# **Software Requirements Specification**

# **PRJ566 – Fall 2024**

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| PRJ566 – Team No.7 | Team Members |
| Name of Project:  Tanken GO Travel Planning Web Application  Project Leader: Julian Huang  Last updated: 2024/09/11 | 1. Julian Huang  2. Rong Chen  3. Hsien-Ting Liao  4. Shan-Yun Wang |

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# **1 - Introduction/Overview - Document Information**

## 1.1 Document Authors

* Julian Huang
* Rong Chen
* Hsien-Ting Liao
* Shan-Yun Wang

## 1.2 Revision History

|  |  |
| --- | --- |
| Week 02 | 1. Introduction/Overview: (ongoing)  1.1 Document Authors: Completed  1.2 Revision History (ongoing)  1.3 Document Conventions: Completed  1.4 Document Purpose: Completed  1.5 Intended Audience: Completed  1.6 Group Agreement: Completed |
| Week 03 | 2.1 Project Proposal: Completed |
| Week 04 |  |
| Week 05 |  |
| Week 06 |  |
| Week 07 |  |
| Week 08 |  |
| Week 09 |  |
| Week 10 |  |
| Week 11 |  |
| Final |  |

## 1.3 Document Conventions

* Main heading font size 20, sub heading size 16, body text size 12
* Any text in red indicates an exception or error
* Any text in blue is in-progress
* Any text highlighted in yellow or **bold** is an important point
* Any text in green was recently added
* Any text *italicized* represents definitions
* Any text with ~~strike-through~~ is deleted

## 1.4 Document Purpose

The purpose of this document is to provide a comprehensive overview of the requirements, functionalities, and structure for the development of the **Tanken GO** Travel Planning Web Application. It outlines the goals, intended features, user needs, and technical specifications, serving as a guide for developers, stakeholders, and project managers to ensure the successful implementation and delivery of the project. The document also defines the *project scope*, *system risks, and design elements*, helping to align the development process with the expected outcomes.

## 1.5 Intended Audience

* **Project team members** (developers, designers, and project managers) will use this specification as a guideline for the development and implementation of the **Tanken GO** Travel Planning Web Application.
* **Stakeholders** include the **CEO**, project sponsor, and other key personnel who require an understanding of the *project’s scope*, *objectives, and functional requirements*.
* **End-users** who are interested in understanding how the system will address their needs.
* **Faculty** and **project supervisors** overseeing the progress and ensuring the project meets academic and professional standards.

## 1.6 Group Agreement

**TEAM AGREEMENT**

**Team #: 7**

**Project Title: Tanken Go Travel Planning Web Application**

**Project Time Frame:**

**Team Members: Julian Huang | Rong Chen | Hsien-Ting Liao | Shan-Yun Wang**

**Team Leadership: Julian Huang**

**Team Functions:**

* We will share information through MS Teams, OneDrive, WhatsApp, e-mails, and meetings
* We will communicate progress and share files through MS SharePoint
* We will manage project documentation and track changes using GitHub for collaborative editing and version control

**Team Meetings: Every Wednesday 12:40pm**

**Team Problems: N/A**

**Team Commitment**

The undersigned members agree to work together on the project until the end of the PRJ666 next Semester. They recognize that as a team and individually they are responsible for the quality of all deliverables.

**Name**  **Date**

|  |  |
| --- | --- |
| **Julian Huang** | 2024/09/11 |
| **Rong Chen** | 2024/09/11 |
| **Hsien-Ting Liao** | 2024/09/11 |
| **Shan-Yun Wang** | 2024/09/11 |

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# 2 - Project Overview

## 2.1 Project Proposal

### Project Background

As self-planned trips gain popularity, many existing travel platforms overwhelm users with cluttered interfaces and lack personalization. Travelers today seek simple, intuitive tools that provide tailored recommendations for a seamless planning experience.

**Tanken GO** was created to meet this need by offering an AI-powered platform that simplifies trip planning. It provides customized itineraries, interactive maps, and real-time cost estimations, addressing the growing demand for personalized, user-friendly travel solutions.

### Problem Statement

|  |  |
| --- | --- |
| **The Problem of:** | Planning a trip through existing platforms can be overwhelming, time-consuming, and lacks personalization, making it difficult for travelers to create a customized travel experience that meets their specific needs. |
| **Affects:** | Travelers who prefer self-planning but struggle with the complexity of traditional travel websites, as well as stakeholders such as travel businesses and service providers looking to offer personalized experiences. |
| **The impact of which is:** | Users face frustration due to overwhelming options, poor user interface, and a lack of tailored recommendations, leading to dissatisfaction and inefficient trip planning. |
| **A successful solution would:** | Provide a simplified, AI-powered platform that offers personalized trip recommendations, customized itineraries, and intuitive navigation, enhancing the overall travel experience by saving time, reducing stress, and ensuring the trip aligns with individual preferences. |

### Product Vision

|  |  |
| --- | --- |
| **For** | Travelers who prefer customized trip planning can use AI to create personalized travel itineraries. |
| **Who** | Have difficulty navigating complex and cluttered travel planning websites and desire a more efficient, user-friendly solution that caters to their specific travel preferences. These travelers seek a platform that simplifies the planning process, offering tailored recommendations and seamless trip management. |
| **The Product Name** | **Tanken GO** - Travel Planning Web Application |
| **That** | Provides AI-powered trip recommendations, customizable itineraries, interactive maps, and cost estimations. |
| **Unlike** | Traditional travel websites that are cluttered and difficult to navigate. |
| **Our product** | Offers a simplified, personalized, and community-driven approach to travel planning. |

