



UFCF8S-30-2-Advanced Software Development

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## **Strategy Planning**

During the strategy phase of development we decided to use the SQLAlchemy ORM (Object-Relational Mapping) to manage the data storage and retrieval needs of the GUI. Using an ORM let us quickly iterate versions of the application, rather than spending time getting bogged down with manual SQL queries. It allowed us to interact with the database in a natural object-oriented way.

We also identified our strengths and weaknesses as developers, and used this knowledge to divide up development of the application. Since each Tkinter window works fairly independently from all of the others, after we had chosen what windows we wanted to create we chose a number of them each to develop. George focused more on the admin focused windows of the GUI, and developed functions that allowed easy switching between windows and easy opening of custom modal windows. Toby developed the user facing windows (those related to booking) and ensured that the look and feel of the application was pleasing.

During the requirements gathering and analysis phase, our team will engage in stakeholder analysis to identify the system users and stakeholders. We will use techniques such as interviews and surveys to gather user requirements, which will be documented in a requirements specification. We will also create user personas and user journey maps to better understand the needs and motivations of our users. To ensure that our solution is aligned with the needs of our stakeholders, we will perform a stakeholder impact analysis. It is also crucial that we clearly define the roles and responsibilities of each team member, using a responsibility assignment matrix. By thoroughly understanding our users and stakeholders, and defining clear roles and responsibilities, we can ensure the success of our system development project.

## **Continuous team iterations**

We kept our development flexible by planning it using gitlab issues. These allowed us to informally plan what sections of the project we were working on, assign different tasks to different people, and swap between tasks easily without disrupting some sort of monolithic plan.

## **Team coordination and communication**

Teamwork was key for this project's success, we agreed to go to each weekly practical on Thursday's and failing that to catch up on Discord. We also created a GitLab repository so we could both edit and access each other's work on a regular basis. This was essential for the team to work cohesively, when one of us had an issue the other member could access the work and be able to help that same day. In terms of coordination, we decided early on which parts of the design we wanted to

do. George wanted to apply his SQLAlchemy skills to this project so we decided to use SQLAlchemy for the database.

### Simplicity

We kept the project simple by focusing on core features and avoiding unnecessary complexity. We also regularly reviewed requirements to ensure that we were not adding unnecessary elements. This allowed us to deliver value quickly and deliver a high-quality end result.

### Work Plan

Date	Purpose of meeting	Fulfilled Tasks
6/10/22	Formation of group and reading through specification.	Group formed, spec analysed, and requirements elicited.
13/10/22	Use Case diagrams and class diagrams. Clarify spec with James. Began work log.	First draft of use case diagram completed. Started class diagram.
20/10	Assess icon and banner images created.  Complete first draft of the class diagram. Create wireframe sketches for GUI windows.	Completed first draft of class diagram; added to use case diagram; Created wireframes for Login & listings pages. Started development of system.
27/10	Practical; Created Database schema, dummy data for DB, compiled all diagrams into one file, started sequence diagrams. Started final drafts of Use Case and Class diagrams.	DB created and filled with dummy data, started sequence diagrams and uploaded files to GitLab.  <b>TO DO BEFORE NEXT PRACTICAL!! – FINISH USE CASE AND CLASS DIAGRAM.</b>

3/11	Finished Use Case and Class diagram, also completed two of three sequence diagrams. Have scheduled meeting for 16/11 at 11am (Online). Created issues on GitLab repository to plan work to be done before next meeting	All members to check and complete issues in GitLab repository and think of suitable third sequence diagram to complete for deadline 15/11 at 2pm.
10/11	<b>PART ONE Finalisation (15/11 2pm Deadline)</b>	Completed Part One
17/11	Work to begin on database and python files	Began work on the GUI and database. Icon, banner, and assets done.
24/11	Continued work on the database and python files and design	Began work on python files and finalising the database.
1/12	Begin work on the testing	Began work on testing database and GUI
8/12	Help with Toby on new booking python file	Fixed the problem with the design of new booking, was an issue with the row configure
15/12	Finalised Database	Database complete and ready for submission
22/12	Finishing off design for python files	Only cancel booking remaining and beginning work on individual reports and joint report.
CHRISTMAS BREAK		

5/12	Cancel booking finalised and complete	Finished the python file cancel_booking, and started Joint Report
9/12	PART TWO Finalisation (10/01 2pm Deadline)	Joint Report and testing completed