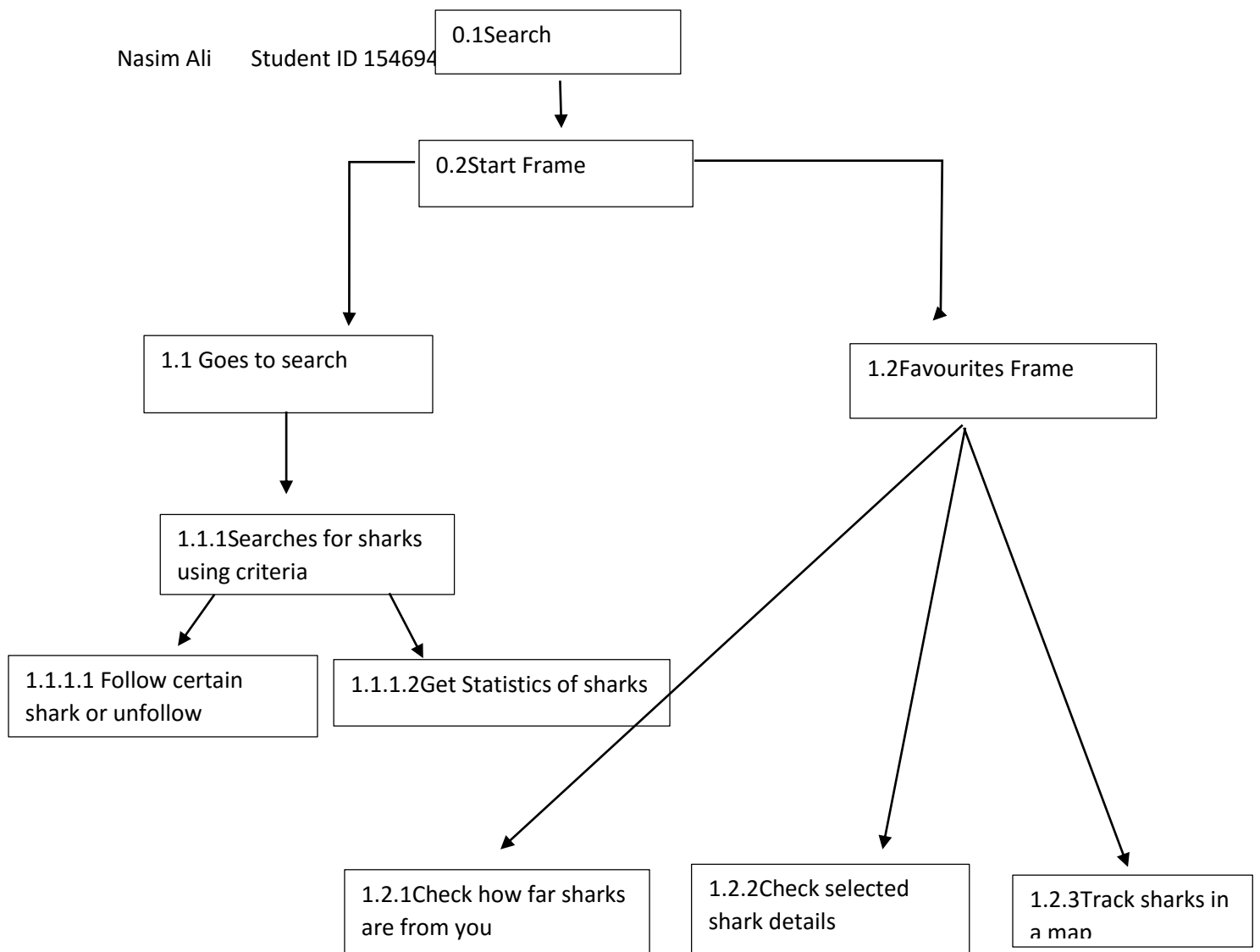
Domain Analysis:

Bellow will be a diagram that will show visually how the domain model for the shark tracker looks. Also shows the extra features we have included in the program. In our shark tracker program the user will be able to accomplish the following tasks, create a login and store that login for later use, have a favourites sharks list stored to that specific user login, click on Favourites to check for any sharks the user is following, click on Search in the start frame to search for more sharks, check for statistics of shark data for a certain period of time, and track sharks in a map from the favourites frame.



