Software Requirements Specifications

Airport Check-In Kiosk Software

**Version 0.1**

# Table Of Contents

[Table Of Contents 1](#_Toc331929903)

[Revision History Table 2](#_Toc331929904)

[Sign-Off Matrix 3](#_Toc331929905)

[Introduction 4](#_Toc331929906)

[Document Purpose 4](#_Toc331929907)

[Intended Audience 4](#_Toc331929908)

[Project Scope 4](#_Toc331929909)

[References 4](#_Toc331929910)

[Product Description 5](#_Toc331929911)

[Product Features 5](#_Toc331929912)

[User Classes and Characteristics 5](#_Toc331929913)

[Operating Environment 5](#_Toc331929914)

[System Features 6](#_Toc331929915)

[F 1.0 - Kiosk Menu 6](#_Toc331929916)

[F 2.0 - Traveler Identification 6](#_Toc331929917)

[F 3.0 - Traveler Reservation Search 8](#_Toc331929918)

[F 4.0 - Confirm or Change Seat 8](#_Toc331929919)

[F 5.0 - Pay for Luggage 9](#_Toc331929920)

[F 6.0 - Print Boarding Pass 9](#_Toc331929921)

[F 7.0 - Navigation 10](#_Toc331929922)

[External Interface Requirements 12](#_Toc331929923)

[User Interfaces 12](#_Toc331929924)

[Hardware Interfaces 12](#_Toc331929925)

[Software Interfaces 12](#_Toc331929926)

[Communications Interfaces 12](#_Toc331929927)

[Nonfunctional Requirements 13](#_Toc331929928)

[Performance Requirements 13](#_Toc331929929)

[Safety Requirements 13](#_Toc331929930)

[Security Requirements 13](#_Toc331929931)

[Software Quality Attributes 13](#_Toc331929932)

# Revision History Table

Table

|  |  |  |  |
| --- | --- | --- | --- |
| Version Number | Version Date | Added By: | Revision Description |
| 0.1 | 03-Apr-2009 | J. Moustafaev | Document created |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

# Sign-Off Matrix

Table

|  |  |  |  |
| --- | --- | --- | --- |
| Name & Title | Project Role | Date | Signature |
| Dennis Samons | Project Manager - ABC |  |  |
| Alma Lupo | Business Analyst - ABC |  |  |
| Harold Melanson | VP Product Development - ABC |  |  |
| Jacob Therrien | VP Professional Services - ABC |  |  |
| John Hetrick | VP Customer Care - XYZ |  |  |
| Irma Eller | Manager Marketing - XYZ |  |  |

# Introduction

## Document Purpose

This document is the Software Requirements Specification for the "Airport Check-In Kiosk Software" It addresses intended audiences, scope, user classes, functional and non-functional requirements of the future product. The SRS document is a configuration item and must be placed under change control once agreed. Updates to the SRS must be reviewed and approved by the Project Manager, Business Analyst and any relevant stakeholders for the section that is changed.

## Intended Audience

This document is intended for the following audiences:

* Project manager
* Business analyst
* Technical team members - developers, testers, architects, etc.
* Users of all categories
* Business stakeholders
* External customers

## Project Scope

ABC Software Systems shall study, configure and implement the Airport Check-In Kiosk software system for XYZ Airlines by September of 2010.

## References

Table

|  |  |
| --- | --- |
| Document Title | URL Link |
| "XYZ Airlines User Interface Guide" | Click here to access the document |
|  |  |

# Product Description

## Product Features

Table

|  |  |
| --- | --- |
| Feature ID | Feature Description |
| F 1.0 | Kiosk Menu |
| F 2.0 | Traveler Identification |
| F 3.0 | Traveler Reservation Search |
| F 4.0 | Confirm or Change Seat |
| F 5.0 | Pay for Luggage |
| F 6.0 | Print Boarding Pass |
| F 7.0 | Navigation |

## User Classes and Characteristics

Table

|  |  |  |
| --- | --- | --- |
| User Class | Characteristics | Favored? |
| Travelers | XYZ Airlines customers who will be using the kiosks to check in for their flights and obtain their boarding passes | Yes |
| IT employees | XYZ Airlines employees who will be responsible for system maintenance and updates |  |

## Operating Environment

The "Airport Check-In Kiosk Software" shall be deployed on the existing kiosks running Windows 7 O/S.

