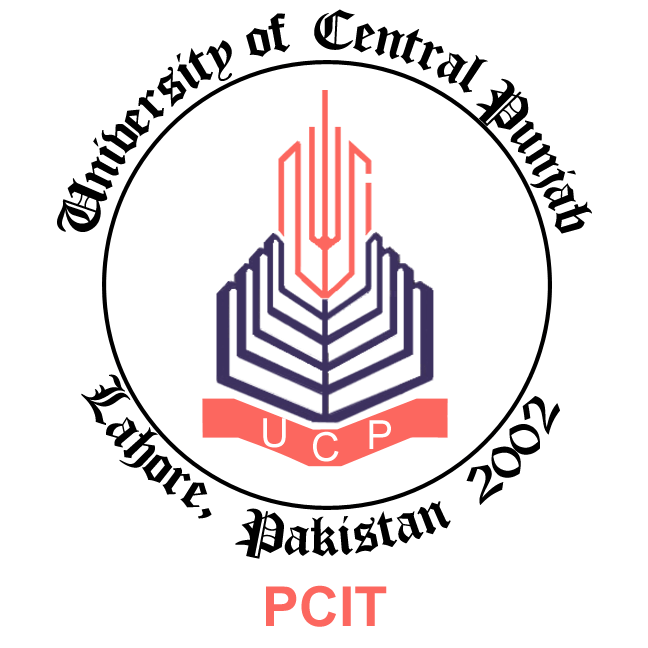
**BSCS FINAL PROJECT PROPOSAL**

Assetln: Asset Management Tool

*Term of Registration: Fall 2024*



Presented by:

|  |  |
| --- | --- |
| **Registration No:** | **Name:** |
| L1F21BSCS1059 | Muhammad Burhan |
| L1F21BSCS0485 | Areeba Khan |
| L1F21BSCS0484 | Noor-Ul-Aain |

|  |
| --- |
| Faculty of Information Technology |

University of Central Punjab

**Project Title**

Assetln: Asset Management Tool

**Project Advisor**

Asif Farooq

**Particulars of the students:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.No** | **Registration#**  eg.**L1F00BSCS0101** | **Name in Full**  Use Block Letters | **CGPA** | **Signatures** |
| 1 | L1F21BSCS1059 | MUHAMMAD BURHAN | 3.7 |  |
| 2 | L1F21BSCS0485 | AREEBA KHAN | 3.1 |  |
| 3 | L1F21BSCS0484 | NOOR-UL-AAIN MAQBOOL | 3.59 |  |

**Advisor’s Consent**

I Prof. / Dr. / Mr. / Ms. Asif Farooq am willing to guide these students in all phases of above-mentioned project as advisor. I have carefully seen the Title and description of the project and believe that it is of an appropriate difficulty level for the number of students named above.

|  |  |  |
| --- | --- | --- |
| **Note:**  Advisor can’t be changed without prior permission of the Manager Projects and the duration for completion of the Project is 2 regular semesters (approx.) from the date of Registration of Research Project. | Signatures and Date  |  | | --- | |  |   **Advisor** |

**EVALUATOR/REFEREE 1**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| I have carefully read the project proposal and feel that the proposed project is a useful one and of a sufficient difficulty level to justify 2 regular semesters workload for above mentioned students. I have made recommendations in the evaluation form to improve the scope and quality of the project. | | | | | |
|  | | | | Signatures and Date | |
|  |  |  |  |  |  |
|  | | | |  |

**EVALUATOR/REFEREE 2**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| I have carefully read the project proposal and feel that the proposed project is a useful one and of a sufficient difficulty level to justify 2 regular semesters workload for above mentioned students. I have made recommendations in the evaluation form to improve the scope and quality of the project. | | | | | |
|  | | | | Signatures and Date | |
|  |  |  |  |  |  |
|  | | | |  |

**Abstract / Executive Summary**

The “Assetln” project tackles the common problems of inefficiency and complexity found in current asset management tools. These existing solutions often have complicated interfaces that overwhelm users, making asset management difficult. Assetln is designed to simplify these processes, offering an easy-to-use and comprehensive tool that meets the specific needs of organizations. By integrating intuitive features for both organization owners and asset managers, the system aims to enhance asset tracking, maintenance, and analysis. Using modern technologies like Angular and .NET (Dot NET), we are developing a dynamic and robust application. This project, in collaboration with ZAPTA Technologies, will provide a beta version for real-world testing and refinement, ultimately aiming to improve organizational performance through effective asset management.

