COMP3111 Milestone 3 Report

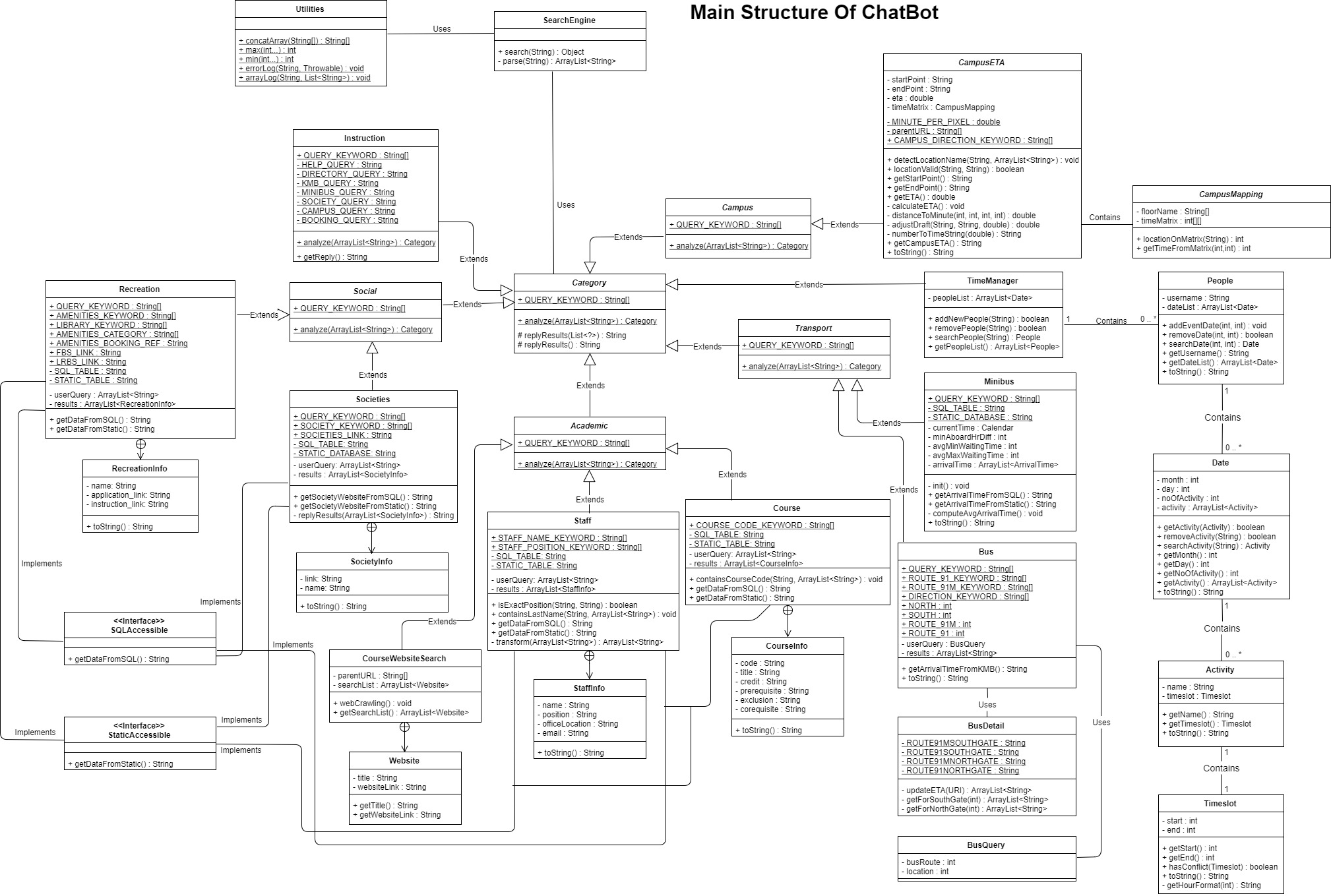
**Topic : HKUST Freshmen Chatbot**

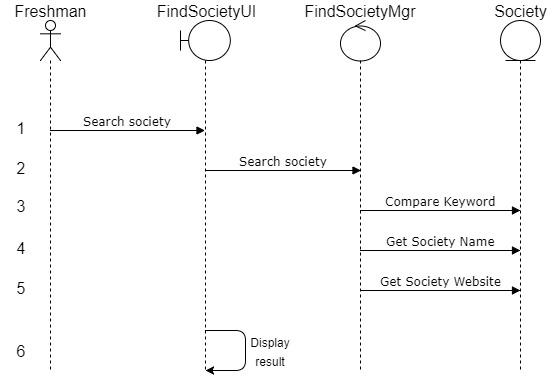
Team Members : Chan Yee San Samuel, Leung Cheuk Nam, Liu Yan Ho, Fung Yuk Cheung, Lai Yui Fung