# System Features

Figure



Figure



Figure



Figure



## F 1.0 - Kiosk Menu

Table

|  |  |
| --- | --- |
| FR Name | Kiosk Menu |
| FR ID | FR 1.1 |
| Precondition | No preconditions |
| Primary Actors | User, system |
| FR Description | 1. The system shall display the message urging the user to initiate the system 2. The user shall initiate the system 3. The system shall present the user with the following options of identification:  * Passport * Credit Card * Frequent Flyer Card |
| Priority | Must have |
| Related NFRs | See NFRs 7.1, 7.2 and 7.3 |

## F 2.0 - Traveler Identification

Table

|  |  |
| --- | --- |
| FR Name | Traveler Identification - Passport |
| FR ID | FR 2.1 |
| Precondition | User has selected the "Passport" identification option |
| Primary Actors | User, system |
| FR Description | 1. The system shall prompt the user to scan his/her passport and conduct a tutorial explaining how to do that properly 2. The user shall scan his/her passport 3. The system shall read the information from the passport 4. If The system is able to read the passport info it will extract the person's:  * First Name * Last Name * Date of Birth  1. If the system is unable to read the passport, it shall prompt the user to:    1. try scanning the passport one more time or    2. try other ways of identification (see FR 2.2 and 2.3) or    3. proceed to the check in counter |
| Priority | Must have |
| Related NFRs | See NFRs 7.1, 7.2 and 7.3 |

Table

|  |  |
| --- | --- |
| FR Name | Traveler Identification - Credit Card |
| FR ID | FR 2.2 |
| Precondition | User has selected the "Credit Card" identification option |
| Primary Actors | User, system |
| FR Description | 1. The system shall prompt the user to scan his/her credit card and conduct a tutorial explaining how to do that properly 2. The user shall scan his/her credit card 3. The system shall read the information from the credit card 4. I f The system is able to read the credit card info it will extract the person's:  * First Name * Last Name * Date of Birth  1. If the system is unable to read the credit card, it shall prompt the user to 2. try scanning the credit card one more time or 3. try other ways of identification (see FR 2.1 and 2.3) or 4. proceed to the check in counter |
| Priority | Must have |
| Related NFRs | See NFRs 7.1, 7.2 and 7.3 |

Table

|  |  |
| --- | --- |
| FR Name | Traveler Identification - Frequent Flyer Card |
| FR ID | FR 2.3 |
| Precondition | User has selected the "Frequent Flyer Card" identification option |
| Primary Actors | User, system |
| FR Description | 1. The system shall prompt the user to scan his/her frequent flyer card and conduct a tutorial explaining how to do that properly 2. The user shall scan his/her frequent flyer card 3. The system shall read the information from the frequent flyer card 4. I f The system is able to read the frequent flyer card info it will extract the person's:  * First Name * Last Name * Date of Birth  1. If the system is unable to read the frequent flyer, it shall prompt the user to: 2. try scanning the frequent flyer card one more time or 3. try other ways of identification (see FR 2.1 and 2.2) or 4. proceed to the check in counter |
| Priority | Must have |
| Related NFRs | See NFRs 7.1, 7.2 and 7.3 |

## F 3.0 - Traveler Reservation Search

Table

|  |  |
| --- | --- |
| FR Name | Traveler Reservation Search |
| FR ID | 3.1 |
| Precondition | User's passport or credit card or frequent flyer card has been successfully read and his/her first name, last name and date of birth have been extracted by the system |
| Primary Actors | User, system, central reservation database |
| FR Description | 1. The system shall search the reservation database using a combination of the users first name, last name and the date of birth 2. If the system was successful in locating the reservation, it will display the reservation information including first name, last name, flight number and seat row and number and request the user to confirm it. 3. If the system could not find the reservation or if the user does not confirm his/her reservation it will prompt the user to proceed to the check in counter |
| Priority | Must have |
| Related NFRs | See NFRs 7.1, 7.2 and 7.3 |

## F 4.0 - Confirm or Change Seat

Table

|  |  |
| --- | --- |
| FR Name | Traveler Seat Selection |
| FR ID | 4.1 |
| Precondition | User's has confirmed his/her reservation |
| Primary Actors | User, system, central reservation database |
| FR Description | 1. The system shall display he current seat information assigned to the user and ask him/her if he/she wants to change the seat or select a new seat: 2. If the user selects to keep the default seat, the system shall confirm his/her selection and prompt the user to proceed to the next step (see FR 5.1) 3. If the user decides to select a new seat the system shall present the available seats on the flight and prompt the user to select the new seat. 4. The user shall select the new available seat 5. The system shall prompt the user to confirm his/her selection 6. If the user confirms his/her selection the system shall update the central reservation database, display updated reservation information and prompt the user to proceed to the next step 7. If the user rejects his/her selection the system shall go back to step 1B |
| Priority | Must have |
| Related NFRs | See NFRs 7.1, 7.2 and 7.3 |

