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**1. Introduction**

**1.1 Overview**

This document illustrates a plan to develop a lunch decider application for a smart phone. Various objectives, major activities, schedule, team organization, process model utilized, project resources required and risks associated with the development of the application are discussed in the document.

**1.2 Scope**

The software application will feature a Google Android touch screen graphical user interface. The theme of the interface will be that of a television game show. The application will utilize user input data to make calculations to determine which restaurants satisfy the user’s input criteria.

**1.3 Objectives**

There are three main major objectives. They are to:

* Develop a television game show themed “Lunch Decider” application.
* Utilize user input data to determine which restaurants’ satisfy user’s criteria.
* Restaurants that meet the criteria will randomly populate a Plinko themed GUI control, which when operated, will return a restaurant name and location.

**1.4 Major Activities**

The major activities performed during the development of the application are described below.

* The initial and foremost activity is requirements gathering. This activity has been completed.
* The next activity is writing the software requirements specification document. This document describes hardware and software requirements, use cases,and an overview of the project. This activity has been completed.
* The third activity is to write the project plan document. This documentprovides an overview of the project schedule, work breakdown among the team members, project risks, and the project resources.
* The fourth activity is to model the application. Mainly it will describe the interface. This activity also includes sequence diagrams and class diagrams.
* The fifth activity is coding. Along with the coding, unit testing is done.
* The sixth major activity is testing. In this phase, integration testing, system testing and acceptance testing will be performed.
* The final activity will be creating an application information page for Android Market.

**1.5 Project Deliverables**

The deliverables of the system will include the following:

* Requirements Specification document
* Project plan document
* System Design Document
* Test plan document
* Team evaluation document
* Final Completed Application

**1.6 Project Constraints**

Time is the major constraint of this project. All the basic functionality of the system should be implemented by the end of the semester. The working project, including all deliverables,is required to be submitted by the last class day of the spring 2011 semester.

**2. Project Schedule**

The project schedule consists of the work breakdown structure, task network diagram, and timeline chart which are described below.

**2.1 Work Breakdown Structure**

Work breakdown structure is a tool to group various tasks and functions that have to be performed by team members, and the various activities to be performed within a particular deadline.

**2.2 Task Network Diagram**

The task network diagram is a diagram depicting the sequence in which projects terminal elements are to be complemented by showing terminal elements. It also shows the before-after dependency relations between various project activities.

**2.3 Timeline Chart**

A timeline chart allows the reader to understand the chain of events as they take place over a period of time. The events are typically represented as markers along a horizontal or a vertical line. Gantt chart typically shows expected starting and finishing for each activity of project.

**3. Project Estimates**

This project is the part of the course work required for the fulfillment of master’s degree. No budget estimate is made for the development of this project. The resources needed to complete this project are either available free of cost on the web or provided by the Midwestern State University Computer Science department.

**4. Project Resources**

Project resources include the members of the MAD (Micro Android Developers) team and hardware and software resources.

**4.1 Team Members**

The MAD(Micro Android Developers) team members are

* Babu Ravi TejaNallamothu
* ManoharNarsupalli
* Shawn Seals
* Mezegebe Gebreyes

**4.2 Hardware Resources**

Thefollowing physical components are used in our system.The client side hardware specifications and the development platform are described below.

**Table 1:** Client side hardware specifications

|  |  |
| --- | --- |
| Environment | Basic Requirements |
| Operating System | Google Android v 2.1,2.2 or v 2.3 |
| Memory | Minimum 4MB of Disk memory |
| **Internet Connection** | **A minimum of 200MB dataplan is required for the application to download appropriate information from the internet.** |

**Table 2:** Development Platform

|  |  |
| --- | --- |
| Environment | Configuration |
| Operating System | Windows XP, Windows 7 |
| Memory | Minimum 1Gb disk space, 4 GB RAM |
| Processor | Intel core 2 Duo |
| Browser | Internet Explorer 7, Mozilla Firefox 3.6 |
| Applications | Eclipse-Helios 3.6,MS Word, MS Project, MS Visio, Adobe Acrobat |
| Database | SQLite v 3.4.0 |

**4.3 Other Resources**

This project will be done under the guidance and supervision of Dr. Catherine V. Stringfellow, Professor at the Department of Computer Science at Midwestern State University. Other Computer Science Professors may be used as expert advisors.

**5. Project Risks**

In this section, risks that are identified to occur during the project development process and their mitigation strategies are discussed.

**Table 3:** Project Risks

|  |  |  |  |
| --- | --- | --- | --- |
| Risk | Chance | Impact | Strategy |
| Unavailability of Team Members | Low | Moderate | Since most work is done by two members each, documents will still be available to the group. |
| Missing deadlines | Low | Serious | Team members should have meetings on a regular basis to keep track of the work. |
| Lack of sufficient experience with the developing environment | Moderate | Serious | Team members should follow various tutorials, interactions with professors. |
| Loss of data during development of the project | Moderate | Serious | Team members have to maintain back up to overcome this risk and entire documentation has to be given to every member of the team. |

The most important risk is to avoid involves compatibility among the client side interface screen, the game and GPS. To avoid these potential risks, team members should refer to the requirements specification document and this project plan. We will employ testing on both strengths and conditions of our applications.

**6.** **Project Management**

Project management deals with issues like team organization, selection of process model and communication mechanisms that will be used during the project development process.

**6.1 Team Organization**

The MAD development team is a democratic, decentralized organization.Even though it is a democratic team, each team member is held responsible for specific tasks.

**6.2 Process Model**

For this project, MAD is following the principles of Agile Processing, specifically the Agile Model Driven Development (AMDD).

The various life cycle steps involved in AMDD are envisioning which includes requirements and architecture envisioning followed by project plan and modeling, modeling storming sessions and coding are done in iterations and finally testing is done. AMDD helps in better understanding of technical risks as we have initial prototype and we can even estimate the schedule in advance.

**6.3 Management Reporting and Communication**

Communication with the customer has been in person and via email. Our team has a minimum of two face-to-face meetings per week and also communicates through email. Minutes are recorded for every meeting. In addition to the date and time, meeting minutes consist of a summary of the meeting discussion, specific tasks that each member is to work on or complete before attending the next meeting, and a plan of what will be discussed in the next meeting.

**7. Control Plan**

The control plan describes how the project controls and reports the status and activities of the project.

**7.1 Requirements Control Plan**

The requirements of the project are very understandable. However, if there are any changes made by the customer, those requirements will be discussed in the next team meeting. Time estimated to complete the additional work will be factored into the schedulesince time is the major constraint forour project.

**7.2 Schedule Control Plan**

The project schedule plan is drafted at the start of the project and is based on the deadline given by the instructor. The team has weekly meetings to discuss the amount of work done and the work needed to be done. If there is any delay in the project due tochanging customer requirements or team member issues, the work has to be redistributed among the team members to meet the deadline.

**7.3 Budget Control Plan**

This project is performed as a graduate level class work. There are no costs involved in the project, so no budget estimates and plans are done.

**7.4 Quality Control Plan**

All deliverable drafts are to first be reviewed by the team members. Once corrections have been made, the drafts are submitted to the instructor, Dr. Catherine Stringfellow, for further review. Based on the reviews, corrections are made to create the final deliverable. Review meetings will be conducted between the team members to review the project and make changes in the project if needed. The final reviewed document is to be submitted to the instructor.

# 8. SCHEDULE

Project Schedule and Task Network Diagrams are attached.

**9. REFERENCES**

1. IAN Summerville, Software Engineering, 7th edition, ADDISON-WESLEY, 2004.
2. Roger S Pressman and Associates Inc, Formulation and Planning

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