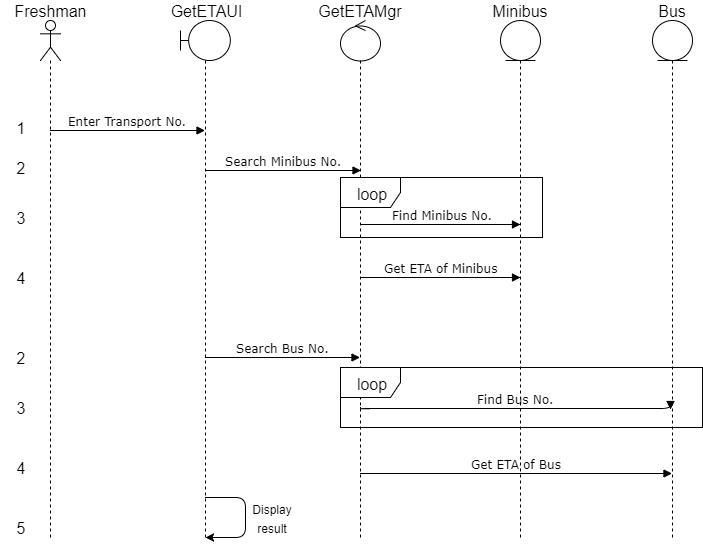
**Part 1**. URL to bitbucket repository containing source code

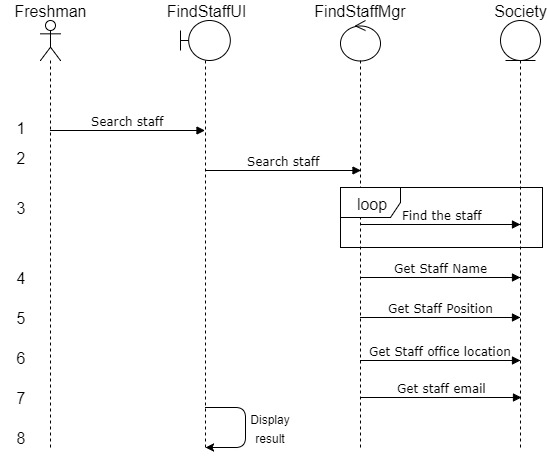
<https://bitbucket.org/projectgroup18/ust-freshmen-chatbot>

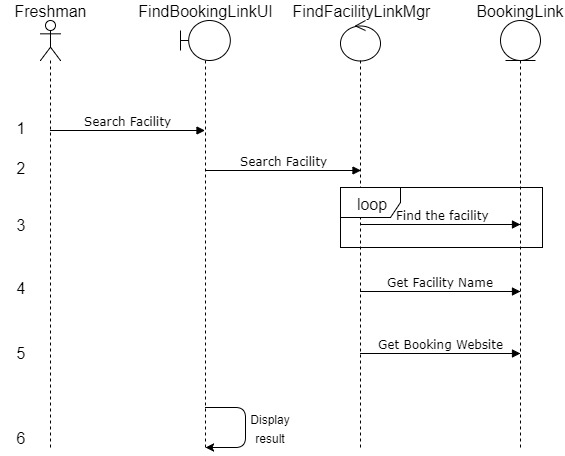
**Part 2**. UML Class Diagram and Sequence Diagram of Project

