



# PROPOSED APPLICATION FOR AIR BNB

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*PREPARED BY: TADIWA KUNAKA AND ALI GHAFARI*  
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## 1.0 INTRODUCTION

### 1.1 PROBLEM BACKGROUND

Over the past few years Airbnb has taken the world by storm having humble beginnings in 2007 when it had just one rental property to over 5.6 million active listings and 4 million hosts. The platform boasts of a staggering 150 million plus users and has the potential to hit the 1 billion user mark. As a consequence of the platform growing bigger by the day it is starting to experience some problems mainly on the user side. Some of these problems include the quality of cleanliness of each listing hence there is a need for users to be able to filter comments on the platform that relate to cleanliness for them to make a better-informed decision. In addition to that users should be able to filter results that attain to certain keyword such as pool or cat. Moreover, people of this day and age find it easy to comprehend information through diagrams and picture thus a need for user to be able to generate a chart showing the distribution of prices of properties.

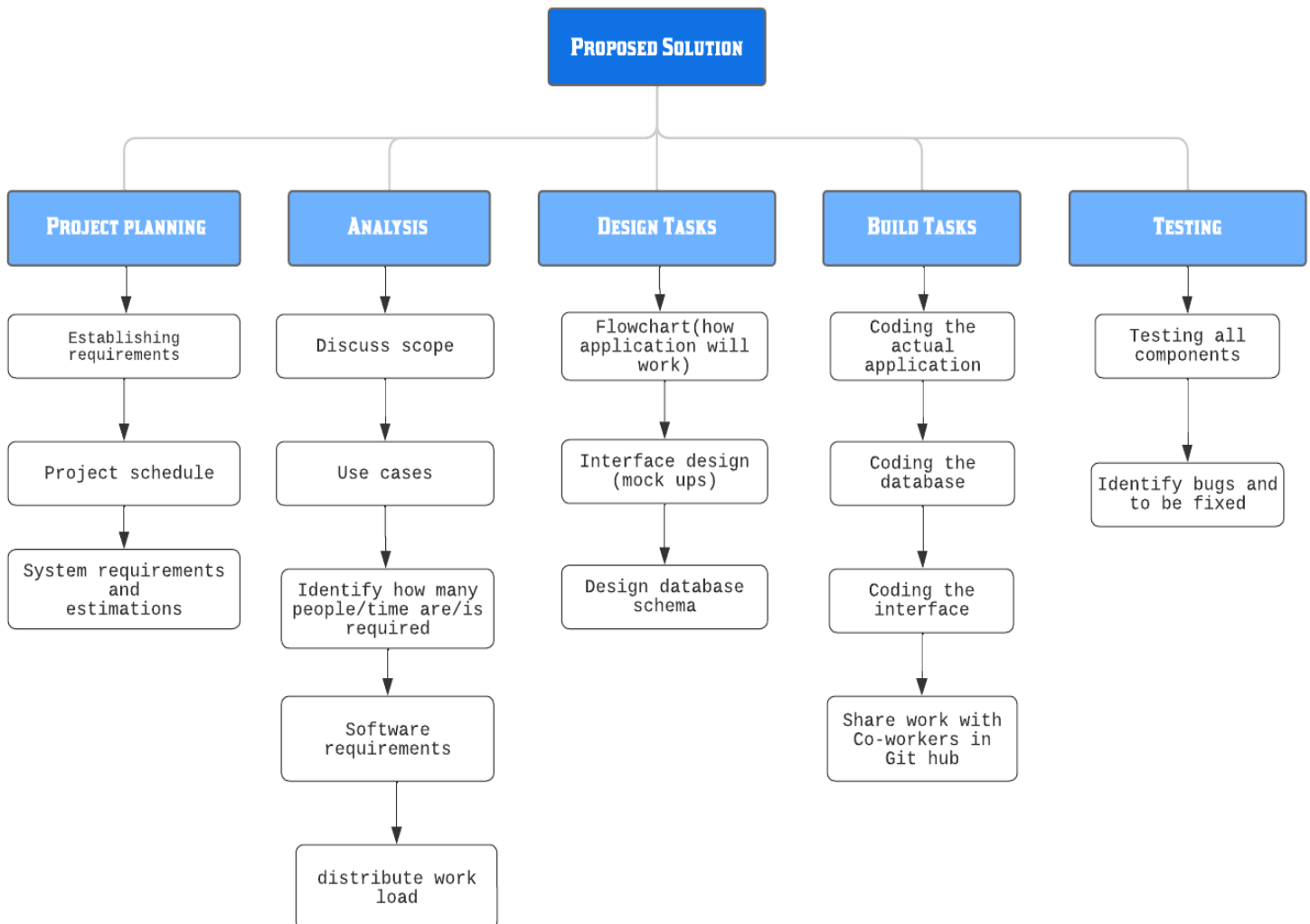
### 1.2 SCOPE

To meet these needs, an application named Info Calculator will be designed which will be user friendly and intuitive to use. The proposed solution will also have an additional feature which takes the average cost of each suburb and compares them by telling you how many reviews it has and how much it costs. All this will be packaged in a beautiful interface that will leave the users in awe.

