Software Project Management Plan
Cougar Travel Agency

Version 1.1
Issued on: October 25, 2012
Issued by: Team Echo
Issued for: Cougar Travel Agency

Revision History

Version	Release Date	Author	Major Changes
1.0	10/14/12	Lindsey L. Shelton	Created Initial Document
1.1	10/25/12	Lindsey L. Shelton	Revisions made to Document, released to Team

Table of Contents

1. Overview

1.1 Project Summary

1.1.1 Purpose, Scope, and Objectives

The purpose of our project is to develop a software product that will assist Cougar Path Travel agents and customers in getting the best deal for the travel required. This product will allow an agent to create a new customer profile, retrieve an existing customer profile, find what flights are available, reserve a flight a customer, make changes to a customer's flight reservation, cancel a customer's flight reservation, create a receipt for a customer, create a watch for the customer, print a daily report for the agent, and obtain updates from the CRATD.

1.1.2 Assumptions and Constraints

- The team will have an Analysis Workflow complete by October 25, 2012.
- The team will have a Design Workflow complete by November 8, 2012.
- The team will have the Source-Code Implementation complete by December 6, 2012.
- Our team will only use the Java language as our programming language of choice.
- Our team will split the workload according to everyone's given tasks, strengths, and interests.
- Our team will communicate with each other often.
- Our team will manage our time efficiently to meet our deadlines.
- Our software product will meet the customer's needs and be reliable.
- Our software product will be client friendly and easy to use.

2. Reference Materials

Author/Title	Publisher/Year	Purpose/Description
Schach, Steven *Object-Oriented Software Engineering*	McGraw-Hill, 2008	Design reference book for use-cases and documentation.
Miles, Russ Hamilton, Kim *Learning UML 2.0*	O'Reilly Media, 2006	Design reference book for use-cases.

3. Definitions and Acronyms

Arrival City – city of flight destination.

Card Security Value (CSV) Number – this is the security number located on the back of most credit cards.

Cheapest Fare – this is an option the customer will choose as a personal preference.

Cougar Path Travel – name of the travel reservation company to whom we are developing the "Express Flights Locater" software package.

Customer – people who are interested in planning a flight with Cougar Path Travel that are either potential or current within the system.

Customer Number – this is the number assigned to the customer to keep the customer identified individually for accurate and quick look-up.

Customer Profile Information – a collection of basic information about the customer that will be maintained on the local database and is comprised of (customer's name, address, email address, phone number, Credit card information [holder's name, card type, card number, expiration date, and Card Security Value (CSV) number] and a billing address).

Daily Report – a daily task done by the manager that summarizes business that was conducted throughout the day. It is comprised of a financial and contact section.

Departure City – city of flight origin.

Discount – a reduction in price that is applied to the total price at any inconvenience to the customer.

"EFL" Database – local database containing local data such as airport codes, airlines, departure times, airline mileage, airport fees, etc…

Express Flights Locater – name of the software package we are developing for the client.

Final Destination – the arrival city of the last flight in a chain of flights.

Final Status – an indicator that specifies if a flight is going to be delayed, cancelled or is on-time.

Flight Travel Data – data pulled from the CRATD in a text format and updated within the data members of the Express Flights Locator.

In-person Service – services being provided by an agent or a manager to a customer in a face-to-face setting.

Itinerary Case – these are individual cases that contain information about a current search, reservations, and modification to a current flight and are instantiated every time a customer wants to search for a new flight search based around different search parameters or decides to cancel their current flight a whole new itinerary case opens.

Leg – generally refers to a single flight within a chain of flights but can mean a single flight.

Manager – agent that has a higher level of access and additional tasks within the system.

On-phone Service – services being provided by an agent or a manager to a customer over a telephone connection.

"Plan-to-Go" Fee Structure – flat fee that is charged for the service of assisting in finding the optimal flight for the customer regardless of if the customer actually books the trip or not.

Price "Watch" – a service offered by the client that monitors the price of a set of flights based on a set of criteria and waits for any flight to meet a price threshold based on the customers specification.

Price "Watch" Threshold – the price specified by the customer in which they will be notified of specific flights based on their itinerary specifications.

Shortest Number of Flights – refers to the least number of connecting flights between the departure and arrival airport.

