Richa Pahuja (s5353290), Dayyan Ahmed (s5280098), Zekun Liu (s5291882)

Software Technologies (2810ICT\_3235/7810ICT\_3235)

PROJECT plan

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# **1. Introduction**

## **1.1 Background**

The main objective of this project would be to focus on a detailed and summarized database of Airbnb activity in Sydney, NSW, Australia. However, with such a long database, the client is struggling to navigate through his desired information completely without spending hours and a lot of effort to look for it by going through the entire database. He has requested an interface where he can navigate through it easily. Considering the problem mentioned, our team would be developing a website to assist our client to easily navigate to their desired data with an easy-to-navigate search option along with a filter to accommodate users' preferences in the listing, review score, price, and how clean the property is. In conclusion, the website would be designed in an appealing way with an easy-to-search option just as the client requested for.

## **1.2 Problem Background**

The background problem in this scenario is that the client has a large and detailed database of Airbnb activity in Sydney, NSW, Australia. However, due to the extensive nature of the database, the client is facing challenges in efficiently navigating and accessing their desired data. This navigation process is time-consuming and requires a significant amount of effort as they must manually search through the entire database to find the specific information they need. The problem is further exacerbated by the lack of a user-friendly interface to facilitate easier access and retrieval of data.

## **1.3 Scope**

The scope of this project will involve a website that will easily and efficiently navigate through an extensive database of Airbnb activity in Sydney, NSW, Australia. The website's features and functionality will include a summarized view of the Airbnb activity database, a user-friendly interface, search functionality, filters to refine search results, and a visually appealing design to enhance the user experience. The scope of this project specifically focuses on addressing the client's challenge related to data navigation and retrieval. The project does not involve creating or altering the current Airbnb database itself but rather aims to provide a more efficient means of interacting with the existing data.

The user requirement would also be included which would have list of subsystems. For instance, price subsystem which will be responsible for making a graphical representation for the chosen house, key word subsystem which will be responsible for looking for some specific key words mentioned in the records for example like pool or pets. There are other subsystems for cleanliness and neighborhood checking that as well are designed keeping in mind the user’s requirements and their preference and needs.

## **1.4 Document Content**

The Document displays the client’s concern regarding the big database which they are having issues navigating through. A website is proposed that would solve the client’s problems, beyond what is asked for. The websites features and functionality will include a summarized view of the Airbnb activity database, a user-friendly interface, search functionality, filters to refine search results, and a visually appealing design to enhance the client experience like it is stated above. Our Team later in the document also stated a work breakdown structure to break down the project’s scope and visualize the task in an organized way. The details of the work breakdown structure are mentioned in the activity definition and estimation where the time for each task is stated too. The Gantt Chart is attached for the convenience of our team members so that we can have access to it highlighting how long the task took, done by whom, and if it is interlinked with any other task. This is an initial which highlights the planning part of the Project.

# **2. Work Breakdown Structure**

|  |  |
| --- | --- |
| Task ID | Task Description |
|  | Initiating |
|  | Appoint a project Manager |
|  | Develop a project charter |
|  | Meet with teammates |
|  | Planning |
|  | Write the description about scope plan |
|  | Create WBS and schedule |
|  | Write design system component |
|  | Create Gantt chart |
|  | Planning user-interface design |
|  | Design Task |
|  | Design software components |
|  | Design Website layout |
|  | Design list use for the data analysis |
|  | Executing |
|  | Database integration |
|  | Making the website compatible to all devices |
|  | Check the data analysis |
|  | Creating background query bank |
|  | making query which will get the suburb data |
| 21. | making query which will get the database for the pricing |
| 22. | making query which would be looking for the key words from the database |
| 23. | making query which will provide data for the neighborhood |
| 24. | making query which will be looking for cleanliness |
| 25. | designing how the graph would be represented |
| 26. | designing how the data would be shown in the interface |
| 27. | Testing |
| 28. | Document test cases for all subsystem |
| 29. | Gather test data based on iteration |
| 30. | System analysts perform the test |
| 31. | Show the client his first deliverables |
| 32. | Perform user acceptance testing procedure |
| 33. | Write a report of test results |
| 34. | Controlling |
| 35. | Keep updating the Status |
| 36. | Update plans |

# **3. Activity Definition & Time Estimation**

1. Initiating: This includes tasks from 2-4. This is the foundation for the project planning and execution for Airbnb Project.

