Individual Report for OOSD

This project has required our group to design and implement an accommodation system using a range of software tools including Astah UML, NetBeans, Java and, JavaFX. The system includes a GUI that allows different users (e.g., manager and warden) to edit view and remove room details. We delegated the required tasks between team members and followed Agile practices to ensure the project was developed to the best of our ability. The main factors of agile development that we considered whilst developing this system included collaborative meetings and interim deadlines. This system allowed us to stay on track during the project and to make sure all members of the team knew their roles and responsibility at all times.

Before starting the development process, we were required to use a unified modelling language tool to create a range of diagrams to represent our system. We designed a use case diagram to identify a productive system and to avoid building the wrong solution for the specification. As a group, we individually designed our own use case diagram before comparing results and combining the diagrams to ensure that the final model included all of the requirements of the specification. I was responsible for aiding the design of the diagram and for proof checking the final version. With the aid of the use case diagram, we then designed a class diagram to distinguish the relevant nouns from the scenario that represented the classes needed for this application. Similarly, we all individually designed our own class diagrams and then combined ideas to form a more developed final model. The last diagram we were required to develop was the sequence diagrams in order to model the interactions between the classes in a single use case. To do this, we each created a different sequence diagram each for a chosen use case. I was allocated ‘View Room Information’ and designed a complete sequence diagram to represent a step by step on how the classes interact with each other.

Diagram

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During the implementation we used Java, JavaFX and SceneBuilder to create the graphical user interface. This was made easy by following agile practices with frequent team meetings either in person or online. They also ensured that all members of the group were aware of their responsibilities and roles at all times. I was responsible for the testing of the project throughout development. I ran tests on all elements of each GUI page to ensure that they all worked as planned both individually and when interacting with each other. I used a test case format in order to document all tests ran and to ensure I covered as much of the project as I could.

This project has allowed me to develop a better understanding of Java and has taught me how to use tools like JavaFX, Scenebuilder and UML modelling tools. I believe that this module has allowed me to develop a good understanding on how to use UML models effectively to design a fully implemented object-oriented system. My knowledge of JavaFX and Scenebuilder before this module was not great as I had never used them.