University of Central Punjab
(Incorporated by Ordinance No. XXIV of 2002 promulgated by Government of the Punjab)
Faculty of Information Technology

PROJECT OFFICE

FORM FOR BS PROJECT IDEA AND GROUP ALLOCATION

	Day		Month			Year			
DATE	2	1	–	0	6	–	2	0	2	4

Project Title: Assetln: Asset Management Tool

Brief Description:

The "Assetln" project is designed to address the inefficiencies and complexities prevalent in current asset management tools. These existing solutions often have intricate interfaces that overwhelm users, making asset management cumbersome. Assetln aims to resolve these issues by developing an easy-to-use and comprehensive asset management tool that caters specifically to the needs of organizations. This project focuses on enhancing asset tracking, maintenance, and analysis through intuitive features and a user-friendly interface. Utilizing modern technologies like Angular for the front-end and .NET for the back-end, the tool will provide a dynamic and robust application that simplifies the asset management process. The project will be developed in collaboration with **ZAPTA Technologies**, ensuring that the tool is tested and refined in real-world environments. By integrating these user-friendly features and modern technologies, Assetln aspires to improve organizational performance by providing a streamlined, effective, and efficient solution for asset management.

Extended Abstract:

Problem:

Many organizations face significant challenges with existing asset management tools due to their complexity and lack of user-friendliness. These tools often have complicated interfaces and convoluted processes, leading to user frustration, inefficiency, and poor asset tracking and management. The core problem lies in the absence of a simplified, user-centric tool that meets specific organizational requirements and streamlines asset management processes.

Related Work:

Current asset management solutions, such as IBM Maximo and SAP EAM, are known for their robustness but are also criticized for their overwhelming complexity. Studies and user feedback highlight the need for more straightforward, intuitive tools that can be easily adopted by organizations of varying sizes and types. Previous projects in the asset management domain have emphasized the importance of user-friendly interfaces and

BS Program:

- BSCS ☒
- BSSE ☐
- BSDS ☐

Term of Registration:

- ☒Fall 2024
- ☐Spring _____

Tools to be used:

Front-End: Angular
Back-End: .NET
Database: MySQL
Design Tools: Figma
Project Management: Confluence, JIRA

Project Type:

- ☐Research based
- ☐Hardware based/Embedded
- ☐Game based
- ☒Software Development
- ☐Artificial Intelligence (AI)
- ☐Mobile Application
- ☐Web Application
- ☐Robotics
- ☐Database
- ☐Other: _____

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simplified workflows. "AssetIn" builds on these insights by focusing on ease of use and specific functionality that addresses the common pain points identified in existing tools.

Proposed Methodology:

The development of AssetIn will follow a structured approach using Agile methodologies to ensure iterative progress and continuous feedback. The project will be divided into several phases:

Requirement Analysis and Research:

1. **Conducting thorough research on existing asset management tools to identify their weaknesses:** To develop a tool that effectively addresses the shortcomings of current solutions, we will begin with comprehensive research. This research will include analyzing user reviews, feedback, and case studies related to prominent asset management systems like IBM Maximo and SAP EAM. The goal is to pinpoint specific features and functionalities that users find cumbersome or inefficient. By understanding these pain points, we can ensure that AssetIn is designed to overcome them.
2. **Gathering detailed requirements from potential users and stakeholders to understand their specific needs and pain points:** Engaging directly with potential users and stakeholders is crucial. We will conduct surveys, interviews, and focus group discussions with various organizations to gather insights into their asset management needs. This step will help us understand the diverse requirements of different industries and organizational sizes, ensuring that AssetIn is versatile and adaptable.

System Design:

1. **Designing a scalable architecture using Angular for the front-end and .NET for the back-end:** The system design phase will focus on creating a robust and scalable architecture. Angular will be used for developing the front-end, chosen for its ability to create dynamic and responsive user interfaces. For the back-end, we will utilize .NET due to its reliability, security features, and support for scalable web applications. This combination will ensure that AssetIn is both powerful and user-friendly.

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2. **Creating intuitive user interfaces that simplify asset management tasks:** The user interface design will prioritize simplicity and ease of use. We will employ user-centric design principles to create interfaces that are intuitive and require minimal training. Features such as drag-and-drop functionality, customizable dashboards, and clear navigation paths will be incorporated to enhance the user experience.

Development:

1. **Implementing the front-end and back-end functionalities:** During the development phase, our team will work on implementing the core functionalities of AssetIn. This will include developing modules for asset tracking, maintenance scheduling, inventory management, and reporting. The use of Angular and .NET will enable us to create a seamless and integrated system that operates efficiently across different platforms.
2. **Developing features for asset tracking, maintenance scheduling, and analytical reporting:** AssetIn will offer a comprehensive set of features to cover all aspects of asset management. Asset tracking functionalities will allow users to monitor the location, status, and usage of assets in real-time. Maintenance scheduling will help organizations plan and execute maintenance tasks efficiently, reducing downtime and extending the lifespan of assets. Analytical reporting tools will provide valuable insights through data visualization, helping organizations make informed decisions about their assets.
3. **Ensuring robust data security measures to protect sensitive organizational information:** Security is a paramount concern in asset management. AssetIn will incorporate advanced security measures to protect sensitive data. This includes encryption, role-based access control, and regular security audits. By prioritizing data security, we will ensure that organizations can trust AssetIn to safeguard their valuable information.