Hierarchical Task Analysis:

The main task of this program is to be able to track your favourite shark, which will give you information about the shark, how far the shark is from you, and to see where the shark in the map is located. Below is a diagram of the Hierarchical Task Analysis:



Plan 1 (See Search Results)

Do 0.1, 0.2, 1.1, 1.1.1

Plan 2 (See Statistics)

Do 0.1, 0.2, 1.1, 1.1.2

Plan 3 (Follow Shark)

Do 0.1, 0.2, 1.1, 1.1.1, 1.1.1.1 (recursively)

Plan 4 (Check favourite distance)

Do 0.1, 0.2, 1.2, 1.2.1

Plan 5 (Check selected shark details from fav)

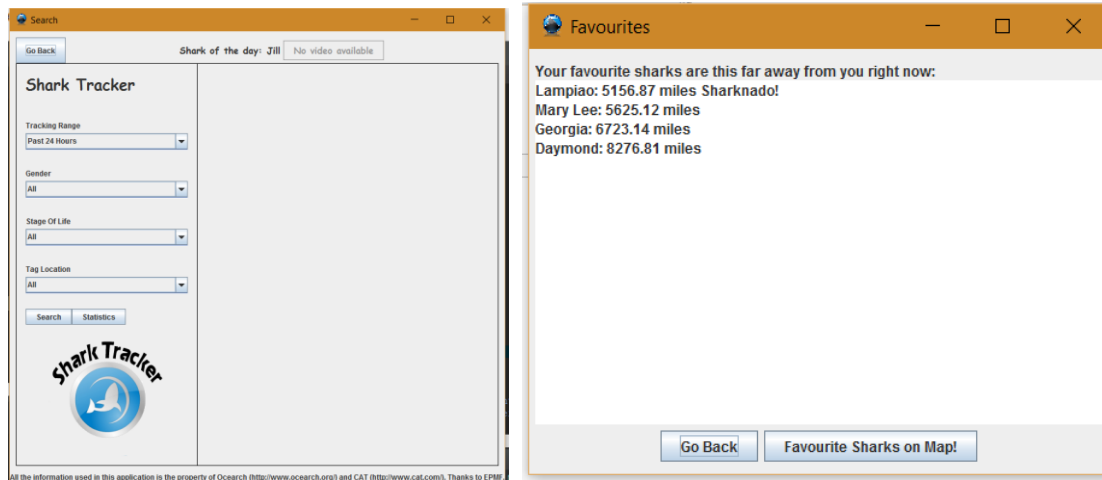
Do 0.1, 0.2, 1.2, 1.2.2

Plan 6 (Track fav sharks in map)

Do 0.1, 0.2, 1.2, 1.2.3

Window Models

In our main window it will shows a result panel full of shark details which will be based on the filter results of the user selections. The user will be able to add their sharks by clicking on the Follow, and unfollow a shark, by clicking same button.



The Search frame is the main part of the application as most of the application functions are based from this frame, as you have to search for a shark to follow a shark. The frame contains 3 JButtons initially, but more when search results is filled, and 4 JComboBoxes to filter results. You can go back to the start frame by clicking on the Go back button, and if you want to terminate the program just click exit.

The favourites frame contains JLabels which are clickable to show shark information which will pop up the search frame again, but only showing results for the selected shark. You can track sharks on a map by clicking on the 'Favourite Sharks on Map!'.

Extends

Further improvements to the program could be made by maybe by adding additional api such as Social Media APIs where users can login through social media like Facebook, or Twitter, this save time for the user to login as they don't have to create a new login, and it will be linked to their social media apps.

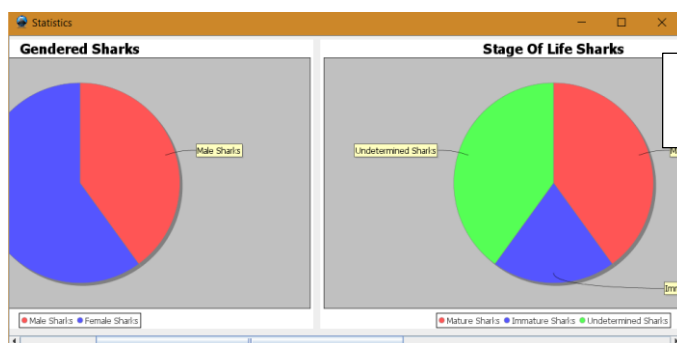
Global Navigation Structure



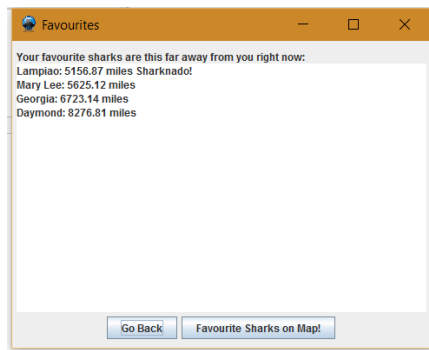
User can choose to login or stay as admin



How search would be loaded once loaded



Statistics frame once pressed from the Search frame



Favourites Frame Loaded, with the followed sharks



Map Frame loaded showing markers for the followed sharks

Conclusion

In conclusion, the Shark tracker application is used to track certain sharks, based upon the users search first initially made, and the sharks they chose to follow. The user will be able to track the shark later to see their latest last Ping date, or see updated information about the shark, and so on. These information is bought from the Jaws api which connects to a server.

Improvements could be made to the app such as back ground to improve.