Shortest Time – refers to the shortest flight time from first departure until the last arrival at the traveler's final destination.

To "Book" a Trip – this is another term used for reserving a flight and may also be used to describe the planning process for the trip.

Travel Agent – trained professionals that interact with and assist the customer in finding flights that meet the customer's needs.

Travel Reservation Company – is a company that assists customers in finding and purchasing airfare at the most convenient and reasonable price based on the customer's needs.

4. Project Organization

4.1 Roles and Responsibilities

For the Requirements Workflow:

- Lindsey is the leader. She will be assigning the tasks and keeping the team organized and on top of everything.
- Brendan is the scribe. He will be implementing the use-case descriptions and glossary.
- Brian is the designer. He will be implementing the use-case diagrams.
- The team overall will develop the planning and post-mortem stages/documentation. We will also be adjusting the glossary of terms as necessary.

For the Analysis Workflow:

- Lindsey is the leader. She will be orchestrating the team meetings and will be taking the meeting notes. She will also organize the program into tasks for everyone and provide the entire Software Project Management Plan (SPMP) for the team. She will also be doing a few diagrams as Brendan/Brian require and submitting the project for the team.
- Brendan is the scribe. He will update the use-case summary of changes as needed since he was a constructor of the use-case descriptions in the Requirements Workflow. Brendan will also be implementing the use case scenarios, and flushing out the previously created use-case descriptions. He will assist Brian with the Communication Diagrams, Sequence Diagrams, and Statecharts.
- Brian is the designer. He will be updating the use-case summary of changes as needed since he was a constructor of the use-case diagrams in the Requirements Workflow. He will also be creating a class diagram of all entity boundary and control cases, therefore flushing out his previous use-case diagrams into these class diagrams. Brian will also be implementing the Communication Diagram, Sequence Diagram and, Statecharts along with Brendan.
- As a team, we will all implement the PSP (Project Planning Log and Project Time Log) documents and split the diagrams amongst ourselves as needed. Our team will also communicate more with one other and have structured team meetings.

5. Managerial Process Plan

5.1 Start-up Plan

5.1.1 Estimation Plan

Our team will require a total of 105 hours for the remainder of the project. Around 30 hours will be needed to complete the Analysis Workflow, 30 hours will be needed to complete the Design Workflow, and 45 hours will be needed to complete the Implementation Workflow. These estimations were gathered based upon the PSP documents in IP01, IP02, and GP02 for Brian, Brendan, and Lindsey.

For more information concerning our Planning and Time process, see:

- GP02_[TeamEcho]_PSP_ProjectPlanningLog.pdf
- GP02_[TeamEcho]_PSP_ProjectTimeLog.pdf

5.1.2 Staffing Plan

As stated previously, Lindsey is the project manager, Brendan is the project scribe, and Brian is the project designer. All three team members will be required to work the entire 10 weeks of Analysis Workflow, Design Workflow, and Implementation Workflow. For the beginning of the project, Lindsey will mostly work on the documentation of all team activities and organizing the team, and then work along with the team as a developer, analyst, and manager. Also in the beginning stages, Brendan will focus on the documentation of events into words and work as a developer and tester for the remainder of the project. The same instance goes for Brian, who will be creating visualizations of the project workflows and documentation of the events into words in the beginning of the project. For the remainder of the project, he will also be working as a developer and tester.

5.2 Work Plan

5.2.1-2 Work Activities and Schedule Allocation

Knowing the entirety of our estimated work activities for the remainder of the project is still indeterminable. But thus far, this is our plan for the remainder of the project:

Analysis Workflow:

Week of 10/07/12	Lindsey will organize the program tasks for the team members and include a document that breaks down how to do each member's task.
Week of 10/14/12	Brian and Brendan will focus on the creation of the diagrams and descriptions for the Analysis Workflow. This includes the Summary Description of Use-Case changes, Use-Case Scenarios, Class Diagrams, Statecharts, Communication Diagrams, and Sequence Diagrams. Lindsey will focus on the creation of the SPMP (Software Project Management Plan) and will fill in for any tasks that Brian or Brendan need.
Week of 10/21/12	Our team will continue the creation of the diagrams and descriptions for the Analysis Workflow. On Wednesday and Thursday, Lindsey will prepare the files for submission.