### 1.3 DOCUMENT CONTENTS

This document will look at the work breakdown structure for the whole project. This will be a list of all the activities required to see this proposed application to completion. Secondly, and this document will look at the activity definition and estimation which will be a follow up of the work breakdown structure to give further details of each activity and the estimated time for each to be completed. Over and above that all this information will be put into context with the use of a Gantt chart

## 2.0 WORK BREAKDOWN STRUCTURE



### 3.0 ACTIVITY DEFINATION AND ESTIMATION

| Task ID                    | Task Description   | Duration(hours) |
|----------------------------|--|-----------------|
| <b>1. Project Planning</b> |  |                 |
| <b>1.1</b>                 | Establish system requirement<br><br>Functionalities needed to satisfy the requirement of the proposed application (mainly functional and performance requirements) | 1               |
| <b>1.2</b>                 | Document system requirements<br><br>Word document with system requirements   | 2               |
| <b>1.3</b>                 | Produce project schedule   | 2               |
| <b>1.3</b>                 | Organize team members<br><br>Assembling a team that works on this project to see it to completion  | 3               |
| <b>2. Analysis</b>         |  |                 |
| <b>2.1</b>                 | Team to discuss scope  | 3               |
| <b>2.3</b>                 | User requirements<br><br>How the user will interact with this software (what they should be able to do etc.  | 2               |
| <b>2.4</b>                 | Software requirements<br><br>What this software should be able to achieve with regards to user requirements  | 2               |
| <b>2.5</b>                 | Analysis of use cases<br><br>Analysing how people will use this software   | 3               |
| <b>2.6</b>                 | Distribute work load among team  | 2               |
| <b>3 Design Tasks</b>      |  |                 |
| <b>3.1</b>                 | Design flowchart (how application will work)<br><br>Diagram of how the software will/might work  | 3               |
| <b>3.2</b>                 | Design Interface (structural)  | 4               |

|                      |   |    |
|----------------------|---|----|
|                      | How the backend components will work together   |    |
| <b>3.3</b>           | Design Interface (visual)<br><br>The look and feel of the software interface. Design principles will be put into place to come up with good visual elements e.g. colour, fonts, icons. Mock-ups will be produced during the process | 5  |
| <b>3.4</b>           | Design system components<br><br>Pseudocode of system components N.B not actual code   | 4  |
| <b>3.5</b>           | Design database class diagrams<br><br>general conceptual modelling of the structure of the database   | 3  |
| <b>3.6</b>           | Design database schema  | 3  |
| <b>4. Build Task</b> |   |    |
| <b>4.1</b>           | Creating Git repository (constantly updated)<br><br>Git repository created that is has restricted access to team members only   | 29 |
| <b>4.2</b>           | Design software components<br><br><ul style="list-style-type: none"> <li>➤ Design to be done using python programming language</li> <li>➤ Functions</li> <li>➤ Data structures (lists, trees, arrays etc.)</li> </ul>               | 13 |
| <b>4.3</b>           | Coding framework / user interface<br><br>GUI python libraries to be used to design different UI components of this application  | 6  |
| <b>4.4</b>           | Coding database<br><br><ul style="list-style-type: none"> <li>➤ Database to be coded with SQL language</li> <li>➤ External data migrated into created database</li> </ul>   | 5  |
| <b>4.5</b>           | Coding integration of user interface and database<br><br><ul style="list-style-type: none"> <li>➤ Creating connection object to link python to database</li> </ul>  | 3  |
| <b>5. Testing</b>    |   |    |

|     |   |   |
|-----|---|---|
| 5.1 | <p>Perform test for all subsystems/components</p> <p>Testing of each component individually to identify any bugs so that they can be resolved</p>                     | 2 |
| 5.2 | <p>Acceptance tests with users</p> <p>Main purpose is to find out if the has met the requirements that were outlined and if the application meets user's approval</p> | 2 |
| 5.3 | <p>Create report for test results</p> <p>Documenting the results of the tests carried out</p>   | 1 |

## 4.0 GANTT CHART

### AIR BNB PROPOSED APPLICATION