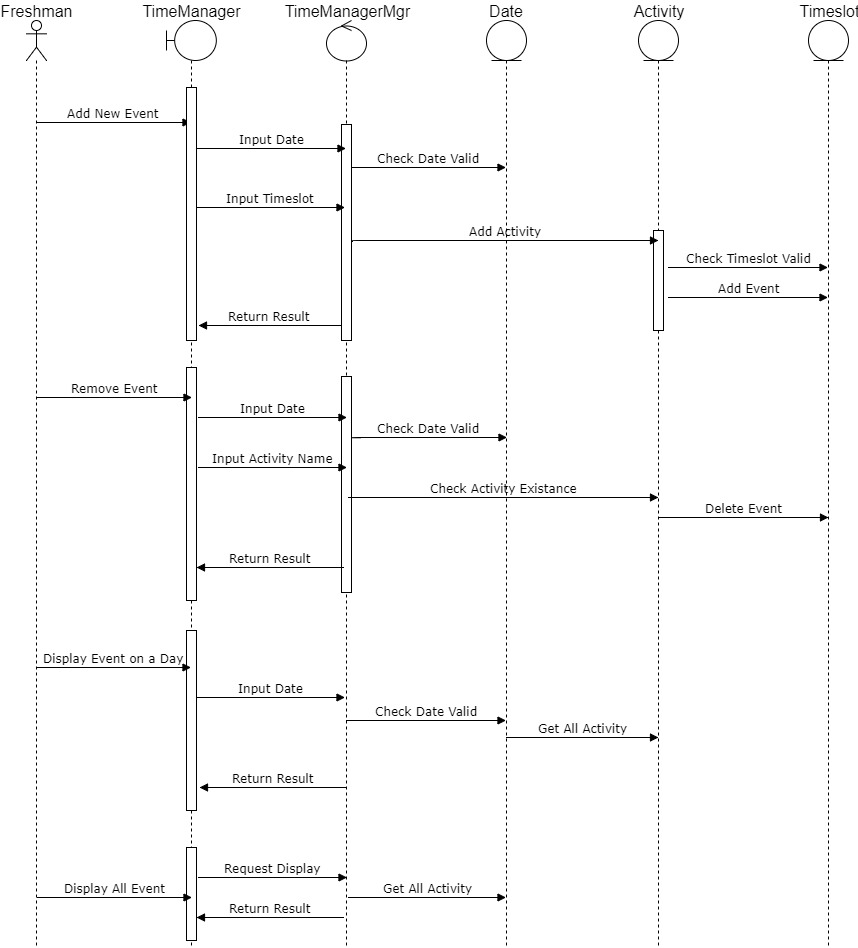


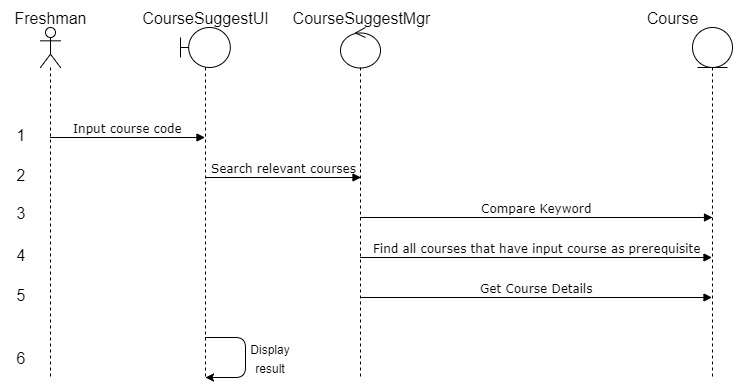


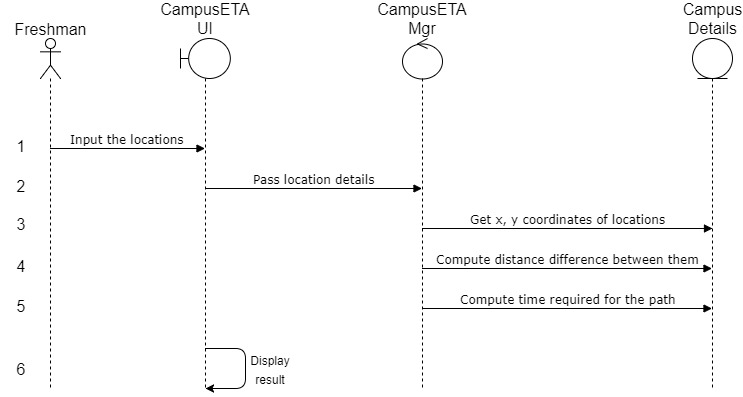


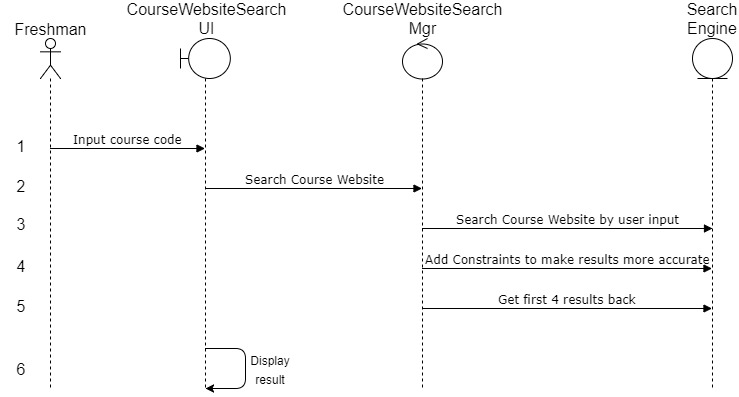












Description of design pattern we use :

* Strategy Pattern : In the UML class diagram, the Utilities class has demonstrated this pattern. We concluded some common functions and behaviors that will be used in various Category class, and made them as a family of algorithms. Examples like max and min, which can compute any type of objects with biggest or smallest value. They can work independently within classes.
* Mediator Pattern : In the UML class diagram, the Category class is the mediator. Every features are originally communicated in well-defined but complex ways, but now they are all inheriting the Category class, which handles and coordinates how the feature classes communicates. Now those feature classes do not need to explicitly know about each other. This greatly simplifies the maintenance.
