**Software Project Management Plan**

**My Personal Commerce Account-Banking Application**

3/8/2020

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**Change History**

|  |  |  |
| --- | --- | --- |
| **Revision** | **Change Date** | **Description of changes** |
| V1.0  V1.1 | 3/4/2020  3/8/2020 | Initial release  Editing section 2 and 1.5 |
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**Document Storage**

This document is stored in the project’s SVN repository at:

<https://github.com/umkc-cs-451-2020-spring/semester-project-group-7>

**Document Owner**

The entire team is responsible for developing and maintaining this document.

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# 1 Overview

## 1.1 Purpose and Scope

The purpose of this project is to provide Commerce Bank customers with a web application that pulls in transaction details and allows users to set triggers for notification rules and receive notifications around them. The system should also save data to a database so recurring reports can be created.

## 1.2 Goals and Objectives

The main goal of this project is to create a web application so Commerce Bank customers can see their transactions in detail, receive notifications from the app, and the system should be able to save the data to a database. More specifically:

1. Users should be able to log into their account through the Login Page.
2. There should be a Dashboard that includes a transaction summary for triggered notification rules over a time period that the user can set.
3. There should be a Triggers tool that allows configurable notification rules to be created to notify users when transactions fit into a set of criteria.
4. The application should be able to remember users if they close their browser and then log in again.
5. The user interface should use Commerce Bank color scheme in styling.

## 1.3 Project Deliverables

The following items will be delivered to the customer on or before 5/5/2020:

1. Source code for the web application.
2. User and System Guide
3. System Administrators Manual
4. Project Plan
5. System test Cases
6. Suite of regression tests
7. Requirements Document
8. Architecture Document

## 1.4 Assumptions and Constraints

Assumptions:

1. No external resource will be used.
2. All the deadlines that both ends agreed on, should not be compromised.
3. Additional features maybe added depending on time and the clients’ requests.

Constraints:

1. The application must run on all browsers.
2. The database must be open source.
3. The software must be ready by May 5,2020.

## 1.5 Schedule and Budget Summary

Major Milestones and Deliverables:

02/07/2020 - Gather requirements

02/17/2020 - Iteration #1 Begins

02/23/2020 - Project Charter Complete

03/01/2020 - Requirements Document Baselined

03/02/2020 - Iteration #1 Closeout

03/02/2020 - Iteration #2 Begins

03/08/2020 - Project Plan

03/16/2020 - Risk Management Report

03/16/2020 - Iteration #2 Complete

03/16/2020 - Technical Prototype Complete

03/17/2020 - Iteration #3 Begins

04/03/2020 - Architecture Document Complete

04/06/2020 - Iteration #3 Complete

04/06/2020 - Iteration #4 Begins

04/20/2020 - Iteration #4 Complete

04/20/2020 - Iteration #5 Begins

04/26/2020 - Test Plan Complete

04/27/2020 - User and Systems Guide Complete

05/01/2020 - Project Results Complete

05/04/2020 - Iteration #5 Complete

## 1.6 Success Criteria

The overall project will be deemed a success if the product success criteria are met by meeting all the constraints, goals, and stakeholder’s expectations on time. The product should have a dashboard that tells a user the number of times each notification rule has been triggered over the past month and year, the ability to hide notification rules when the times tripped is zero, the ability for users to choose a date range view the data, the ability for a user to create a login with a username and password that is at least eight characters, contains one upper case letter, one symbol, and one number. The transaction list should be sorted by date, users should have the ability to add transactions, there should be a trigger tool to allow for configurable notification rules to be created to notify users when transactions fit into a set of criteria, and users should receive notifications when they log in.

## 1.7 Definitions

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.

Scenario – one path through a use case

Actor – user or other software system that receives value from a use case. The actor will be unique for each use case.

Role – category of users that share similar characteristics.

My Personal Commerce Account Banking Application – what is being described throughout the document.

Project – activities that will lead to the production of the My Personal Commerce Account Banking Application described throughout the document. Project issues are described in a separate project plan.

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

Project Manager – is responsible for planning, organizing, staffing, directing, controlling and managing risks. The main deliverable of the project manager is a project plan which includes a schedule, budget, and risk management plan.

Stakeholder – anyone with an interest in the project and its outcomes. This includes clients, customers, users, developers, testers, managers and executives. For this product, the stakeholders include Commerce Bank, Commerce Bank customers, the Professor, and team.

Should – adverb used to indicate importance; indicates the requirement is desired but not mandatory.

May – adverb used to indicate an option. For example, “The system may be taken offline for up to one hour every evening for maintenance.” Not used to express a requirement, but rather to specifically allow an option.

Controls – the individual elements of a user interface such as buttons and check boxes.

Deadline – the latest time or date by which something should be completed. The deadline for this project is due by May 4,2020. Individual iterations will be due separately.

User Guide – is designed to assist end users to use the product, the My Personal Commerce Account Banking Application. This will be a separate document.

## 1.8 Evolution of the Project Plan

Before the start of an iteration, the team will meet for a meeting and discuss project roles and assignments. Each team member will contribute equally and finish their part on time. The excel sheet will be updated before and after each iteration to track tasks and the amount of time they take to complete. We will note any risks we find as we go along completing the project.

# 2 Startup Plan

## 2.1 Team Organization

Project Manager (1): The project manager is responsible for creating the project plan (with input from those doing the work), managing risks, running the weekly team meeting and final editing project documents.

Programmers (4): Programmers are primary responsible for coding and unit testing modules. They are also expected to take part in architecture planning and review meetings.

## 2.2 Project Communications

As a group, we meet at least once a week and these meetings last for one to two hours. In addition, we use Slack to communicate quickly and effectively when necessary and when we need help. In addition, we try to use the GitHub repository in an effective and up-to-date manner in order to reach the code or documents in our project at any time.

