Software Project Management Plan for “Online Credit Card Management System”

1. Introduction

The Online Credit Card Management System is a specialized software solution designed to revolutionize and simplify the process of managing credit card transactions and accounts for both consumers and financial institutions. This system plays a pivotal role in modernizing and automating the traditionally complex and time-consuming task of credit card management. By harnessing cutting-edge technology, the Online Credit Card Management System offers users a convenient and secure approach to tracking, monitoring, and managing their credit card activities and financial transactions. With its intuitive and user-friendly interface, the system aims to enhance accuracy, reduce administrative hassles, and provide real-time access to crucial financial information for cardholders and financial institutions alike. Through the effective implementation of the Online Credit Card Management System, consumers gain greater control over their finances, enabling them to make informed decisions about their spending and manage their credit responsibly. Simultaneously, financial institutions can streamline their operations, minimize fraud risks, and provide better customer service, fostering a more efficient and transparent credit card management ecosystem. This ultimately contributes to a more secure and user-centric financial landscape in our increasingly digital age.

I. Project Overview

The Online Credit Card Management System project (referred to as OCMS-SPMP) is initiated with the objective of transforming the way financial transactions and credit card accounts are handled within the context of a financial institution or credit card company. This project seeks to develop a robust and advanced software solution that will streamline and automate various aspects of credit card management, from transaction monitoring to account management. The scope of OCMS-SPMP encompasses the comprehensive design, development, rigorous testing, and effective implementation of a user-friendly platform that caters to both financial institutions and credit cardholders, ensuring a seamless and secure interaction with sensitive financial data.The primary goals of this project include enhancing the security and accuracy of credit card transaction processing, reducing administrative complexities and costs, and providing real-time access to critical financial information for both financial institutions and cardholders. OCMS-SPMP aims to empower financial institutions with efficient tools for managing credit card accounts, tracking transactions, and mitigating fraud risks, while simultaneously granting cardholders the ability to monitor their financial activities, set spending limits, and receive alerts for suspicious transactions. The project acknowledges the diverse set of stakeholders, including financial institution personnel, credit cardholders, IT administrators, and regulatory authorities, each playing a crucial

role in the system's functionality and compliance. The Online Credit Card Management System will encompass a range of essential functionalities, including transaction monitoring, account management, fraud detection, compliance reporting, and robust security measures. These high-level features are designed to create a centralized platform for all credit card management activities, fostering an environment of transparency, security, and effective communication within the financial institution and between the institution and its customers. OCMS-SPMP represents a significant step toward modernizing credit card management practices, ensuring a safer and more convenient experience for both financial institutions and cardholders in today's digital financial landscape.

II. Project Deliverables

1. Feasibility Study	13.11.2023 – 29.12.2023
2. Requirement Gathering	01.01.2024 – 26.01.2024
3. Analysis Requirement	29.01.2024 – 08.03.2024
4. High Level Design	11.03.2024 – 12.04.2024
5. Low Level Design	15.04.2024 – 31.05.2024
6. Coding	03.06.2024 – 06.09.2024
7. Unit Testing	09.09.2024 – 26.09.2024
8. Integration Testing	27.09.2024 – 17.10.2024
9. System Testing	18.10.2024 – 31.10.2024
10. Acceptance Testing	01.11.2024 – 14.11.2024
11. Final Deliverable	14.11.2024

III. Evolution of this document

This document will be updated as the project progresses. Updates should be expected in the following sections:

i. ***References*** - updated as necessary.

ii. ***Definitions, acronyms, and abbreviations*** - updated as necessary.

iii. ***Organizational Structure*** will be updated as the team leaders are assigned for each phase.

iv. ***Technical Process -*** this section will be revised appropriately as the requirements and design decisions become clearer.

v. ***Schedule –*** as the project progresses, the schedule will be updated accordingly.