* Factory Pattern : In the UML class diagram, the SearchEngine class will handle how to get output from the feature class and return it to LINE client side. It will create a Category class during its searching process, which the Category class will act as a factory. Category class will determine which feature class to instantiate upon runtime, such as Campus, Transport and Social. Now the instantiation of category / features will be handled by Category class and separated from SearchEngine class. It simplifies the work done in the search method of SearchEngine.

**Part 3**. QR Code of LINE chatbot



**Part 4**. Details on testing

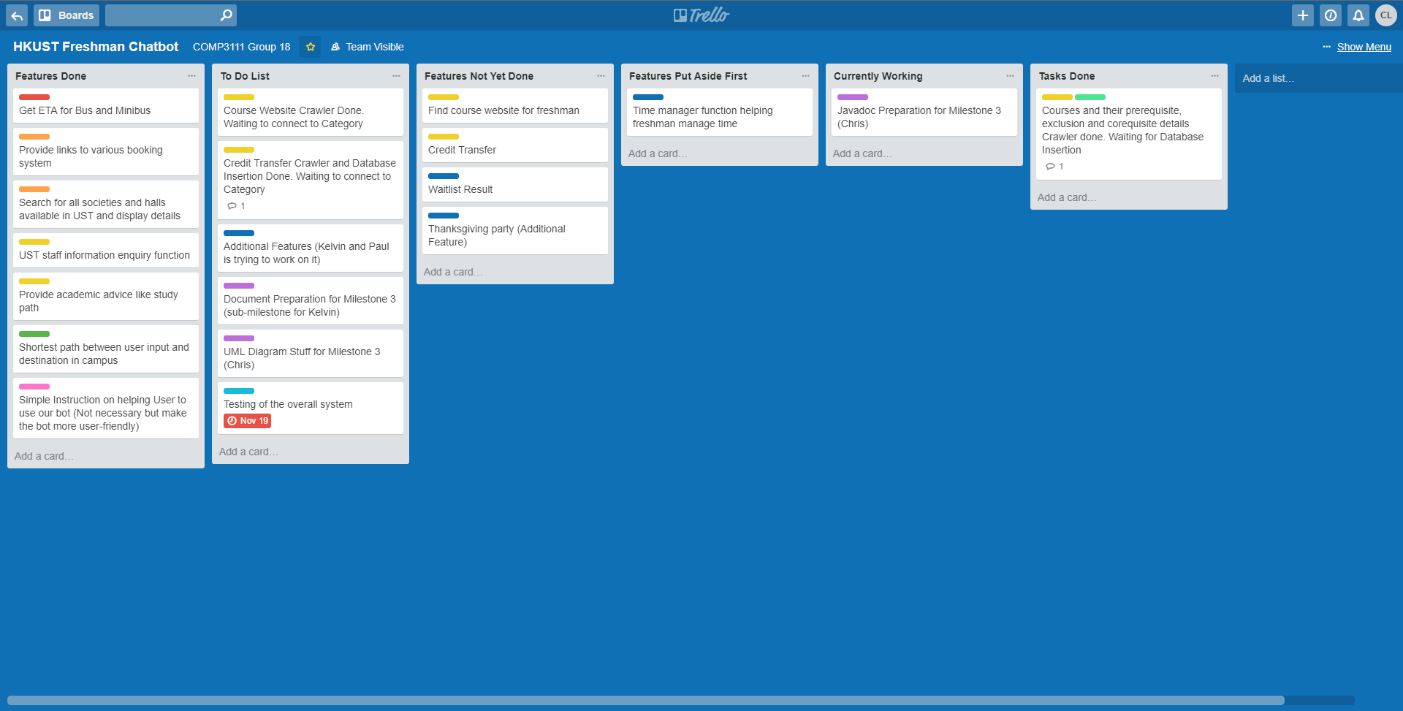
* How we do testing : We make use of the boundary testing which basically includes some valid input, input that steps on boundary of validity and some invalid input.
* Number of test cases we written :