* Assign Project Manager who would be responsible for coordinating all project activities, ensuring timely progress.
* Create a project Charter formulating its purpose, scope, and initial requirements.
* Meet with teammates to discuss roles, responsibilities, and expectations, and appoint time and tasks accordingly.

1. Project Planning would include scope definition, WBS, Activity definition, resource allocation, and risk assessment.

* Scope definition Writing.
* Write WBS and schedule.
* Write all the components regarding system design.
* Make a Gantt chart to make a visual representation of the project schedule.
* Requirements and UI design to ensure it meets users’ needs and expectations.

1. Design Task

* Design the software elements, for instance, the buttons on the menu navigation bar.
* Design website layout in an interactive and appealing way.
* Data Analyst structured list design that outlines the specific data attributes and parameters.

1. Executing is implementing the project plan to carry out the task outlined above.

* Link the database of the Airbnb with the website.
* Storing the query of the client generated through the filter into the data bank.
* Data analysis verification to ensure accuracy and reliability.
* Designing the interface so it can be compatible with all operating systems like mac or dell and many more
* Making individual query to look for the suburb details from the database
* Designing a query to generate data in a graphical form for the expense for the night in an individual area or property.
* Designing an algorithm that will look for the key words in the data base and can display the results
* Generating query which will look for cleanliness and every word related to cleanliness from the review section in database.
* Putting a query which will be able to look for the neighborhood of the property.
* Designing the graphical representation and how they would be displayed on the screen
* Designing where and how the analyzed information will be displayed

1. Testing to ensure everything runs smoothly with no bugs or security errors.

* Test Case Documentation for every subsystem.
* Test Data Collection
* System testing to identify defects or any setbacks from the specified requirements.
* Initial deliverable presentation to the client to take their feedback for any additions to the system if requested.
* Perform user acceptance testing after any additions to the new system on the client’s request to make sure the software meets the needs now.
* Test Result Documentation is essential to keep tabs.

1. Project Monitoring and Control

* Regularly update the entire team, employees, stakeholders, and clients on any added information regarding project challenges, progress, and changes.
* Plan updates needed to be revised occasionally.

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | predecessors | Duration |
| 1 | Initiating | 0 | 7 |
| 2 | Appoint a project Manager | 0 | 1 |
| 3 | Develop a project charter | 2 | 4 |
| 4 | Meet with teammates | 3 | 2 |
| 5 | Planning | 1 | 8 |
| 6 | Write the description about scope plan | 4 | 2 |
| 7 | Create WBS and schedule | 6 | 1 |
| 8 | Write design system component | 7 | 2 |
| 9 | Create Gantt chart | 7 | 4 |
| 10 | Planning user-interface design | 8 | 3 |
| 11 | Design Task | 5 | 15 |
| 12 | Design software components | 10 | 6 |
| 13 | Design website layout | 12 | 6 |
| 14 | Design list use for the data analysis | 13 | 3 |
| 15 | Executing | 11 | 20 |
| 16 | Database integration | 14 | 5 |
| 17 | Making the website compatible to all devices | 16 | 3 |
| 18 | Check the data analysis | 17 | 2 |
| 19 | Creating a background query bank | 18 | 10 |
| 20 | Making query which will get the suburb data | 18 | 2 |
| 21 | Making query which will get the database for the pricing | 20 | 2 |
| 22 | Making query which would be looking for the key words from the database | 21 | 1 |
| 23 | Making query which will provide data for the neighborhood | 22 | 2 |
| 24 | Making query which will be looking for cleanliness | 22 | 3 |
| 25 | Designing how the graph would be represented | 21 | 3 |
| 26 | Designing how the data would be shown in the interface | 23 | 3 |
| 27 | Testing | 15 | 5 |
| 28 | Document test cases for all subsystem | 15 | 2 |
| 29 | Gather test data based on iteration | 15 | 2 |
| 30 | System analysts perform the test | 15 | 3 |
| 31 | Show the client his first deliverables | 30 | 2 |
| 32 | Perform user acceptance testing procedure | 31 | 2 |
| 33 | Write a report of test results | 32 | 1 |
| 34 | Controlling | 27 | 3 |
| 35 | Keep updating the Status | 33 | 2 |
| 36 | Update plans | 33 | 1 |

# **4. Gantt Chart**

[Gantt chart 4.0 .xlsx](https://1drv.ms/x/s!AqvIjN4lHzLWgl6SA2jODqlJTODp?e=MYUDBj)