Testing and Integration:

1. **Collaborating with ZAPTA Technologies to conduct real-world testing:** Collaboration with **ZAPTA Technologies** will play a crucial role in the testing phase. By deploying AssetIn

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in a real-world environment, we can identify and address any issues that arise. This collaboration will provide practical insights and feedback, allowing us to refine and improve the tool based on actual usage scenarios.

2. **Integrating feedback to refine the tool and address any issues identified during testing:** Continuous feedback from users and stakeholders will be integrated into the development process. This iterative approach will ensure that AssetIn evolves to meet the needs of its users. By addressing issues promptly and incorporating suggestions, we can enhance the tool's functionality and user experience.

Deployment and Maintenance:

1. **Deploying a beta version for broader testing and feedback:** After thorough testing and refinement, a beta version of AssetIn will be deployed for broader testing. This phase will involve inviting a wider audience to use the tool and provide feedback. The beta testing phase will help us identify any remaining issues and gather additional insights to further improve the tool.
2. **Providing continuous support and updates based on user feedback and evolving requirements:** Post-deployment, we will offer continuous support and updates for AssetIn. User feedback will be actively solicited and used to guide future updates and feature enhancements. This commitment to ongoing improvement will ensure that AssetIn remains relevant and effective in meeting organizational needs.

Expected Results:

By the end of the project, AssetIn will deliver a fully functional, user-friendly asset management tool that significantly enhances the efficiency of asset tracking, maintenance, and analysis. The tool will be equipped with intuitive features that simplify complex processes and provide valuable insights to help organizations make informed decisions about their assets. The collaboration with **ZAPTA Technologies** will ensure that the tool meets practical organizational needs and is refined through real-world application.

Conclusion:

"AssetIn" aims to revolutionize the field of asset management by providing a solution that is both powerful and easy to use. By

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addressing the common issues found in existing tools and focusing on user-centric design, the project seeks to improve organizational performance and efficiency. The successful implementation of this project will demonstrate the potential of modern technologies like Angular and .NET in creating innovative solutions that meet specific business needs. AssetIn will set a new standard for asset management tools, offering organizations a reliable, efficient, and user-friendly solution to manage their assets effectively.

Particulars of the students:

Sr. #	Registration#	Name in Full	Email	Contact #	CGPA	Signatures
1	L1F21BSCS1059	MUHAMMAD BURHAN	l1f21bscs1059@ucp.edu.pk	03004653232	3.7	
2	L1F21BSCS0485	AREEBA KHAN	l1f21bscs0485@ucp.edu.pk	03224386028	3.1	
3	L1F21BSCS0484	NOOR-UL-AAIN MAQBOOL	l1f21bscs0484@ucp.edu.pk	03081333354	3.59	

Name and Signatures of the advisor:

_____

For Project Office use only

Remarks:

Signatures and Date

Group No

_____

Manager Projects

UNDERTAKING FOR UNDERGRADUATE FINAL YEAR PROJECTS

Acceptance of Project Idea

Students will be required to defend their idea before the scrutiny committee (SC) which has the authority to accept or reject the project idea. The decision taken by the SC will be final and cannot be challenged.

Similarly, in phase wise evaluations, the marks awarded by the evaluators will be considered final. No excuses on their skill, relevancy, competency or biasedness will be acceptable as an absolve.

Issuance of hardware

Due to the prevailing COVID 19 pandemic situation, it may not be possible to acquire any kind of specific hardware. This situation is due to the import/export problems faced by all countries and it can't be predicted when the situation will improve. Therefore, it is highly recommended that only the hardware which is readily available in Lahore (Hall Road) may be requested for the projects. Furthermore, if the hardware is not available, the HOD may recommend change in the project scope.

The Project Office will facilitate the requestor only in initiating the procurement process. However, Project Office bears no liability if the hardware is not procured timely as it beyond its purview. It shall be sole responsibility of the project advisor or the group itself to arrange the required hardware for the project if predominantly essential. Furthermore, the problem(s) of procurement of necessary hardware will not be considered admissible plea to revise the awarded grades.

A group/advisor is bound to collect procured hardware within two days on intimation from the project office and return within a week of grade notification.

Supervisory Meetings

A group is required to hold at least two meetings per month and maintain meeting minutes. Missing two consecutive meetings without any notice may lead to withdrawal of the project.

I, Mr. /Ms. /Dr. _____, solemnly declare that I have read and understood the above mentioned instructions and shall abide by these in both letter and spirit.

Project Title: _____

_____
Advisor‘s Name & Signature

_____
Date:

Student 1:	Student 2:	Student 3:
Name: Muhammad Burhan	Name: Areeba khan	Name: Noor-Ul-Aain Maqbool
Registration: L1F21BSCS1059	Registration: L1F21BSCS0485	Registration: L1F21BSCS0484
_____	_____	_____
Signature	Signature	Signature