Requirements Analysis Document (RAD)

Prepared for

World Plane, Inc. (WPI)

Prepared by

Team [Your Team Name]

Member1, Member2, …

[date]

[version]

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# Introduction

## Purpose of the system

*This section should provide a short summary of why the system is being developed to communicate with the customer / stakeholder your understanding of the rationale for the system. The summary should be consistent with information received from any ‘Request for Proposal (RFP)’, ‘Statement of Work (SOW)’, verbal communications, email exchanges, written exchanges, etc. It is also appropriate to supply direct quotes from the documents. The documents themselves will be listed in the appropriate References section below.*

## References

*This section lists any references used to determine what the system should be and the functionality the system will provide or constraints the system must fulfil. These can be written, electronic, conversations, meetings, etc. For example you might include a reference such as:*

* Statement of Work (SOW) provided by World Plane, Inc.

## Scope of the system

*Briefly describe what the system will be able to do using language from the problem domain (functional perspective) the customer / stakeholder will understand.*

## Core System Functionalities

*This section describes,* ***at a very high level****, what the system will be able to do. These are not user stories or use cases, but a means to communicate the types of functions the system will be providing. The user stories and use cases should be consistent with this list.*

*In this section you communicate to your client / user / other stakeholders you understand their needs for the system. Conceptually what functionality does the system need to provide?*

## Objectives and Success Criteria of the Project

*This section serves to communicate an understanding of how the system will be judged –* ***from the client’s or user’s perspective****. This communicates to your customer / stakeholder that you understand what it takes to successfully solve their business problem. You are communicating your understanding of user acceptance criteria for success.*

The success of the application depends upon meeting the following core set of objectives:

# Current System

## Existing System

*What system exists at present? How will this system be enhanced, augmented, changed? Will the system be replaced entirely?*

*This section communicates to your client / stakeholders you understand the starting point.*

## Current Operations

*What does the client / user / business currently do to address this business problem? How does the business operate? Show your understanding of your client’s / user’s existing business practices. If you don’t know what they are, find out from appropriate stakeholders or say that you don’t know or the stakeholder has not provided the information to you. Don’t make up something that’s not true.*

# Proposed System

## Overview

*This section is where you communicate your understanding of the enhanced or future system you will be developing. In the overview you communicate your high level understanding of what the future system needs to deliver to meet the client’s / user’s / stakeholder’s needs.*

## Conceptual Model - User Scenarios

*This is where you list the representative set of user scenarios your team has developed. This communicates to your customer / stakeholder your understanding of the specific actions the system needs to support and provides your customer / stakeholder an opportunity to agree or disagree.*

*This section lists the scenarios defining the detailed operations the system will need to support. Each user scenario will define a role, an action, and potentially a reason the role wants to perform the action. Each scenario should be sufficiently complex to be meaningful and representative of how an actor would interact with the system. The set of user scenarios will not be exhaustive, but they should provide good coverage of the roles actors would fulfill when interacting with the future system. Remember models, including conceptual models, focus on the good abstractions.*

## Functional Model - Use Case Model

*This section communicates the functionality the future system will provide and how the different functionalities (use-cases) relate to each other. These can be communicated using either the use case table or a use case diagram – or both.*

*The set of use cases, taken as a set, need to provide all functionality required to support the set of user scenarios identified in the conceptual model above.*

|  |  |
| --- | --- |
| **Name:** |  |
| **Actor:** |  |
| **Entry**  **Conditions:** |  |
| **Flow of**  **Events:** |  |
| **Exit**  **Conditions:** |  |
| **Quality Requirements:** |  |

Associated Use Case Diagram (if desired)

## Analysis Model – Object Model

*This section presents your initial static object model. It should present the set of classes, and associations between the classes, required to support the use cases in your functional model. The object model at this point is not complete. The important abstractions (identified in the conceptual and functional models above) will be supported by one or more classes in the object model. The set of operations and attributes for each class are likely incomplete but the responsibility, or responsibilities, of each class have been identified. The details of associations between classes are still incomplete, but associations which are required to support use cases are identified.*

# Requirements

*This section will list the functional and nonfunctional requirements which describe necessary operations of and constraints on the system under development. As a set these requirements fully describe what the system must do and how it must be done.*

*A good set of requirements satisfy the ‘4-C’ criteria:*

* *Clear*
* *Correct*
* *Complete*
* *Consistent*

*Additionally, each requirement can be verified as correctly implemented or met by the developed software or the software development process. Finally, the rationale for each requirement should be communicated to guide design objectives, improve understanding and help prioritize efforts should conflicts occur.*

## Functional Requirements

*This section will list the set of requirements the system will be providing to support the functionalities and user stories above. Remember the 4C’s - The set of requirements should be complete, correct, consistent and clear (unambiguous).*

*Each requirement also needs to be verifiable and you should communicate the rationale for the requirement.*

## Customers shall be able to specify the departure airport they wish to travel from and the arrival airport they wish to travel to.

## Customers shall be able to specify the maximum number of stopovers when traveling from departure to destination airports.

## Nonfunctional Requirements

*This section lists the constraints on the system. Nonfunctional requirements specify the way the system must fulfill the functional requirements above. They are usually categorized by usability, Reliability, Performance, and Supportability.*

### Usability

* Customers shall be able to specify the departure airport and arrival airport from a list of possible airports provided by the system.

### Reliability

### All classes will be unit tested using Junit test cases developed in parallel with application software

### Performance

### Response time for any requested actions will reasonable. Operations in excess of 3 seconds will provide indication to the customer the system is operating.

### Supportability

### The application will use the JAVA programming language for platform independence.

# Glossary

Definitions, Acronyms & Abbreviations

*Important terms and concepts are listed here. More will be added by the project teams. This section should include any ‘jargon’ specific to the problem domain or the solution domain to ensure all stakeholders have the same understanding of what words and terms mean.*

|  |  |
| --- | --- |
| *Reservation* | A seat on a specific flight specifying either ‘First Class’ or ‘Economy’ seating section of the plane. A reservation does not specify a particular seat number for the flight. |
| *Another Term* | Concise definition of the specified term |
|  |  |