**Introduction and Background**

Managing assets effectively is crucial for organizations to keep track of their physical and variable assets. However, many of the tools available today are overly complicated, leading to user frustration and operational inefficiencies. The “Assetln” project seeks to solve these issues by creating a simplified asset management tool that is specifically tailored to the needs of different organizations. This tool will feature intuitive interfaces and functionalities that make asset tracking, maintenance, and decision-making easier. With guidance from ZAPTA Technologies, this project aims to align with industry standards and provide practical solutions. The motivation behind this project is to enhance organizational efficiency and asset utilization through a straightforward and effective management system.

**Statement of the Problem**

Many current asset management tools are complex, resulting in user annoyance and inefficiency. Organizations find these systems hard to navigate, which leads to poor asset management and tracking. The core problem is the absence of a simplified, user-friendly tool that meets specific organizational requirements and streamlines asset management process.

**Objective(s) / Aim(s) / Target(s)**

1. **Develop a User-Friendly Tool:**

Create an asset management tool that is simple and easy-to-use for both organization owners and asset managers.

1. **Enhance Asset Tracking:**

Provide comprehensive functionalities for efficient tracking for both fixed and variable assets.

1. **Support Informed Decision-Making:**

Implement intuitive features and advanced search filters to aid in seamless asset analysis and decision-making.

1. **Ensure Robustness and Scalability:**

User modern technologies like Angular and .NET (Dot NET) to develop a dynamic and scalable system.

1. **Deliver a Beta Version:**

Work with ZAPTA Technologies to produce a beta version for testing and refinement, ensuring the tool meets practical organizational needs.

**Completeness Criteria**

Briefly describe completeness criteria for your project. These criteria will be used to evaluate your project. If your project fulfills these criteria, then it will be considered complete. You need to define each subpart of your project and assign it a weightage. The weightage would help evaluators deciding project completeness and hence your terminal grade. You may expand the table up to the minutest level you want. The criteria vary project to project depending upon your contribution and deliverables.

|  |  |  |
| --- | --- | --- |
| **S.No.** | **Criteria** | **Weightage %** |
| 1 | Desktop GUI | 10 |
| 2 | Mobile Application Development | 20 |
| 3 | Algorithm Development | 50 |
| 4 | Communication | 20 |

**Challenges**

1. **Integration of Various Technologies:**

Combining technologies like Angular for the front end, .NET for the back end, and MySQL for the database will require in-depth understanding and seamless integration.

1. **User Interface Design:**

Designing an intuitive and user-friendly interface that meets the needs of both organization owners and asset managers can be challenging.

1. **Scalability and Performance Optimization:**

Ensuring the system is scalable and performs efficiently under heavy load and with large datasets.

1. **Data Security:**

Implementing robust security measures to protect sensitive organizational data.

1. **Understanding Existing Solutions:**

Analyzing current asset management tools to identify their weaknesses and ensure the new tool offers significant improvements.

**Knowledge Areas Required**

1. **Software Engineering:** Understanding the software development lifecycle, project management, and requirement analysis.
2. **Web Development:** Proficiency in front-end technologies (Angular) and back-end technologies (.NET).
3. **Database Management:** Knowledge of MySQL for designing and managing the database.
4. **User Experience Design:** Skills in creating intuitive and user-friendly interfaces.
5. **Cybersecurity:** Understanding security protocols and practices to protect data.
6. **System Integration:** Combining different technologies into a cohesive system.

**Learning Outcomes**

1. **Proficiency in Modern Web Technologies:** Gaining expertise in Angular and .NET.
2. **Enhanced UI/UX Design Skills:** Learning to design and implement user-friendly interfaces.
3. **Improved Database Management Skills:** Gaining insights into the challenges and requirements of asset management.
4. **Experience in System Integration:** Learning to integrate various software components into a functional system.
5. **Enhanced Security Practices:** Understanding and implementing data security measures.