URL to Test Coverage Report in Bitbucket :

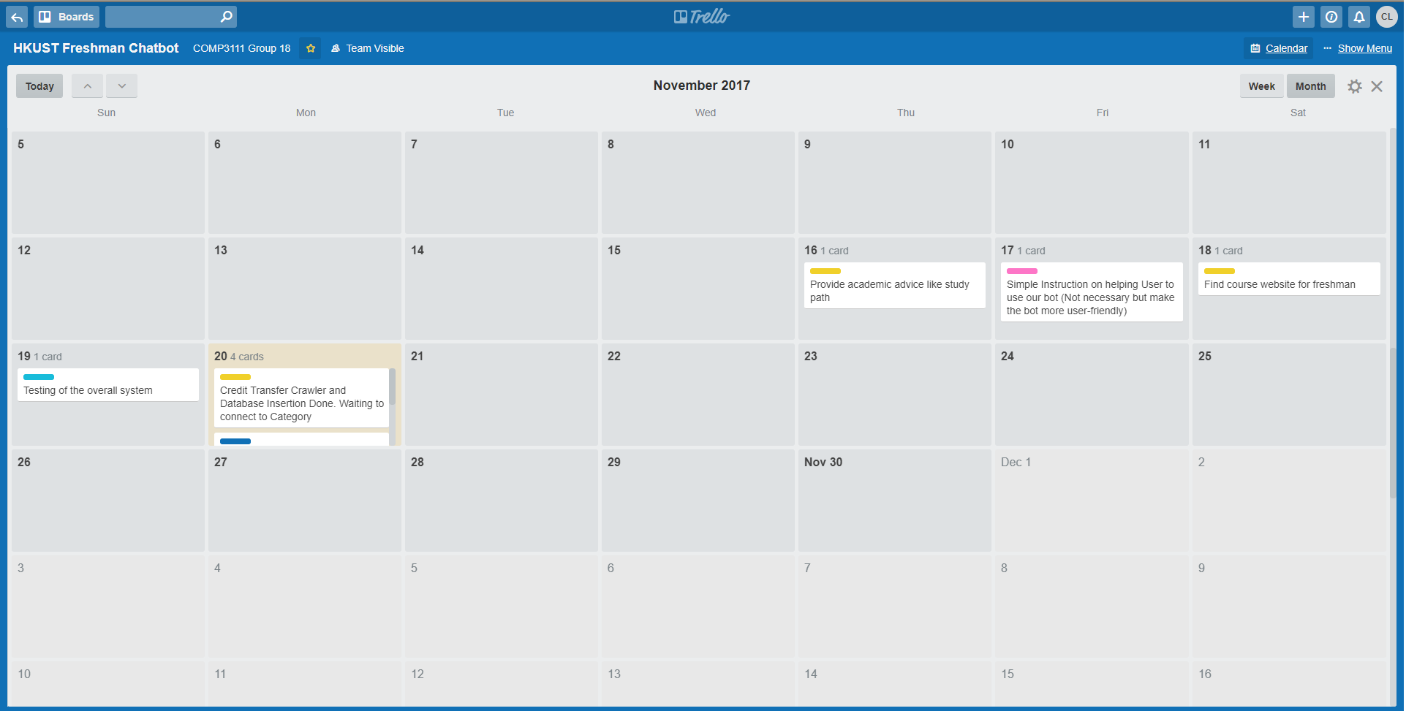
Test Coverage Report Screen Capture:

**Part 5**. URL of Javadoc on project

**Part 6.** Screen cap of project management tool



Make features as milestones and pin them on board to remind teammates.



