IT-632-Software Engineering

Cafeteria Management System (Cashless Canteen)

Project Plan Version 1.1

Team-2

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DA-IICT, Gandhinagar

Document Revision History:

Version	Primary Author(s)	Description	Reviewer(s)	Date
1.0	Purav Chitaliya	Project Plan	Aakash Thakkar	9 September, 2013
1.1	Irfan Wadia, Dipen Rangwani	Content updated	Aakash Thakkar	13 September, 2013

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1. Introduction

1.1 Overview

The project is about developing an online web portal which facilitates quick, less erroneous, accountable and cashless transactions in the cafeteria at DA-IICT. Every student, faculty and rest of the staff need not carry any cash to cafeteria for buying food, what they need is to just carry RFID card and order to cafeteria person and Bam!, you are done.

The Purpose of this document is to tentatively define the different phases and iterations for the project life cycle. It will aid as a guideline to the team to see if they are in sync with estimated deadlines of various phases of software development.

1.2 Project Deliverables

The deliverables will include:

- Project Proposal
- Feasibility Report
- Project Plan
- Software Life Cycle Development Model
- Software Requirement Specifications
- User Manual
- Requirements Traceability Matrix
- System Design Documents
- System Test Plan
- Test Cases
- Test Reports
- User Interface Design Document
- Quality Assurance Plan
- Tools and Libraries
- Risk Monitoring, Management & Mitigation Plan
- Software Configuration Management Plan
- Coding Conventions
- Documentation Standards
- Cost Estimation Plan
- Deployment Plan
- Termination Analysis
- Product – Website

1.3 Stakeholders

The stakeholders would include:

- Customers at DA-IICT
- CMC at DA-IICT
- Admin Staff at DA-IICT
- Canteen Owners at DA-IICT

1.4 Assumptions

- Canteen owners would learn to use the system after proper training provided.
- Internet connection, electricity would never be hampered.
- Computer system, scanner, server and all other infrastructure is provided to support the software system.
- Every student is comfortable paying 20 INR once for the RFID card.
- If later any technical issue arises, CMC members have to look after it.

1.5 Constraints

- The main concern is the average time of the transaction, which should be decreased by the successful implementation of the plan.
- Storing of the cash should be handled by a responsible person from the admin department.
- Student has to hotlist the card if it is stolen or is gone missing, and hence he cannot continue with the transactions until a new card is issued to him/her.

1.6 Risks

- There is money involved in the project transactions, so there is a risk of security frauds. But we intend to develop system with maximum security.
- There is a chance that canteen staff would make errors in transactions due to lack of knowledge or carelessness.

2. Goals and Scope

2.1 Project Goals

- The overall aim of the project is to simplify the cafeteria transactions by making them automated (computerized), cashless and quick.
- The project should solve the problem of change (low denomination currency).
- The average time of the transactions is to be reduced comprehensively.
- The students would have to be made aware about their daily/ weekly/ monthly/ quarterly transactions by providing them with reports.

2.2 Project Scope

- The project is a simple website/web portal that can be utilized by the students, faculty members, canteen members, and admin staff.
- The website can be accessed from any platform like a browser, mobile phone - android and iOS etc i.e. making it responsive.
- For now, the system is specifically targeted to attend the problems related to cafeteria at DA-IICT, but as time passes and reviews begin to come, we can make it more generic.
- The website is also aimed to handle Cafeteria complaints, feedbacks and request from the end users of the system.

2.3 Project Undertaking

- At the initial stage we intend to study the previous system that was implemented 8 years ago and failed miserably.
- A thorough requirement gathering and analyzing is to be performed to make the system capable to perform functionalities for what the system was designed.
- The current manual system at the cafeteria is not at all robust and accountable to any frauds. A more secure, automated system is to be developed keeping records of all the transactions regardless of how small or big in amount they are.
- In the current system the users are not able to keep the track of the transactions they perform in cafeteria. In the proposed system the students would have all the above information at their disposal.

There are various features that are demanded from canteen side and the student's side that we would like to add in the system:

- The menus (especially Thali) can be conveyed to the students a day before the day it is to be prepared.
- Reviews, rankings and polls should be entertained by the system.
- Email notifications of each and every transactions needs to be sent to the users.