**Nature of the End Product / Research Outcomes**

The end product will be a comprehensive asset management tool that simplifies asset tracking, maintenance, and analysis. It will feature intuitive interfaces for different user roles and offer functionalities that improve organizational efficiency. The tool will be testes and refined through a beta version implemented at ZAPTA Technologies.

**Related Work / Literature Survey / Literature Review**

Existing asset management tools often suffer from complexity and user dissatisfaction. Tools like IBM Maximo and SAP EAM are robust but can be overwhelming for users. “Assetln” aims to differentiate itself by focusing on simplicity and user-friendliness. Previous projects on asset management have highlighted the need for streamlined processes and intuitive interfaces, which “Assetln” will address.

**Deliverables / Work Breakdown Structure**

1. **Project Proposal Document:** Initial document outlining the project scope and objectives.
2. **Design Document:** Detailed design of the system architecture and user interfaces.
3. **Prototype:** An initial version of the tool for feedback and testing.
4. **Beta Version:** A more polished version for real-world testing at ZAPTA Technologies.
5. **Final Version:** The complete and refined tool ready for deployment.

**Work Breakdown Structure (WBS):**

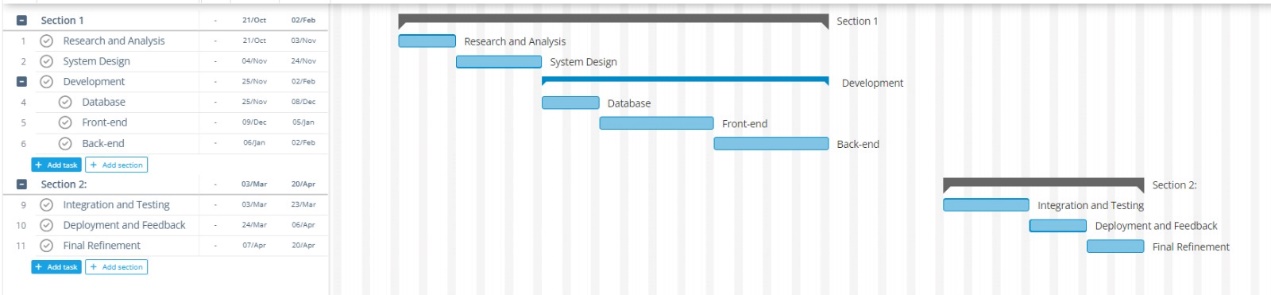
1. Research and Analysis: 2 weeks
2. System Design: 3 weeks
3. Development:

* Database: 2 weeks
* Front End: 4 weeks
* Back End: 4 weeks

1. Integration and Testing: 3 weeks
2. Deployment and Feedback: 2 weeks
3. Final Refinement: 2 weeks

**Project Plan / Project Schedule / Project Timetable / Project Calendar**

**Gantt chart**



**Weekly Milestones:**

1. Week 1-2: Research and Analysis
2. Week 3-5: System Design
3. Week 6-9: Designing Database
4. Week 10-13: Front-end Development
5. Week 14-15: Back-end Development
6. Week 16-18: Integration and Testing
7. Week 19-20: Development and Feedback
8. Week 21-22: Final Refinements

**Monitoring Progress:**

Weekly meetings with the advisor to review progress and make necessary adjustments.

**Resources Required**

1. **Software:**

* Angular and .Net development environments
* MySQL database management system
* Figma for UI design
* Confluence/ JIRA for project management

1. **Hardware:**

* Development computers
* Testing servers

1. **Books and Journals:**

* Relevant books on asset management and web development.
* Access to online research journals and articles.

**Miscellaneous**

1. **Collaboration with ZAPTA Technologies:**

Regular interactions and feedback sessions with ZAPTA Technologies to ensure alignment with real-world needs.

1. **User Testing:**

Conducting user testing sessions to gather feedback and improve the tool’s usability.

**References/Bibliography**

1. **Research Papers:**

* J. Doe et al., "Evaluating the Usability of Asset Management Systems," Journal of Asset Management, vol. 10, no. 2, pp. 123-135, May 2020.
* J. Smith et al., "Improving Efficiency in Asset Management," Journal of Operations Management, vol. 25, no. 4, pp. 567-580, August 2018.

1. **Online Resources:**

* Official Documentation, Articles and tutorials on Angular and .NET
* Industry reports on asset management trends and best practices