Revision History

Revision	Date	Updated By	Update Comments
0.1	08.08.2023	Manali Kundu	First Draft
0.2	08.09.2023	Manali Kundu	Second Draft/Final Draft

IV. References

i. Team Website
https://creditcardmanagementsystem.000webhostapp.com/

ii. Project Scope
https://drive.google.com/drive/folders/16PujgRFdVpopi7fp1ip409bRn8UW3CRg?usp=sharing

iii. Case Studies
- **https://spd.group/machine-learning/credit-card-frauddetection-case-study/**
- **https://www.anmsoft.com/corporate-credit-card-managementsoftware-system.html**

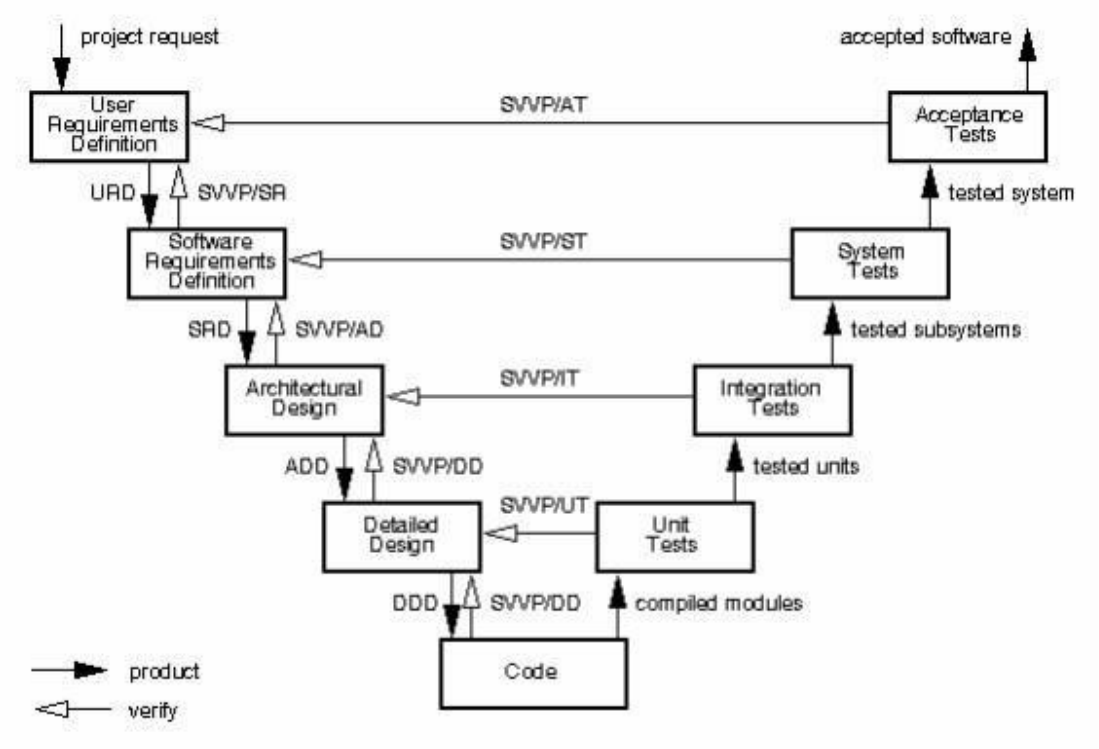
V. Definitions, Acronyms and Abbreviations

i. UML - Unified Modeling Language
ii. DD - Detailed Design
iii. SR - Software Requirements iv. SRD - Software Requirements Document
v. SUM - Software User Manual
vi. TBD – To Be Decided
vii. URD - User Requirements Definition
viii. AD – Architectural Design
ix. UT – Unit tests
x. IT – Integration tests
xi. ST – System tests
xii. AT – Acceptance tests
xiii. SVVP - Software Verification and Validation Plan

2. Project Organization

I. Process Model

The process used for this project will be a V-model such that each stage of the model allows us to do testing after completing a phase. Referring to the diagram below, each phase is tested after completion.