3. Organization

3.1 Coordination Team

Team consists of 10 members, each having different skill sets. The team has been divided into sub-groups so that the work assigned to each sub-group can be finished efficiently on time and hence the whole project.

Tentative Roles and Responsibilities of the team members are listed below:

Name	Roles	Responsibilities
Purav Chitalia	Team Leader	• Project Management • Documentation and Review • Requirements and User Study
Irfan Wadia	Team Member	• Software Development • Documentation and Review
Aakash Thakkar	Team Member	• Software Development • Document Review
Utkarsh Patel	Team Member	• Software Development • Testing
Jay Parikh	Team Member	• Software Development • Designing • Documentation
Dipen Rangwani	Team Member	• Documentation and Review • Code Review and Testing
Ankush Gupta	Team Member	• Requirement gathering and analysis • Database design
Pratik Sanadhya	Team Member	• UI design • Integration an System Testing
Akash Dobariya	Team Member	• Software Development • Integration an System Testing • Database design
Ashish Singh	Team Member	• Software Development • Code Review • Database design

Note that in the Coding and Unit Testing Phase, the team would be divided into further sub-groups which will perform their own unique task. These would include Database Management, front end web development and back end web development.

4. Schedule and Milestones

Milestones	Deliverables	Proposed Deadline
Finalizing a project idea	Project Topic	20,August 2013
Need of the project, feasibility analysis, Project proposal	Feasibility report and project proposal	24, August 2013
Planning for the work to be done in course of the Project	Project Plan	8, September 2013
SRS, Test plan	SRS	12, September 2013
User Manual v1.0	User Manual	12, September 2013
Coding of individual modules and unit testing	Unit tested modules	TBA
Integrating the modules	Integration testing report	TBA
Testing and final changes	System testing report, User Manual	TBA
Product delivery and Final Presentation	Final Product along with relevant documents	TBA

5. Cost Estimation

The cost of the project is due to the cost of human resources and other resources such as hardware and software which would be used to develop the system. All the software which we'll use in this project are free and open source so, no costs will be incurred by our team.

The cost of Human Resources in Person per hour has been estimated by us as following:

- Team size is 10 members.
- Every week 1 person works for around 7 hours.
- Till end of November, we have a total of 17 weeks.
- Total estimated time required in the project = 17 x 7 x 10 = 1190 person hours.
- This time is flexible and may change as the project proceeds.

The cost of the system once deployed would be:

- A RFID scanner which cost around 750 INR per canteen.
- RFID smart card 15 INR/student
- The computer system would be provided by the admin department of DA-IICT, so no extra cost for that.

6. Communication and Reporting

Type of Communication	Method / Tool	Frequency/ Schedule	Information	Participants / Responsibilities
Internal Communication:				
Project Meetings	Face to face	2 days/week Approx.	Project status, problems, future plans	Team Leader, Team members
Sharing of project data	Google group, cloud based document services.	When available	All project documentation and reports	Team Leader, Team members
Milestone Meetings	Face to face	Weekly	Project status (progress)	Team Leader, Sub-group Members
External Communication and Reporting:				
Meetings with TA	SEN LAB	Every Thursday	Guidance	Team Leader, Team Members
Client/Stake -holders Meetings	Face to Face	Till SRS and then during implementation	Collect Information	Project Team

7. Project Monitoring and Quality Control

Management within the group: The project will be monitored by conducting appropriate meetings among the team members. Team members have been further divided into Sub -groups and will be allotted specific tasks involved during the process of software development. At the end of each module or phase, the progress will be evaluated and accordingly there will be proper planning to complete the project in systematic and cost effective manner.

Requirement Management: Requirement specification document will contain all the requirements as specified by our stakeholders. It will be monitored in every phase and will be updated according to the need of the project.

Quality Control: To maintain the quality of each deliverable, a review process will be followed for each deliverable. During the requirement phase, to ensure the quality of SRS, there will be regular questionnaires and interviews. During the coding phase, proper coding conventions and standards will be followed.