Design Workflow:

Week of 10/21/12	Lindsey will begin organizing the tasks for the team members for the Design Workflow. She will also start on the creation of UML for the pre-implementation of code as well as pseudo-code and add to the SPMP document.
Week of 10/28/12	Our team will begin implementing the design by building off the documents created in the Analysis Workflow. This is a temporary idea/estimation of tasks at this time.
Week of 11/04/12	Our team will continue the implementation of the design. On Tuesday and Wednesday, Lindsey will prepare the files for submission. This is a temporary idea/estimation of tasks at this time.

Implementation Workflow:

Week of 11/04/12	Lindsey will begin organizing the tasks for the team members for the Implementation Workflow.
Week of 11/11/12	Our team will begin the implementation of our project design's pseudo-code and UML into working code.
Week of 11/18/12	Our team will continue the implementation of our project into source code. During this time we also plan on analyzing/testing our code.
Week of 11/25/12	During this week, our team will finish the implementation of our code and focus on testing and implementation for pre-production.
Week of 12/02/12	Our team will prepare our Express Flights program for release to the customer.

* Please note that the Design and Implementation Workflows are temporary estimations of tasks. These tasks are subject to change as the project progresses towards completion.

5.2.3 Resource Allocation

Our team will meet frequently throughout the progress of this project after our classes on Tuesdays and Thursdays, as well keep in touch via phone and messaging. The goal for our team is to create a good communication set with one another as well as make sure all of our team members are kept up date with the program's progress. Lindsey's main focus for this project is keeping the team's documents up to date and that our team is meeting the specified time allocated for this project. As the majority of our project requires a lot of team communication to complete our work, Brian and Brendan have been assigned to implement most of the tasks together thus far.

6 Supporting Process Plan

6.1 Testing Plan

As testing is an important aspect throughout this entire project, our team plans to make use of it in all aspects of the project (not just the Implementation of the Source Code). In our Analysis Workflow, the majority of our testing was based within the diagrams. We had to determine if the use-case diagrams and descriptions that were initially created in the Requirements Workflow should continue to be used in the remainder of the project. Please see GP02_[TeamEcho]_UseCaseChanges.pdf for the updated changes to the use-cases that were created in the Requirements Workflow. The testing in the Analysis Workflow is mostly based upon if new use-cases should be created or if old use-cases should be removed. In the Design Workflow we plan on building off of the documents and diagrams created in the Analysis Workflow into UML diagrams and pseudo-code. The testing in the Design Workflow will be based mostly on if our previous documents in the Analysis Workflow will be used in the Design and Implementation of our Source Code. In the Implementation Workflow, our Source Code will be the focus of our testing and analysis. We want to make sure our customer has both a program that is easy to use and reliable to do the necessary tasks.

6.2-3 Quality Assurance Plan and Reviews and Audits Plan

For the early stages of our team's QA (Quality Assurance) Testing, our team will focus on if the customer's specifications and our team's design. Lindsey will work mostly as the QA Analyst throughout the entire term of our project. All team members will adhere to common standards in all documentation and implementation processes. Prior to the Implementation phase, our team will analyze our previous designs and documents and determine if they should be used in Implementation. We will also spend the majority of pre-production analyzing and testing our Express Flights program and determine if is ready for release. In all team meetings, we plan on reviewing and testing each member's work and progress.

7 Post-Mortem

As stated in the post-mortem in the Requirements Workflow, communication is still a fault amongst our team members. However, this time we were able to meet briefly in several team meetings to keep all members up-to-date on team's progress. Another fault for our team was the understanding on how to implement some of the diagrams. But yet again, as the project progressed and questions were asked to Dr. Mayer, our understanding became clearer.

What worked well for our team was also our level of communication. This time we conducted meeting notes and minutes, and kept in touch with one another often. This eased the construction and organization of tasks amongst all team members.

There are a few tasks that our team plans on improving for the remainder of our project. One task is the division of tasks in a more specific manner. Instead of team members having a generalized idea on their tasks, members will receive a further in-depth report of their assigned tasks. The reason for this is to give our members an idea of what their tasks do and why they were given the said task. Another task our team plans to improve time spent on the project. We desire to efficiently manage all of our time so that we will have ample enough time remaining to make changes to our implementations.