

Software Requirements Specification For The Red-Eyes Black Dragons

September 27, 2021
Version 3.0

Prepared by:

Andrew Aeilts, Jacob Anderson, Lila Shelton,
Blake Simpson, Renny Soto, Danny Tariq

Table of Contents

1 INTRODUCTION	4
1.1 Overview	4
1.2 Goals and Objectives	4
1.3 Scope	4
1.4 Definitions	4
2 GENERAL DESIGN CONSTRAINTS	5
2.1 Commerce Bank Application Environment	5
2.2 User Characteristics	5
2.3 Mandated Constraints	5
3 NONFUNCTIONAL REQUIREMENTS	5
3.1 Operational Requirements	5
3.2 Performance Requirements	6
3.3 Security Requirements	6
3.4 Documentation and Training	6
3.5 External Interface	6
3.5.1 User Interface	6
3.5.2 Software Interface	6
4 FUNCTIONAL REQUIREMENTS	7
4.1 Required Features	7
4.1.1 Use Case: 1	7
4.1.2 Use Case: 2	7
4.2 Optional Features	8
4.2.1 Use Case: 3	8
4.2.2 Use Case: 4	8

Revision History

Version	Date	Name	Description
1	09/23/10	Andrew Aeilts, Jacob Anderson, Lila Shelton, Blake Simpson, Renny Soto, Danny Tariq	Initial Document
2	9/25/2021	Andrew Aeilts, Jacob Anderson, Lila Shelton, Blake Simpson, Renny Soto, Danny Tariq	Use cases
3	9/27/2021	Andrew Aeilts, Jacob Anderson, Lila Shelton, Blake Simpson, Renny Soto, Danny Tariq	Final revision

1 Introduction

1.1 Overview

This document provides information on the requirements for the Commerce Banking software application. Project goals, scope and definitions are given in the introduction. Design constraints and application environment are described in the following section. Non-functional requirements are outlined for later verification. Functional requirements are given to show the system features and expected user interaction.

This document will *not* address project issues such as schedule, development, and cost. These project constraints will be included in The Software Project Management Plan and will give specifics regarding these topics.

The Commerce Banking app will be a web application that allows customers to monitor their bank transactions and set custom notification rules based on each customer's individual requirements. Being a web application, the Commerce Banking app will be accessible from any web browser enabling convenience for customers. Customers can use the app to monitor transactions based on the criteria that they set themselves within the app.

1.2 Goals and Objectives

The main objective of this project is to allow Commerce Bank customers an easy and intuitive web application to monitor their accounts. The Commerce Bank application is expected to:

1. Provide an intuitive and simple interface that is easy to navigate
2. Execute in a quick and responsive manner
3. Allow customers to set custom notification rules on transactions
4. Provide a list of transactions sorted by date

1.3 Scope

The Commerce Bank web application will give users the ability to access and track their bank account. The web application will apply OWASP ZAP to security scan our applicaiton, keeping user information safe. Users will be able to login and enter a home page that allows them to view a dashboard, view & edit notifications, and allows them to export summaries to a spreadsheet. Users will also be able to receive notifications via email. Users will be shown a transaction summary which will be sorted by date. Users can add a transaction to the summary which should then trigger a notification.

1.4 Definitions

Commerce Bank Application – the product that is being described here; the software system specified in this document.

Project – activities that will lead to the production of the Commerce Bank application.

Client – the person or organization for which this Commerce Bank application is being built.

User – the person or persons who will actually interact with the Commerce Bank application.

Use case – describes a goal-oriented interaction between the system and an actor. A use case may define several variants called scenarios that result in different paths through the use case and usually different outcomes.

Actor – user or other software system that receives value from a user case.

Developer – the person or organization developing the system, also sometimes called the supplier.

Application - software that performs specific tasks for an end-user

2 General Design Constraints

2.1 Commerce Bank Application Environment

The Red Eyes Black Dragon's product will include a web app designed to work. This application will interface with a proxy server of our design. This proxy server will interface with a website of our own design.

2.2 User Characteristics

Commerce Bank app users: Individuals with a Commerce Bank account, individuals who own a computer with internet access, individuals who have experience with online browsing.

2.3 Mandated Constraints

- The application must possess a login page
- The application must possess a Transaction summary page
- The application must possess a home page
- The application must send out notifications by email
- The application must undergo an OWASP security scan
- The application must use Commerce Banking styling
- The application must have user configurable notification rules

3 Nonfunctional Requirements

3.1 Operational Requirements

Usability: The application needs to be designed so that **anyone**, regardless of technical level, is able to understand the website. The text should be properly formatted, visually appealing, and clearly visible across mobile and desktop views. Everyday language should be used so that everyday users are able to understand it.

