JagTran

JagTrack
Software Development Plan

Version 1.1

Revision History

Date	Version	Description	Author
03/12/2012	1.0	Document created.	Nguyen, Matthew
04/24/2012	1.1	Update for Elaboration. Deleted section 2.4 - Evolution of Software Development Plan	Moore, Adam

Table of Contents

Software Development Plan

1. Introduction

1.1 Purpose

This Software Development Plan includes general information about the JagTrack project and its organizational structure.

1.2 Scope

The scope of this document is the Inception and Elaboration phases of the JagTrack project for the Spring 2012 Software Engineering class. Details may be borrowed by teams doing work on this project in the future.

1.3 Definitions, Acronyms, and Abbreviations

- USA: University of South Alabama
- JagTrack The project
- JagTran: USA's on campus transportation
- CSC 331: The class the project "employees" are in.

1.4 References

- *Iteration Plans*
- *Requirements Management Plan*
- *Measurement Plan*
- *Risk Management Plan*
- *Development Case*
- *Business Modeling Guidelines*
- *User Interfaces Guidelines*
- *Use-Case-Modeling Guidelines*
- *Design Guidelines*
- *Programming Guidelines*
- *Test Guidelines*
- *Manual Style Guide*
- *Infrastructure Plan*
- *Product Acceptance Plan*
- *Configuration Management Plan*
- *Documentation Plan*
- *Quality Assurance Plan*

- *Problem Resolution Plan*
- *Subcontractor Management Plan*
- *Process Improvement Plan*

2. Project Overview

2.1 Project Purpose, Scope, and Objectives

Create a mobile application that will allow JagTran passengers to query details about USA's JagTran system including approximate arrival times of buses, locations of bus stops, and route maps.

In addition, we will create an application that will allow the JagTran administration to collect detailed data on JagTran usage, including passenger loads across all buses, that will enable the JagTran administration to make more informed decisions in managing the JagTran.

2.2 Assumptions and Constraints

1. The project staff consists of students in CSC 331.
2. The sensory systems will be capable of storing bus location or passenger information into a database accessible by the JagTrack applications.
3. The mobile application will be developed and deployed on the Android platform.

2.3 Project Deliverables

03/20/2012 – LCO deliverables due

04/01/2012 - Elaboration Iteration 1 deliverables due

3. Project Organization

3.1 Organizational Structure for Inception

Teams (From the wiki):

3.1.1 Project Manager:

- Robert Fornof
- Hayden Chudy

3.1.2 Requirements/Analysis Team 1:

- Xingyu Wang
- He Zhang
- Weijian Jian
- Jim Fletcher

3.1.3 Requirements/Analysis Team 2:

- KD Wilson
- Chase Bryant
- Hao Wu
- Rujie Yuan

- Sumit Shrestha

3.1.4 *Quality Assurance*

- Christopher Camp
- Caleb Hall

3.1.5 *Configuration Management*

- Matthew Cooper
- Matthew Nguyen

3.1.6 *Testing & Security*

- Adam Moore
- Brad Bittinger
- Leyue Wang
- Shanna Keith

3.1.7 *Technology & Tool Integration*

- Christopher Johnson
- Glenn Bigelow (Ray)

Organizational Structure for Elaboration Iteration 1 (from the wiki)

Team 1 - Android Application

•Christopher Johnson - Lead

•Sumit Shrestha

•Hao Wu

Team 2 - Desktop Application

•Bradley Bittinger - Lead

•Matthew Ngyuen

•Weijian Jian

Team 3 - Deployment / Integration / Testing Activities

•Xingyu Wang - Lead

•Shanna Keith

•Leyue Wang

•Rujie Yuan

Team 4 - Quality Assurance

•Christopher Camp - Lead

•Ray Bigelow

Team 5 - Hosting Setup / Persistence Layer Design / Database Design

•Adam Moore

•Hayden Chudy

•Caleb Hall

Team 6 - Prototyping (Due April 27)

•Robert Fornof

Team 7 - Use Case Development / Requirements Analysis

•KD Wilson - Lead

•Chase Bryant

•He Zhang

•Jim Fletcher

3.2 External Interfaces

Interactions with the customer are done through a customer representative. In this case, it would be Professor McDonald.

3.3 Roles and Responsibilities

- Each team/person is responsible for artifacts from the RUP assigned to them.
- Project Managers: Responsible for guiding the rest of the team and assigning tasks as they see fit.

- Artifact assignments are as follows:
    - Team 1 - Android Application
    - Artifacts (Due April 24)
        - System Sequence Diagram
        - Use Case Realization
        - Design Model
        - Working Code
        - Documentation Within Code (to be reviewed by QA Team)

    - Team 2 - Desktop Application (Use Case: Track Passengers) IMPORTANT
    - Artifacts (Due April 24)
        - System Sequence Diagram
        - Use Case Realization
        - Design Model
        - Working Code
        - Documentation Within Code (to be reviewed by QA Team)

    - Team 3 - Deployment / Integration / Testing Activities
    - Artifacts (Due April 27)
        - Integration Build Plan
        - Deployment Plan
        - Test Guidelines
        - Test Plan

    - Team 4 - Quality Assurance
    - Artifacts (Due April 27)
        - QA Plan

    - Team 5 - Hosting Setup / Persistence Layer Design / Database Design
    - Artifacts (Due April 27):
        - Architecture Document
        - Data Model/Interface Specification

- Team 6 - Prototyping (Due April 27)
- Artifacts:
  - Prototype

- Team 7 - Use Case Development / Requirements Analysis
- Artifacts (Due April 27)
  - All listed under Requirements

4. Management Process

4.1 Project Estimates

4.2 Project Plan

4.2.1 Phase Plan

- Goals
  - Continue requirements gathering
  - Begin implementation of features that involve risky aspects of architecture
  - Develop a candidate architecture for the system
- Schedule
  - Iteration 1
    - Implement the standard path for "Get Passenger Count" and "Get Arrival Time" use cases
    - Implement key architecture and components
      - Database
      - PHP application
    - Define candidate architecture
    - Continue requirements gathering
  - Iteration 2
    - Further refine architecture
    - Begin carrying out all tests
    - Realize another use case

4.2.2 Iteration Objectives

- Inception:
  - Majority of RUP artifacts started or finished.
- Elaboration - First Iteration
  - Continue refinement of RUP artifacts, including further detailing the Use Case Model
  - Decide on a candidate architecture

- Produce working code that demonstrates the feasibility of the highest risk architectural components, including the database and web component that perform calculations on bus data
- Refine non-functional requirements

4.2.3 Releases

- 3/20/12 – Prototype for Project Briefing
- 5/01/2012 - Working code release of Android application and desktop administration application

4.2.4 Project Schedule

- 3/20/12 – First Project Briefing/Demo
- 5/01/12 – Second Project Briefing/Demo

4.3 Iteration Plans

[See iteration plan]

4.4 Project Monitoring and Control

4.4.1 Requirements Management Plan

4.4.2 Schedule Control Plan

4.4.3 Quality Control Plan

4.4.4 Reporting Plan

4.4.5 Measurement Plan

4.5 Risk Management Plan

[See risk management plan]