## 2.2 Stakeholders and Users

|  |  |
| --- | --- |
| **Stakeholder Name/Identifier** | **Category** |
| CEO (Chief Executive Officer) | Yasser Elmankabady |
| Construction Manager and Scheduler | Administration, Julian Huang  Needs accurate up to date information for costing and scheduling of project details |
| Administrative Assistant | Shan-Yun Wang |
| Schedulers | Rong Chen |
| Cost Accountant | Hsien-Ting Liao |
| Project Leader | Julian Huang |
| Developers | Julian Huang, Rong Chen, Hsien-Ting Liao, Shan-Yun Wang |

## 2.3 Functional Requirements

## 

## 2.4 Nonfunctional Requirements

Operational, Performance & Security Requirements

## 2.5 Project Scope

1. Project Objectives:

· Clearly state the goals and objectives of the project. What is the project aiming to achieve?

2. Deliverables:

· List the tangible outcomes or products that will be delivered at the end of the project. These could be reports, software, hardware, documents, etc.

3. Project Boundaries:

· Clearly define what is within the project's scope and what is not. This helps prevent scope creep, where additional tasks are added without proper evaluation.

4. Project Constraints:

· Identify any limitations or restrictions that could impact the project, such as budget constraints, time constraints, resource limitations, or regulatory requirements.

5. Project Assumptions:

· Document any assumptions that the project team is making. These are factors that are believed to be true but may need validation as the project progresses.

6. Key Stakeholders:

· Identify and list the key stakeholders involved in the project. This includes both internal and external parties.

7. Project Timeline:

· Define the start and end dates of the project, as well as any important milestones or deadlines.

8. Project Risks:

· Identify potential risks that could affect the project and outline strategies for risk mitigation or contingency plans.

9. Resource Requirements:

· Specify the human, financial, and physical resources needed for the project, including personnel, equipment, and materials.

10. Quality Standards:

· Clearly articulate the quality standards that must be met for project deliverables. This ensures that there is a common understanding of what constitutes a successful outcome.

11. Approval Criteria:

· Outline the criteria that must be met for the project to be considered complete and successful. This could include client acceptance, regulatory compliance, or other specific criteria.

12. Communication Plan:

· Describe how communication will be handled throughout the project, including who will be responsible for communication, the frequency of updates, and the preferred channels of communication.

13. Change Control Process:

· Establish a process for handling changes to the project scope. This helps prevent scope creep and ensures that changes are properly evaluated and approved.

14. Dependencies:

· Identify any external factors or dependencies that could impact the project schedule or outcomes.

15. Exit Criteria:

· Define the criteria that need to be met for the project to be officially closed, including handover procedures and final documentation.

## 2.6 System Risks

|  |  |
| --- | --- |
| **Risk** | **Response** |
| The use of Voice Recognition adds complexity, introducing more ways to hack into your device | Implement various security measures and keep code modular in order to reduce complexity and increase security |
| Some of the team members are not familiar with Android Studio (IDE used to develop Android apps) | Hold team sessions to go over the IDE and how to initialize an APK for app testing /  or the whole team will meet twice a week to complete video tutorials related to . . . |
|  |  |
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## 2.7 Operating Environment

- Hardware, software, third-party tools needed to run the software on the client’s side

Hardware:

* Client
  + Desktop/mobile, with modern web browsing capabilities
* Server

Software

* Client
  + latest versions of web browser like Chrome, Safari, Brave
  + Operating Systems like Windows, macOS, iOS, Android
* Server

Network connection

* Client
* Server

Tools

* AWS
* OpenAI

## 2.8 UI/UXD Interface Mock-ups

# **3 - Process and Data Modeling**

## 3.1 UML/DFD Modeling and Data Modeling

### Activity Diagrams and Data Flow diagram

## 3.2 Business Rules

|  |  |  |
| --- | --- | --- |
| Business Rule Number | Business Rule Description | Related UC |
| BR01 | User must provide a username, email and password to register for the app. | UC01 |
| BR02 | Post length can be no longer than 300 characters | UC02 |
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## 3.3 Use Case Specifications with corresponding interface mockups:

**Each use case needs to have the following:**

1- **Business Rules.**

**2- System Use Case Diagrams.**

**3- Use Case Descriptions.**

**4- Corresponding Mockups**

# 4 - Domain Class Diagram

# 5 - Database

# 6 - Work Breakdown Structure (WBS)

## 

## 6.1 Work Breakdown Structure

Sample WBS:

Diagram

Description automatically generated

# 7 - Milestones and Acceptance Criteria

* 1. Milestone one

Definition

Acceptance Criteria

* …
* ….
* ….
  1. Milestone Two
  2. Milestone Three
  3. ..
  4. …
  5. …
  6. ..
  7. ..
  8. ...etc.

# 8 - Implementation Schedule

Implementation Schedule using MS Project (Waterfall)

OR

Product Backlog (Agile-Scrum)

# 9 - Client / Faculty Sign-off

**Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

X .

Name of Client/Rep/Professor