Make use of Calendar to view the deadlines more clearly.

**Part 7.** Table of features approved in Milestone 1 and corresponding progress

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Features | Is Completed? (Y/N) | Sample Test Cases (if completed) | Expected Result | Checked (by TA) |
| Feature 1 – Return ETA for the shortest path between user input and destination in campus | Y | Input “Can I know eta from 4619 to 2407?” | Return “It takes 1 mins and 54 seconds to go from 4619 to 2407” |  |
|  |  | Input “Can I know eta from LTA back entrance to 2504?” | Return “It takes 0 mins and 53 seconds to go from LTA back entrance to 2504” |  |
|  |  | Input “Can I know eta from 4619?” | Return error message which remind user they have ambiguous query |  |
| Feature 2 – Find course  website for freshman | Y | Input “Can you find the course website of COMP3111 for me?” | Return the title and website link of first 4 most relevant course website upon query |  |
|  |  | Input “Can you find details of course COMP 4641 for me?” | Return the title and website link of first 4 most relevant course website upon query |  |
|  |  | Input “Can you find 2012?” | Return error message which remind user they have ambiguous query |  |
| Feature 3 – Provide academic advice for freshman like study path | Y | Input “Can you suggest some course after I have taken COMP 2012?” | Return all the course which has COMP2012 as pre-requisite |  |
|  |  | Input “What can I study if I have finished COMP 3111?” | Return COMP4111 which has COMP3111 has pre-requisite |  |
|  |  | Input “Suggest some path for me after COMP3511” | Return COMP4511, COMP4521, COMP4621 and COMP4632 which has COMP3511 as pre-requisite |  |
| Feature 4 – Time manager function to help freshman plan their schedule wisely | N |  |  |  |
| Feature 5 – Provide links to various booking system of campus facilities to freshman | Y | Input “Where could I book music room in UST?” | Return corresponding link successfully |  |
|  |  | Input “Where to book Lecture Room and also Study Room?” (No lecture room keyword in database) | Return corresponding replacement for suitable room booking link |  |
| Feature 6 – Get ETA for bus and minibus that available in campus like 91, 91M and 11 | Y | Input “ETA of 91 at south gate” | Return the ETA of bus route 91 successfully |  |
|  |  | Input “ETA of minibus 11 please ?” | Return the ETA of minibus route 11 successfully |  |
|  |  | Input “Can I know eta of 91m at north gate?” (Test at night which the last bus has gone) | Return the Chinese representation of “the last bus has gone” |  |
| Feature 7 – Search for all societies available in UST, displaying name and website to freshman | Y | Input “Where is the webpage of film society?” | Return webpage link of film society |  |
|  |  | Input “Nature club, Cricket club, where could I get info on them?” | Return webpage link of nature club and cricket club |  |
|  |  | Input “Where could I get info on HKUST soc?” | Return the webpage which contains all details of UST societies |  |
| Feature 8 – UST staff information enquiry function for freshman,  Provide office location etc | Y | Input “Could you tell me where the office of Prof. Li Bo is?” | Return details of Prof. Li Bo |  |
|  |  | Input “Where is the office of professor Li?” | Return details of all professors with surname Li |  |
|  |  | Input “Where is the office of Sunghun Kim?” | Return details of Prof. Kim |  |
| Feature 9 – Login freshman SIS and get waitlist result if any | N | N/A | N/A | N/A |
| Feature 10 – Get freshman input and check if their course can apply credit transfer | Y | Input “Can I transfer HKALE grades to UST?” | Return “What subjects have you taken” since it is a vague query |  |
|  |  | Input “Can I transfer Chinese History from HKALE to UST?” | Return the corresponding courses from the database |  |
|  |  | Input “Can I transfer HUM4001?” | Return the corresponding course at Centennial College that is able to transfer |  |
|  |  | Input “credit transfer Aalto University” | Return “Which course would you like to transfer? (Please provide course code) since user need to provide what course to apply for transfer credits |  |