II. Organizational Structure

Team Members –

i. Manali Kundu
ii. Peter Smith
iii. Susan Connor
iv. David Johnson

Name	Organization/ Position	Contact Information
Manali Kundu	ITech Project Manager	manalikundu824@gmail.com 8910348497
Peter Smith	Itech Business Analyst	petersmith@gmail.com 8697779847

Days	Deliverable	Team Leader	Deliverable Description
35	1	Manali Kundu	Feasibility Study
20	2	Peter Smith	Requirements Gathering
30	3	Susan Connor	Analysis Requirements
25	4	David Johnson	High Level Design
35	5	Peter Smith	Low Level Design
40	6	Manali Kundu	Coding
14	7	David Johnson	Unit Testing
15	8	Susan Connor	Integration Testing
10	9	David Johnson	System Testing
10	10	Peter Smith	Acceptance Testing
3	11	Manali Kundu	Final Deliverable

III. Organizational Boundaries and Interfaces

Team leaders throughout each development of the phases will be responsible for coordinating team meetings, updates, communications, and team deliverables.

IV. Project Responsibilities

For the most vital responsibilities per phase of each team members, please refer to segment 2.2. Ultimately the project team is responsible for the successful delivery of the product. The team member tasks per deliverable according to expertise and the phases are as given below:

1. Feasibility Study – Whole Team
2. Requirements Gathering – TBD

3. Analysis Requirements – TBD
4. High Level Design – TBD
5. Low Level Design – TBD
6. Source Code – TBD
7. Unit Testing – TBD
8. Integration Testing – TBD
9. System Testing – TBD
10. Acceptance Testing – TBD
11. Final Deliverable – Entire Team

Name	Organization/ Position	Role/Responsibilities
Manali Kundu	ITech Project Manager	• Managing and leading the project team. • Developing and maintaining a detailed project plan. • Monitoring project progress and performance. • Managing project evaluation and dissemination activities. • Develop corrective actions when necessary.
Peter Smith	ITech Business Analyst	• Prepare reports on project plans, status, progress, risks, deadlines and resource requirements. • Develop and perform work flow analysis to find out the difficulties in reaching goals. • Provide project cost estimates.
Susan Connor	ITech Designer	• Propose effective design solutions to meet project goals. • Prepare design layouts and sketches according to company design standards.

		• Keeping of records and files.
David Johnson	ITech Staff	• Documentation of daily activities. • Making kick-off meeting reports. • In-charge of materials needed for team building activities.

3. Managerial Process

I. Management Objectives and Priorities

The management objective is to deliver the product in time and of high quality. The PM and QAM work together to achieve this by respectively checking that progress is made as planned and monitoring the quality of the product at various stages.

II. Assumptions, Dependencies, and Constraints

In this project plan, a number of factors are taken into account. The following list shows the way milestones on various project phases have been scheduled:

- The team budget of 1-person x 365 hours = 365 hours
- The project deadline of December 18th.
- The final presentation is on December 19th.
- The peer evaluation deadline is on December 18th.
- Other days the weekends holiday is closed (August 13th, August 20th, August 27th, September 3rd, September 10th, September 17th, September 24th, October 1st, October 8th, October 15th, October 22nd, October 29th, November 5th, November 12th , November 19th, November 26th, December 3rd, December 10th, December 17th).

NOTE: Due to the deadline of 18th December 2023, running out of time will have its reflection on the product, and not on the duration of the project. By assigning a priority to every user requirement, a selection can be made of user requirements that may be dropped out if time runs out.

III. Risk Management

Identify Risks:

- Data Security Concerns: Consider the risk of unauthorized access to sensitive student data. Without proper security measures, data breaches could occur.
- Technical Challenges: As the sole developer, you might face technical obstacles or limitations that could impact the project's progress or quality.
- Time Constraints: Given your limited resources, there's a risk that the project might take longer to complete than initially estimated.
- Scope Creep: The project's scope might expand beyond your initial plan, affecting timelines and overall project management.
- Lack of Expertise: Certain areas, such as UI/UX design or database optimization, might be outside your expertise, leading to suboptimal solutions.