3.2 Performance Requirements

Maintainability: When changes are made to the application, such as transaction data being added or login info being updated, the application should be able to be made current with minimal impact on the application structure and minimal downtime for users.

3.3 Security Requirements

We will aim to have multiple layers of security in our web application. We will have account security through a login that requires a strong password. In addition, we will have security standards in our database and through the web host. For the stretch requirement we have elected to do the OWASP ZAP scan which will improve our security as well.

3.4 Documentation and Training

Our web application will be available online without documentation or training. We will do a brief presentation that will demonstrate the usage of the application to the Commerce Bank employees.

3.5 External Interface

3.5.1 User Interface

The user interface will be eye-catching and visually appealing. When users access their Commerce Bank accounts, the interface will provide a smooth transition with the Transaction Summary which has a straightforward, understated look and feel. It will also have the styling of the Commerce Bank home page to look compatible and consistent for users.

The interface will be intuitive. As a web app it will be streamlined and simple to use. No training will be provided and it is expected that 95% of users will be able to use the app without any training.

3.5.2 Software Interface

The Commerce Bank app website will communicate directly with the database for the transaction history.

4 Functional Requirements

4.1 Required Features

4.1.1 Use Case: 1

Description: User Login / Check Transaction Summary

Actors: Commerce Bank Customer

Value = high

Cost = high

Risk = low

Basic Path

1. Navigate to the Commerce Bank website.
2. System prompts users to enter username and password.
3. User enters the correct username and password and clicks Login.
4. Application displays account summary with option to view transactions and notifications
5. User Clicks Transaction summary, views history of transactions
6. User clicks Logoff.
7. System exits.

Alternate Path

1. Navigate to the Commerce Bank website.
2. System prompts users to enter username and password.
3. User enters an incorrect username and/or password and clicks Login.
4. System displays error message: "Invalid Username and / or Password for user@wrongaddress.com Or you may have exceeded the number of consecutive attempts allowed. Please try again later."
5. Users may choose to login again, returning to step 1, or exit.
6. System exits.

4.1.2 Use Case: 2

Description: Create Notification Rule

Actors: Commerce Bank Customer

Value = high

Cost = medium

Risk = low

Basic Path

1. Navigate to the Commerce Bank website.
2. User successfully logs in.
3. User clicks the Notification Rules tab.
4. System displays Notification Rules and displays options to add/edit/delete notification rules.
5. Users click add, edit, or delete and create notification rules.
6. User clicks Logoff.
7. System exits.

4.1.3 Use Case: 3

Description: Trigger the newly created Notification Rule / Add new transaction

Actors: Commerce Bank Customer

Value = medium

Cost = high

Risk = low

Basic Path

1. Following Login [Use Case 1 Step 3]: System displays Account Summary with Commerce Bank balance with options to logoff, view transaction, or view notifications.
2. User clicks the view notification button.
3. System displays recent notifications with the option to log off or set a new notification rule.
4. User clicks set notification rule
5. System prompts the user to set rules based on location, login, time of transaction, and new store.
6. The user selects a notification rule to be active
7. User navigates to transaction summary
8. User selects 'add new transaction' button
9. User adds new transaction information that will trigger new notification rule
10. Once user saves transaction, system will notify user via browser window notification or email that a new transaction rule was triggered
11. User dismisses notification popup
12. User logs out
13. System exits.

Alternate Path

1. Following Login [Use Case 1 Step 3]: System displays Account Summary with Commerce Bank balance with options to logoff, view transaction, or view notifications.

2. User clicks the view notification button.
3. System displays recent notifications with the option to log off or set a new notification rule.
4. User clicks set notification rule
5. System prompts the user to set rules based on location, login, time of transaction, and new store.
6. The user selects a notification rule to be active
7. User navigates to transaction summary
8. User selects 'add new transaction' button
9. User adds new transaction information that will NOT trigger new notification rule
10. Once a user saves a transaction, the system will not notify the user because the notification criteria was not met.
11. User logs out.
12. System exits.

4.1.4 Use Case: 4

Description: View Notifications

Actors: Commerce Bank Customer

Value = high

Cost = medium

Risk = low

Basic Path

1. Following Login [Use Case 1 Step 3]: System displays Home page with options to logoff, view transaction summary, view notifications or create notifications.
2. User clicks View notifications.
3. System displays recently created notifications with option to logoff.
4. User clicks Logoff.
5. System exits.