## F 5.0 - Pay for Luggage

Table

|  |  |
| --- | --- |
| FR Name | Traveler Luggage Fee Calculation |
| FR ID | 5.1 |
| Precondition | User's has confirmed his/her seat |
| Primary Actors | User, system |
| FR Description | 1. The system shall ask the user if he/she has any luggage to check in 2. If the user answers negatively to the question, the system shall proceed to next step (see FR 6.1) 3. If the user answers positively to this question, the system shall ask the user to provide the number of bags 4. The user shall enter the number of bags to check in 5. The system shall calculate the baggage fees based on the following formula:    * Total fee = Number of bags X $20 |
| Priority | Must have |
| Related NFRs | See NFRs 7.1, 7.2 and 7.3 |

Table

|  |  |
| --- | --- |
| FR Name | Traveler Luggage Fee Payment |
| FR ID | 5.2 |
| Precondition | The system has calculated the baggage fee |
| Primary Actors | User, system, interface 16, credit card companies |
| FR Description | 1. The system shall display the baggage fee to the user and prompt him/her to pay via credit card 2. The user shall swipe his/her credit card 3. The system shall submit the credit card number, credit card expiration date, customer’s first name and last name and transaction amount  to the credit card company via a secure interface 16.  PGP encryption shall be used on credit card number, credit card expiration date, customer’s first name and last name 4. If the payment is authorized, the system shall communicate this to the user and proceed to the next step (see FR 6.0) 5. If the payment is not authorized the system shall prompt the user to proceed to the check in counter |
| Priority | Must have |
| Related NFRs | See NFRs 7.1, 7.2 and 7.3 |

## F 6.0 - Print Boarding Pass

Table

|  |  |
| --- | --- |
| FR Name | Print Boarding Pass and Receipt |
| FR ID | FR 6.1 |
| Precondition | The baggage fee payment has been authorized or there was no baggage to check in |
| Primary Actors | User, system, central reservation database |
| FR Description | 1. The system shall:    * Print the boarding pass with all the relevant information:      1. Passenger first and last name      2. Date      3. Airline code      4. Flight number      5. Departure time      6. Boarding time      7. Departure airport      8. Arrival airport      9. Seat row and number    * Print the receipt    * Communicate to the customer that the transaction is complete and thank him/her for doing business with the airline |
| Priority | Must have |
| Related NFRs | See NFRs 7.1, 7.2 and 7.3 |

## F 7.0 - Navigation

Table

|  |  |
| --- | --- |
| FR Name | "Cancel" Function |
| FR ID | 7.1 |
| Precondition | User's has moved beyond the "Menu" screen |
| Primary Actors | User, system |
| FR Description | 1. The user shall be able to cancel the entire interaction with the system 2. The system shall stop the session, remove all of the information provided by the user and return to the "Menu" screen |
| Priority | Must have |
| Related NFRs | See NFRs 7.1, 7.2 and 7.3 |

Table

|  |  |
| --- | --- |
| FR Name | "Go Back" Function |
| FR ID | 7.2 |
| Precondition | User's has moved beyond the "Menu" screen |
| Primary Actors | User, system |
| FR Description | 1. The user shall be able to go back one step in the system 2. The system shall save all of the information provided by the user and return to the previous step |
| Priority | Must have |
| Related NFRs | See NFRs 7.1, 7.2 and 7.3 |

Table

|  |  |
| --- | --- |
| NFR Name | Usability |
| NFR ID | 7.1 |
| Precondition | N/A |
| Primary Actors | N/A |
| FR Description | 1. The system interfaces shall conform to corporate GUI standards (click here to access the document) |
| Priority | Must have |
| Related NFRs | N/A |

Table

|  |  |
| --- | --- |
| NFR Name | Availability |
| NFR ID | 7.2 |
| Precondition | N/A |
| Primary Actors | N/A |
| FR Description | 1. The system shall be at least 95% available between 5:00 am and 1:00 am seven days a week |
| Priority | Must have |
| Related NFRs | N/A |

Table

|  |  |
| --- | --- |
| NFR Name | Performance |
| NFR ID | 7.3 |
| Precondition | N/A |
| Primary Actors | N/A |
| FR Description | 1. All transactions shall take less than 1 second |
| Priority | Should have |
| Related NFRs | N/A |

# External Interface Requirements

## User Interfaces

The software user interface shall conform to the current corporate guidelines described in the "XYZ Airlines User Interface Guide" (see "References" section).

## Hardware Interfaces

N/A

## Software Interfaces

"Airport Check-In Kiosk Software" shall be communicating with the central registration database (for more information see the "System Features" section of this document).

## Communications Interfaces

N/A

# Nonfunctional Requirements

## Performance Requirements

See NFRs 7.1

## Safety Requirements

N/A

## Security Requirements

N/A

## Software Quality Attributes

See NFRs 7.2-7.3