

# Team Graphic

***Software Engineering***

***Software Requirements***

***Specification***

***(SRS) Document***

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**Review & Approval**

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## 1. Introduction

**1.1 Purpose**

The purpose of this document is to define and describe the requirements of the Travel Buddy software project and to spell out the system’s functionality and its constraints. The aim of this document is to gather requirements and provide details on the complete Travel Buddy software project. This will include requirements for stakeholders as well as users, define high-level features, and low-level features of the system.

**1.2 Scope of this Document**

The scope of this document pertains to all product features for making the Travel Buddy software system live for user implementation. It focuses on the business’, stakeholder’s, and customer’s needs to allow for sales and distribution. The document will also specify requirements for software development, assist in the selection of software and hardware products, and create a standard model to be used for additional projects for the business.

**1.3** [**Definitions, Acronyms, Abbreviations**](#_1pxezwc)

This document uses the following conventions:

|  |  |
| --- | --- |
| TB | Travel Buddy software System |
| DB | Database |
| CO | Constraint |
| FR | Functional Requirement |
| WA | Web Application |

**1.4 Overview**

The rest of this document provides a general description of the product, including functions, user characteristics, and user objectives. It provides the functional, nonfunctional, and user interface requirements of the product. It also provides use cases, operational scenarios, and schedule of the TB project.

## 2. General Description

**2.1 Product Features**

The TB is an entirely new system to created to manage travel plans for groups of people traveling separately for the same purpose. The product will allow users to upload travel details to be shared with others users such as:

* Departure and arrival times
* Flight and route information in real-time
* Hotel and restaurant reservations

It will also include:

* In-application messaging
* File-sharing capabilities

**2.2** **Similar System Information**

**2.3 User Characteristics**

|  |  |
| --- | --- |
| Traveler | The Traveler is the person using the TB and uploading travel details to the system. They will also use the system to manage calendars, message other Travelers, and share files. |
| Travel Group | The Travel Group is the people who are using the TB to coordinate their individual travel details as they travel to the same place for the same goals. |
| Travel Subgroup | The Travel Subgroup is a specific part of the Travel Group that has needs to share travel details among select members of the Travel Group for events that the whole group is not participating in. |

**2.4 User Problem Statement and Objectives**

The user problem statement that the project is based on is that arranging group travel while each Traveler, or Travel Subgroup, is traveling separately is difficult and tracking the details of each Traveler or Travel Subgroup cannot be done in one place. The objectives of the TB are to allow users to form Travel Groups to share all necessary details among users in a logical way, allow users to communicate location automatically during travel, to utilize in-app messaging for detail clarification and sudden changes, and to allow users to share files related to their travel.

**2.5 General Constraints**

|  |  |
| --- | --- |
| CO-1 | All data will be stored using a MySQL DB |
| CO-2 | Software for the web application shall be composed using Python and React Native |
| CO-3 | User interface shall be composed using HTML, CSS, and JavaScript |

## 3. Functional Requirements

**3.1 FR-1**

Allow users to input applicable travel information including:

* Mode(s) of transportation
* Approximate departure and arrival times
* Airline, flight number, status
* Real-time GPS location
* Hotel location, dates of stay, room numbers
* Meal reservations and informal plans

Users will have the ability to modify or delete their own travel information, but will not have the ability to modify or delete other users’ data. Users will also have ability to create a subgroup to allow travel information sharing among a certain selection of users from the group.

**3.2 FR-2**

Allow users to upload and download applicable travel media including:

* Documents
  + PDF
  + Doc
  + RTF
  + Xls
* Pictures
  + JPEG
  + GIF
  + BMP
* Videos
  + AVI
  + FLV
  + WMV
  + MP4
  + MOV

Users will have the ability to modify or delete their own travel media, but will not have the ability to modify or delete other users’ data. Users will also have ability to create a subgroup to allow travel media sharing among a certain selection of users from the group.

**3.3 FR-3**

Maintain a live conversation area for all group members. Users will also have ability to create a subgroup to allow live conversation among a certain selection of users from the group.

**3.4 FR-4**

Allow users to access a calendar interface that displays all shared user data from individual user profiles. Data will be automatically uploaded to the calendar from user input if the sharing permissions are enabled.

## 4. Interface Requirements

### 4.1 User Interfaces

There will be user interfaces for both the WA and the Android components of the system.

WA Component:

* The user interface will be compatible to any browser such as Internet Explorer, Google Chrome, and FireFox by which user can access to the system.
* The user interface will be implemented using any tool or software package like Java Applet, MS Front Page, EJB etc.

Android Component:

* The user interface will only be compatible with smartphones, tablets, and tablet computers running the Android OS.
* The user interface will be implemented using \*insert tools and software\*

**4.1.1 GUI**

**4.1.2 CLI**

**4.1.3 API**

**4.1.4 Diagnostics or ROM**

### 4.2 Hardware Interfaces

### 4.3 Communications Interfaces

### 4.4 Software Interfaces

## 5. Performance Requirements

* The system must be fully interactive for both the WA and Android application
* The delays involved must be no more than 15 seconds
* No action-response of the system should have an immediate delay
  + If opening windows has a delay of more than 15 seconds, a pop-up error messages must be displayed
  + If opening Android application has a delay of more than 15 seconds, a pop-up error messages must be displayed
* The system will support a 500,000 simultaneous users at any given time
* The Travel Group will allow for fifty simultaneous users at any given time

## 6. Other Non-Functional Attributes

### 

### 6.1 Security

The below are the features of the product that will ensure reliability for all users:

* All data entered or downloaded will be scanned for instances of known worms, viruses, and other harmful programs
* Access permissions for user data for each individual user account will be editable only by that user
* All users accounts must be authenticated by a username and password before each session
* Sessions without any activity for 30 minutes will be logged out automatically

### 6.2 Binary Compatibility

### 6.3 Reliability

The below are the features of the product that will ensure reliability for all users:

* The database will be backed up every two hours

### 6.4 Maintainability

### 6.5 Portability

### 6.6 Extensibility

### 6.7 Reusability

### 6.8 Application Affinity/Compatibility

### 6.9 Resource Utilization

### 6.10 Serviceability

## 7. Operational Scenarios

**Scenario A:**

**Scenario B:**

**Add Scenarios as needed:**

## 8. Preliminary Use Case Models and

## Sequence Diagrams

This section presents a list of the fundamental sequence diagrams and use cases that satisfy the system’s requirements. The purpose is to provide an alternative, "structural" view of the requirements stated above and how they might be satisfied in the system.

### 8.1 Use Case Model

### 8.2 Sequence Diagrams

## 9. Updated Schedule

The updated PERT/GANTT chart is attached at the end of the document

## 10. Appendices