Assess Risks:

Rank the identified risks based on their potential impact and likelihood of occurrence. Focus on risks that have a higher chance of negatively affecting your project.

Mitigation Strategies:

- Data Security: Implement strong authentication mechanisms and encryption to protect student data. Regularly update security patches and consider penetration testing.
- Technical Challenges: Break down the project into smaller, manageable tasks. Research and learn about unfamiliar technologies or concepts as needed.
- Time Constraints: Set realistic timelines and prioritize tasks. Regularly review your progress and adjust timelines if necessary.
- Scope Creep: Clearly define project scope and objectives. Resist adding features that are not essential to the core functionality.
- Lack of Expertise: Leverage online resources, tutorials, and communities to gain knowledge in areas where you're less experienced. Consider seeking advice from peers.

Have a backup plan for critical risks. For instance, if a technical challenge proves insurmountable, be prepared to pivot or seek external assistance.

Maintain open communication with stakeholders, explaining potential delays or challenges and discussing possible solutions. Keep detailed documentation of your risk assessment, strategies, and any changes made. This documentation can be invaluable for future projects. Regularly test your system as you develop it. This can

help identify technical challenges or bugs early, minimizing their impact on the project timeline.

IV. Monitoring and Controlling Mechanisms

The monitoring of progress is done by the PM using the following means:

i. Weekly project status meetings
ii. Shared document repository
iii. Project tracking by MS project plan
iv. Tracking utilizing baselines in MS project

4. Technical Process

I. Methods, Tools, and Techniques

The project will be implemented utilizing V-model methodology, and tools such as Microsoft Project, Star UML, PHP, HTML, CSS, JavaScript MySQL will be utilized. The risks for each category are listed to complete the project successfully.

II. Software Documentation

Documentation such as Project Charter, Business Requirement Document, Functional Specification document, Cost Benefit Analysis, Technical Specification document, Detail Design Document, Test Plan, Implementation Plan, Detailed Project Report, and Benefit Realization document.

III. Project Support Functions

All project support documents will be completed in applicable phases.

5. Work Elements, Schedule, and Budget

i The project is accounted for project resources, technologies and tools required to whole analysis, implementation, and test of the application.

ii The project lead will be rotated for each phase within 4 team members.

iii The document for all phases will be revised in subsequent phases if applicable.

I. Budget And Resource Allocation

Salary	300,000.00
Office Operations/Supplies/Equipment/Consumables	50,000.00
Miscellaneous	20,000.00
Total	**Rs. 370,000.00**

II. Schedule

Task Mode	Task Name	Duration	Start	Finish	Predecessors
	Online Credit Card Management System	**265 days**	**Mon 13-11-23**	**Fri 15-11-24**	
	Feasibility Study	**35 days**	**Mon 13-11-23**	**Fri 29-12-23**	
	Requirements Analysis	**50 days**	**Mon 01-01-24**	**Fri 08-03-24**	
	Requirements Gathering	20 days	Mon 01-01-24	Fri 26-01-24	**2**
	Analysis Requirements	30 days	Mon 29-01-24	Fri 08-03-24	**4**
	Design	**60 days**	**Mon 11-03-24**	**Fri 31-05-24**	
	High level design	25 days	Mon 11-03-24	Fri 12-04-24	**5**
	Low Level Design	35 days	Mon 15-04-24	Fri 31-05-24	**7**
	Coding	**70 days**	**Mon 03-06-24**	**Fri 06-09-24**	**8**
	Testing	**49 days**	**Mon 09-09-24**	**Thu 14-11-24**	
	Unit Testing	14 days	Mon 09-09-24	Thu 26-09-24	**9**
	Integration testing	15 days	Fri 27-09-24	Thu 17-10-24	**11**
	System Testing	10 days	Fri 18-10-24	Thu 31-10-24	**12**
	Acceptance Testing	10 days	Fri 01-11-24	Thu 14-11-24	**13**
	Final Deliverable	0 days	Thu 14-11-24	Thu 14-11-24	**14**