Project Plan

Sydney Airbnb Open Data

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# Introduction

## Background

Sydney has remained a top city for users ever since it was named fourth among the top ten cities in the world for listings in 2016. This dataset shows the Inside Airbnb program's listing activity for homestays in Sydney, NSW, Australia. The dataset is updated each month.

The Inside Airbnb project, which aims to increase transparency and understanding of Airbnb's impact on various cities, makes a dataset about Sydney, Australia's Airbnb listings available. This dataset provides a wide range of information regarding Airbnb operations in Sydney, including detailed listing details and review data. The dataset is updated once a month, making it possible to track trends and changes over time.

## Scope

In Sydney, Australia, the Sydney Airbnb dataset includes information about the neighbourhoods, calendars, listings, and reviews for Airbnb. Analysing the data to find and display seasonal trends in Sydney's Airbnb property values. Creating a tool that enables users to choose a certain area or suburb and see how prices change over the course of the year.

Proving insights into the following aspects:

* Creating a tool that pulls terms and phrases from customer's reviews about certain Sydney Airbnb properties.
* Creating a feature where users can pick a time frame and their preferred suburb. This feature will generate a detailed report listing all available Airbnb rentals in that chosen suburb during the selected time period.
* Develop a feature that lets users pick a timeframe of their choice, and based on their selection, create a chart displaying how property prices are spread during that chosen period.
* Examine the dataset to see how many customers have talked about cleanliness in their comments. We'll check for different cleanliness-related words to make sure we get a complete picture. Then, we'll figure out the proportion or percentage of customers who mentioned cleanliness in their reviews.

## Document contents

The structure of this document is as follows:

Workflow Organisation in Section 2.0

Activity Definition and Estimation in Section 3.0

Gantt chart in Section 4.0

Each element contributes to the project's overarching framework, enabling a thorough examination of the Sydney Airbnb dataset and its consequences.

# Work Breakdown Structure

Project Airbnb

Project Plan Document

Gantt Chart

Software Design Document

Code for Data Analysis

Software Testing.docx

User Manual Document

System Vision

Scope of the Project

Breaking Down the Structure of the project

Requirements for both software and user

Activity Definition and estimation for the project

Use Case Diagram

Analysing Software and System Components

Activity Definition and estimation for the project

UI and Structural Design

Gantt Chart Picture

Executive Summary Report

Work Breakdown Sequence:

* Gantt Chart
* Preparing for Project Plan document
* Scope of the project & required tasks for project Airbnb.
* Breaking down the structure of the project.
* Activity Definition and estimation for the project.
* Preparing the Software Design Document for the scope of this project
* Analysing the Requirements both user and software
* Use Case Diagrams
* Analysing Software Design and System Components for the project
* User Interface Design Wireframes and Structural Design
* Including Gantt Chart in the project plan document.
* Downloading the git\_log.txt
* Writing the code for Feature 1 for Airbnb for a user-selected period, reporting the information of all listings in a specified suburb retrieving the data form of the CSV, and getting the required report.
* Writing the code for Feature 2 for a user-selected period, producing a chart to show the distribution of prices of properties with the provided data CSV using the matplotlib library.
* Writing the code for Feature 3 for a user-selected period, retrieving all records that contain a keyword (user entered), e.g. pool, pet. with the provided data csv.
* Writing the code for Feature 4 analysing how many customers commented on factors related to cleanliness.
* Writing the code for Feature 5 to know the occupancy rate measure of suburbs during a specified time period.
* Preparing the User Manual.docx for the user
* Software Testing Report.docx preparation for unit tests and coverage test results
* Preparing the Executive Summary.docx file

# Activity Definition & Estimation

#001 Gantt Chart (5 days)

Discussion about the activities involved in the project and defining them in the Gantt chart.

#002 Preparation for Project Plan (1 day)

Discussing with the teammates about the preparation of the document and its contents.

#003 Defining the scope of the project and required tasks (1 day)

Writing about the scope and tasks that are required for this project.

#004 Breaking the structure of the project (2 days)

Breaking the whole project into tasks that need to be performed to complete this project which includes discussion with the teammates.

#005 Activity Definition and Estimation (1 day)

Discussing with the teammates elaborating on each activity and estimating the time for each task to be completed.

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#006 Preparation for Software Design Document (2 days)

Discussing with teammates about the Software Design Document and its contents and defining the system vision and its benefits.

#007 Analysing the requirements for user and software (2 days)

Analysing the system and user requirements in order to run this project and defining the requirements for the user and software in the document.

#008 Making use cases and use case diagrams (2 days)

Writing some use cases and making some use case diagrams on how a user may use the application.

#009 Analysing about the Software Design and System Components (2 days)

Making a flowchart on how the software works, writing system components in the document like data structures and functions.

#010 User Interface Design - Structural and Visual (3 days)

Describing the tools used for the design, writing the structure of the design which shows hierarchy and the structure of the interface, designing sketches, wireframes which will help to build a layout for project visual design.

#011 Including the Gantt Chart in the project plan document (1 day)

Taking a snapshot of the Gantt Chart and including it in the project plan document.

#012 Downloading git\_log.txt (1 day)

After pushing the software design and project plan changes, download the git\_log.txt.

#013 Code for Data Analysis (4 days)

Writing the code in Python for the required tasks using some frameworks.

#014 Preparing the User Manual.docx (2 days)

After completion of the code and running the completion create a user manual on how to use the application.

#015 Creating a Software Testing Report.docx (3 days)

After completing the code and running unit tests and test cases that are covered on the application to ensure that the application is error and bug-free.

#016 Preparing the Executive Summary.docx (2 days)

Finalizing the project by creating the report in the executive summary.docx

# *A screenshot of a graph Description automatically generated*Gantt Chart