Software Project Management Plan (SPMP)

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Introduction

This SPMP outlines the methodology and tools we plan to employ to manage the project successfully. This document acts as a guide to ensure that the project stays on track and meets its objectives.

Project Overview

Create a website for Boston University (BU) students to engage in buying and selling with features catering to university life.

Tools and Technologies

- UI/UX Design: Figma, Adobe
- Planning & Management: Jira, Google Docs
- Documentation: Google Docs, Jira, GitHub
- Back-end: Python (Django)
- Front-end: HTML, CSS, Javascript, React (if needed)
- Database: SQLite (Django's default) or MySQL (if needed)
- Version Control: GitHub
- Hosting: AWS

Schedule Management

- Weekly sync-up meetings.
- Additional meetings as required via Zoom.
- Progress tracked using Jira to visualise task dependencies, durations, and milestones.
- Communicate any absences or unavailability to the group with appropriate time to make changes or adjustments as needed.

A link to the Jira board is provided here.
https://cs673team4.atlassian.net/wiki/spaces/MKP/overview

Risk Management

- Risk Identification: Throughout the various phases of the project, we will proactively identify potential risks. The following are possible risk categories based on our team report:
    - Technical Risks

        - Technical Challenges: Potential unresolved technical issues leading to project delays.
        - Integration Issues: Possible problems arising from the integration of different subsystems or components.
    - Schedule Risks
        - Task Delays: Team members may not meet task deadlines as planned.
        - Scope Creep: The project scope may continuously expand, causing schedule delays.

- Risk Assessment: Evaluate potential risks after their identification based on the likelihood of occurrence and its potential impact.
    - Risk Probability: Low, Medium, High
    - Risk Impact: Low, Medium, High

- Risk Prioritisation: High-impact and high-likelihood risks are addressed first.

- Risk Mitigation: Develop plans to counteract or mitigate identified risks.
    - Technical Risks
        - Technical Challenges: Conduct regular technical reviews, and seek opinions on how to solve any potential issues that may arise.
        - Integration Issues: Develop a detailed integration plan, perform integration testing, and ensure comprehensive test coverage.
    - Schedule Risks
        - Task Delays: Set strict task deadlines, monitor progress regularly, and adjust resource allocation as needed.
        - Scope Creep: Strictly control scope changes, ensuring changes are only made when necessary and approved.

- Risk Review: Throughout the project lifecycle, we will regularly monitor the status of potential risks and take necessary actions to address and mitigate them. Monitoring methods for risks include:
    - Regular project progress reports and risk assessments.
        - Regular team meetings to discuss and track changes in risks.
        - Ongoing communication to gather feedback and recommendations.

Risk management will be an integral part of project management to ensure that the project progresses as planned and potential risks are addressed in a timely manner.

Owner of Risk	Reason/Cause	Effect/Impact	Likelihood	Level (H, M, L)	Risk Prevention Strategy	Risk Contingency Plan
Current Team Lead	Technical Challenges	Potential unresolved technical issues leading to delays	Low	Low	Conduct regular technical reviews; seek opinions to solve issues	Develop a detailed plan and allocate extra time for technical challenges
	Integration Issues	Problems arising from subsystem integration	Medium	Medium	Develop a comprehensive integration plan and perform testing	Have a backup plan and additional testing if integration issues arise
	Task Delays	Team members may not meet task deadlines as planned	Medium	Medium	Set strict deadlines, monitor progress, adjust resources	Reallocate resources or extend deadlines as necessary
	Scope Creep	Project scope may continuously expand, causing delays	Medium	Medium	Strictly control scope changes, require approvals	Review scope changes, assess impact, and adjust schedule accordingly

Project Team	Resource Allocation	Unequal distribution of work and responsibilities	Low	Low	Allocate tasks based on skill sets, ensure equal workload	Reallocate tasks and responsibilities to balance the workload
	Quality Assurance & Control	Failure to adhere to development standards	Medium	Medium	Establish coding standards, conduct regular code reviews	Identify and rectify quality issues through additional reviews
	Change Management	Unplanned changes affecting scope, time, cost, and quality	Low	Low	Document change requests, assess impact, obtain approvals	Implement approved changes and update project documentation

Resource Allocation

Tasks for team members will be allocated based on individual skill sets and project requirements, ensuring that each member participates in each aspect of the project division - frontend, backend and design to guarantee that everyone is involved in each aspect of the project. The team will also ensure equal distribution of work and responsibilities.

Quality Management

- Quality Assurance: Establish standards and processes that the project members must adhere to when developing code.
- Quality Control: Conduct regular code and document reviews to ensure standards.

Communication Management

- In-person: Once weekly. May change based on project requirements

- Virtual: Zoom meetings as needed for tasks in different aspects of project division.
- Informal: WhatsApp and Google shared docs.
- Formal: Jira for task tracking, documentation, and collaboration via comments and pull requests.

Team Roles & Responsibilities

Team Lead: The team lead will change on a rolling basis every 2 weeks to ensure every member gets an equal distribution of work and responsibility.

All members will also change project divisions every few weeks to guarantee participation in every aspect of the project as well as gain a better understanding of how different aspects of the project work. This also allows members to instil confidence in skills while also showcasing their strengths.

Change Management

- Identification: Document any change requests, detailing the nature of the change, the reason for it, and its potential impacts during team meetings as well as on Jira
- Evaluation: Assess the impact of the change on the project's scope, time, cost, and quality.
- Approval: All members will approve or deny the change request.
- Implementation: If approved, the change is implemented, and relevant project documentation is updated.

Budgeting & Cost Management

No cost or budget plan is necessary.

- Cloud Infrastructure: AWS free tier will be used to integrate the backend on the cloud which is free with Boston University credentials.

Stakeholder Management

- Identification:
    - Team 4 members - Asma, Jennifer, Tianpei, Tingtao, Jinyi
    - Professor Bora Eryilmaz
- Analysis:
    - The team expects a project that hornes our skillset and showcases our growth and learning. We expect a functioning website with consistent effort and contribution following proper management.
    - The Professor expects a complete project that showcases our skills while also ensuring we are following good management and communication with the team.
- Engagement: Maintain open lines of communication, ensure the team's involvement, and update the professor with weekly reports and updates of progress and any changes while also managing expectations throughout the project lifecycle.

Training & Development

Members who are not familiar with different aspects of the project are encouraged to ask other members for help and to hold Zoom meetings with members who have stronger skills in the area to understand how the technology and tools work.

Conclusion

This SPMP serves as a guide to manage and execute the BU Student Shopping Website Project. Regular reviews and updates to the plan are important in order to adapt to changing circumstances and to ensure project success.