## 2.3 Technical Process

Our team uses the agile development methodology to minimize risks when we need to add new functionality or to change something. Our work is divided into five iterations, each of which is approximately three weeks long. The work for each respective iteration is determined before the iteration starts. At the end of each iteration, the completed work is reviewed, and the remaining work is analyzed to determine the goals, objectives, and deliverables of the next iteration. Our milestones are the timely achievements of our goals and objectives.

## 2.4 Tools

We are using these development tools to perform our work:

* Programming Language – C#, JavaScript, HTML5
* Framework – ASP.NET MVC, Bootstrap
* Database – SQL
* IDE – Visual Studio 2019
* Version Control – source code and written artifacts will be stored in a GitHub repository.
* Defect tracking – defects and issues will be tracked using GitHub.
* Automated testing

# 3 Work Plan

## 3.1 Activities and Tasks

## 3.2 Release Plan

2/23/2020 - Project Charter Approved

2/29/2020 - Preliminary Requirements Complete

2/29/2020 - Requirement Document Complete

3/2/2020 - Iteration #1 Complete

3/6/2020 - Preliminary Project Plan Complete

3/16/2020 - Iteration #2 Complete

4/3/2020 - Architecture Complete

4/6/2020 - Iteration #3 Complete

4/20/2020 - Iteration #4 Complete

4/27/2020 - User and system Guide

5/4/2020 - Iteration #5 Complete

## 3.3 Iteration Plans

**3/2/2020 Iteration #1 complete**

1. Determine technology needs (Database)
2. Evaluate needs for Iteration 2
3. Unit Testing
4. Bug fixes as required
5. Create site map
6. Learn.NET/C#

**3/16/2020 Iteration #2 Complete**

1. Research. NET Framework
2. Research tools used
3. Evaluate needs for Iteration 3

**4/6/2020 Iteration #3 Complete**

1. Create website design mockups
2. Create CSS formatting
3. Create VS.NET MVC project
4. Write basic proxy code
5. Focus on functionality of the app
6. Evaluate needs for Iteration 4

**4/20/2020 Iteration #4 Complete**

1. Testing stage
2. Fix the HTML patterns
3. Check the performance

**5/4/2020 Iteration #5 Complete**

1. Finish bug fixes
2. Close
3. Presentation

## 3.4 Budget

The project budget is the projected cost of the project as a function of time. At any point in the project you should be able to say how much money has already been spent and estimate of the amount of money needed to complete the project. We do not have a budget for this project as it is being sponsored by Commerce Bank through UMKC.

# 4 Control Plan

## 4.1 Monitoring and Control

Detailed in the following section is a plan for tracking project progress and monitoring performance. Included here will be the approximate dates of technical milestones, iteration deadlines, and project reviews.

Weekly – Every week will be a team meeting for members to report in on their progress and address hurdles they have encountered or foresee.

03/02/2020 – Iteration 1 review. Debate technology stack and project requirements. Develop draft project timeline.

03/11/2020 – Horizontal prototype review. Review user interface prototype and discuss backend architecture.

03/16/2020 – Iteration 2 review and Project technical review.

04/06/2020 – Iteration 3 review. Discuss and finalize project architecture.

04/14/2020 – Rough draft final product done. Base requirements done.

04/20/2020 – Iteration 4 review. Review unit tests and debug the application. Review project accomplishments and failures.

05/04/2020 – Iteration 5 review. Final product reviewed.

05/09/2020 – Executive review. The project manager presents the current project status to project sponsor and senior executives.

## 4.2 Project Measurements

|  |  |  |
| --- | --- | --- |
| **Phase** | **Measurement** | **Source** |
| Milestone Planning | Record effort estimates for product features | Project Manager |
| Iteration Begins | Record effort estimates for scheduled tasks  Update effort estimates for product features  Update estimated dates in Milestone plan | Project Manager |
| Iteration Closeout | Record actual effort for scheduled tasks  Record actual effort for product features  Record tasks finished on time. | Project Manager, Developers |
| System Test | Record the rate at which errors are found. | Tester |
| Project Closeout | Record project performance in project performance spreadsheet. | Project Manager |

# 5 Supporting Process Plans

## 5.1 Risk Management Plan

|  |  |  |
| --- | --- | --- |
| **Risk** | **Priority** | **Consequences** |
| Little to no experience with .NET framework | Medium | Unorganized or difficult to read code |
| Unfamiliar with C#, SQL, and JavaScript | Medium | Unorganized or difficult to read code |
| Ensuring security for end users’ information | High | Users losing money and trust in company |
| Three month timeframe to finish project | Low | Rushed product |
| Not clear on the needs of  Commerce Bank | Low/Medium | Requirements not fully met |

Steps will be taken to ensure the security of end users’ sensitive information. The password text will be masked and will be hashed. If logging in or making a transaction from a different region, a notification will be sent to their email. Lastly, users will be only allowed one login session and will expire after ten minutes of inactivity.

To monitor these risks, communication will be key. Progress meetings will be held weekly. For updating risks, manual testing as well as a testing framework will be used regularly.

## 5.2 Configuration Management Plan

1. Documents, source code, and other project files will be uploaded to the projects GitHub repository.

2. A change history table will be included in document files with the version number, the date last modified, the name(s) of anyone who did the editing, and a description of what was edited.

3. An email or slack message should be used to notify the team of any modifications.

## 5.3 Verification and Validation Plan

To verify and validate software quality and features, testing will be key. Test cases will be determined through use cases of requirements and expected results will be logged for each case.

## 5.4 Product Acceptance Plan

To ensure acceptable product quality and functionality, the requirements sheet that was provided from Commerce Bank will be followed. Delivery dates for each requirement will be established before each project iteration.