Team Seven Software Requirements Specification for Commerce Bank Productivity Analysis System

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Revision History

Version	Date	Name	Description
1.0	9/21/2015	Eric Sundquist	Original Requirements Documentation

Introduction

Overview

The Commerce Bank Productivity Analysis System exists to help management track and measure goals. PAS is responsible for keeping a history of benchmarks and calculating scores based on whether certain measurements are meeting or exceeding their goals. With the improvements made by our team, PAS will have a user-friendly dashboard which allows for customizable widgets that show vital information relating to measurements and goals at a glance.

This document lays out the requirements for the PAS. The Introduction contains the project goals and objectives, scope, and product definitions. The General Design Constraints section contains information about the production environment, user characteristics, and mandated constraints. The Nonfunctional Requirements section gives information about operational, performance, and security requirements, other quality attributes, documentation and training, and the external interface. Finally, the System Features section lists the features and their specific requirements to be provided by the PAS.

This document is not concerned with project-level issues such as schedule, budget, development process, testing, etc.

Goals and Objectives

The main goals of the PAS project is to provide

- A dashboard which is intuitive to use and easy to learn
- A customizable and responsive dashboard and widgets
- Tests for all controllers
- A product that is easily deployable by the project sponsor

Scope

The PAS will run in the Commerce Bank environment with their data. It will allow Commerce Bank managers to view and track their critical measurements and goals.

Our team's extensions to the Productivity Analysis System are limited in that they must work with the code base that has already been established. The purpose of this dashboard project is not to add or edit data beyond what is already accomplished in the code being provided. Instead, it will creatively display representations of the data through dashboard widgets. The project will be limited in that it will not have user data to test on. Therefore, widgets may necessarily be generic and will need further customization and extension to specifically suit the needs of the customer.

Definitions

Actor	a user or other software system that receives value from a use case
Customer	the person or organization that will pay for the product, namely, Commerce Bank
May	indication of an optional requirement, allows for an option rather than a requirement
PAS	Productivity Analysis System, the product being developed
Product	the PAS being described here; the software system specified in this document
Project	activities that will lead to the production of the product described here
Shall	indication of a mandatory requirements, also “must” and “will”
Should	indication of a desired requirements, though not mandatory
Use case	a goal-oriented interaction between the system and an actor
User	the person or persons who will interact with the product, namely, Commerce Bank managers

General Design Constraints

Production Environment

The product will access data on a SQL database on a Commerce Bank server. It will be built on top of a code base developed by programmers at Commerce Bank, so it must interface with the provided code. Additionally, it will be maintained by programmers at Commerce Bank, so the product must be buildable using Visual Studio 2013 and SQL Express 2012.

User Characteristics

The intended users for the PAS are Commerce Bank managers. They will be responsible to input and modify data measurements and goals. The managers can be assumed to be technically competent and able to use basic software, though they should not be required to do a lot of research to know how to use the PAS. The managers cannot be expected to do a lot of troubleshooting if they cannot get the PAS to work how they want.

Mandated Constraints

The product will build and run within Visual Studio 2013 and .net 4.5. The product will build and run using SQL Express 2012. The product must integrate into the existing code provided by Commerce Bank programmers. The product must be a web application. The product must run on Internet Explorer version 9. The product should use responsive design.

Nonfunctional Requirements

Operational Requirements

The PAS must be able to read measurement and goal data from a shared database. The PAS must be able to read and write user settings to a shared database. The PAS must be able to run inside an internet browser.

Performance Requirements

The PAS must respond to user requests within a reasonable amount of time. The PAS must be reliable to run and handle errors without crashing. The PAS must be able to run on all potential user's desktop computers, while optionally be able to run on mobile devices as well. The PAS must scale be able to scale to accommodate between 100-500 users.

Security Requirements

Users will be required to log on to the Commerce Bank platform before operating the PAS. This functionality is already built in to the existing code. Different users will have access to different datasets. This will be handled by the Commerce Bank programmers after application is completed.

Other Quality Attributes

The application should require little maintenance from Commerce Bank programmers when completed.

Documentation and Training

A product demonstration will be held with Commerce Bank programmers and potential users upon the product's completion. Additionally, user guide and system documentation will be submitted. The user guide will provide a user-perspective walk through for performing common tasks on the PAS dashboard. System documentation will include notes on building and configuring the software, architecture and design of the software, and any known issues with the software.

External Interface

The PAS dashboard will be a professional, intuitive collection of customizable gadgets. It will attempt to match the look and feel of the existing PAS code. The interface will allow for adding and resizing gadgets with little explanation necessary. It will adjust to different screen sizes.

System Features

Feature: Dashboard

The PAS will display a dashboard when a user logs in. The dashboard will have widgets which display information about company-wide measurements and goals. This is a high-priority feature.

Estimated cost: 72 hours

Use Case:

Title:	View measurement and goal information
Actors:	PAS user
Preconditions:	PAS has measurement and goal information already entered and stored
Basic Flow: 1. User logs on to PAS and navigates to dashboard 2. Dashboard displays most recently viewed configuration 3. User quickly sees the relevant information and can make analysis	

Feature: Customizable Dashboard

The PAS dashboard will be able to add as many widgets as the user wants. The user will be able to resize and reposition widgets in a wide variety of assortments. The user will be able to delete widgets. This is a medium-priority feature.

Estimated cost: 72 hours

Use Case:

Title:	Customize dashboard view
Actors:	PAS user
Preconditions:	PAS has measurement and goal information already entered and stored
Postconditions:	PAS saves state of dashboard for next use
Basic Flow: 1. User logs on to PAS and navigates to dashboard 2. Dashboard displays most recently viewed configuration 3. User adds, removes, resizes, and rearranges widgets as desired 4. System remembers state for next use	

Alternate Flow: 1. User logs on to PAS and navigates to dashboard 2. Dashboard is empty (first time use) 3. User adds widgets as desired 4. System remembers state for next use

Feature: Customizable Widgets

The widgets provided will be customizeable. The user will be able to add and modify views and determine the details and level of information provided. The user will be able to design a custom widget, starting from several basic templates. This is a medium-priority feature.

Estimated cost: 144 hours

Use Case:

Title:	Customize a widget
Actors:	PAS user
Preconditions:	1. PAS has measurement and goal information already entered and stored 2. A widget
Postconditions:	PAS saves state of widget for next use
Basic Flow: 1. User logs on to PAS and navigates to dashboard 2. Dashboard displays most recently viewed configuration 3. User chooses a widget to modify 4. System shows options for modifying widget 5. User chooses options as appropriate 6. System displays the modified widget and saves its state for next use	
Alternate Flow: 1. User logs on to PAS and navigates to dashboard 2. Dashboard displays most recently viewed configuration or blank configuration 3. User adds a new widget 4. System show default widget and options for modifying widget 5. User chooses options as appropriate 6. System displays modified widget and saves its state for next use	

Feature: Interactive Information

The user will be able to change the level and detail of information being displayed. Widgets will have the ability to drill down to view specific data points, allowing the user to more fully understand the information being displayed. This is a medium-priority feature.

Estimated cost: 144 hours

Use Case:

Title:	Interact with information
Actors:	PAS user
Preconditions:	PAS has measurement and goal information already entered and stored
Basic Flow: 1. User logs on to PAS and navigates to dashboard 2. Dashboard displays most recently viewed configuration 3. User identifies information in widget and chooses to see its details 4. Widget changes appearance to give more details about what user selected 5. User can continue to drill down 6. User can move to previous views or to default view when finished	