



REGNO:20/03483

NAME: ANGELA TARE

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SUPERVISOR: JUSTUS MUTIA.

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Email: 2003483@students.kcau.ac.ke

TOPIC: PROJECT TRACKER SYSTEM.

A PROJECT PROPOSAL SUBMITTED TO THE SCHOOL OF TECHNOLOGY IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE OF BUSINESS INFORMATION TECHNOLOGY OF KCA UNIVERSITY.

Submitted by: Angela Tare.

Supervised by: Justus Mutia.

Presented on:

Table of Contents

TOPIC: PROJECT TRACKER SYSTEM.....	1
CHAPTER ONE: INTRODUCTION.....	3

1.1	Background.....	3
1.2	Problem Statement.....	3
1.3	Proposed solution.....	3
1.4	Objectives.....	4
	General Objective:	4
	Specific Objectives:	4
1.5	Justification.....	4
1.6	Scope.....	4
	CHAPTER TWO: LITERATURE REVIEW.....	5
2.1	Project Tracker Systems.....	5
2.2	Existing Projects	5
	2.2.1 Trello project Management system.....	5
	2.2.2 Web-based project management system.....	5
2.3	Case of Project Tracker System.....	6
	CHAPTER THREE: METHODOLOGY.....	6
	Agile Methodology.....	6
	Advantages of using Agile.....	7
	APPENDICES	8
	Resources.....	8
	Gantt Chart.....	9
	Budget.....	10
	Risks and Mitigations.....	10
	References.....	11

ABSTRACT.

The Project Tracker System is a valuable system for managing school projects effectively. It identifies completed projects, reducing the likelihood of students repeating the same tasks. Providing easy access to historical data simplifies project management and enables better decision-making and evaluation of past achievements. The project is designed to provide communication between the administrators and the students, students and the supervisors, as well

as the students researching in the same field. The project automates common project tasks such as subject listing and selection, topic approval, project report writing instructions, supervisor/student communication, evaluation, report submission, and ultimately report storage and administration. Ensuring that such projects are automatically rejected at the moment of submission for approval, would prevent the duplication and recycling of existing projects and ensure prompt completion and submission of high-quality student projects.

CHAPTER ONE: INTRODUCTION.

1.1 Background.

A project is a piece of work undertaken by a college or university student on a specific topic of interest. Project Tracker System is a system that will help the students and administrators to identify what kind of project tasks already exist. This will ensure the already done projects are rejected upon submission. The project is designed to provide communication between the administrators and the students, students and the supervisors, as well as the students researching in the same field. The project automates common project tasks such as subject listing and selection, topic approval, project report writing instructions, supervisor/student communication, evaluation, report submission, and ultimately report storage and administration. Ensuring that such projects are automatically rejected at the moment of submission for approval, would prevent the duplication and recycling of existing projects and ensure prompt completion and submission of high-quality student projects.

1.2 Problem Statement.

Redundancy in project initiation and execution is a big concern for SOT (School of Technology). The other faced by the school is the late submission of the project to the system.

1.3 Proposed solution.

To solve this problem, we must create a strong project tracking system that can quickly locate and stop the duplication of projects that are either underway or have already been finished. The system can also help the SOT to ensure that the students submit their projects on time. The system will also help students to strengthen their research on the projects they are tackling.

1.4 Objectives.

General Objective:

The aim will be achieved by designing and implementing a Project Tracker System to quickly locate and stop the duplication of projects in SOT (School of Technology).

Specific Objectives:

1. To stop the duplication of projects that are either underway or have already been finished.
2. To create an electronic database to store, manage, and backup projects.
3. To implement the system.

1.5 Justification.

The system created will provide storage for SOT projects in the university. The system makes it easier for students to know which project to work on. Also, reduces the time taken by students to figure out which project to do since most projects have been done.

1.6 Scope.

The system is a position will that can quickly locate and stop the duplication of projects that are either underway or have already been finished. The system can also help the SOT to ensure that the students submit their projects on time. The system will also help students to strengthen their research on the projects they are tackling.

Limitations:

1. **Scalability:** While project tracker systems are suitable for managing small to medium-sized projects, they may face limitations when it comes to scaling up to handle large projects or extensive project portfolios. Performance issues or usability challenges may arise in such cases.
2. **Resource Management:** Some project tracker systems may have limited capabilities when it comes to resource management, including allocation and scheduling of team members or other resources. More advanced resource management features may require a dedicated resource management tool.

CHAPTER TWO: LITERATURE REVIEW.

2.1 Project Tracker Systems.

Project tracking is a way to follow, monitor, and manage the progress of a series of work tasks. The Project Tracker System, SOT, is similar to the project management system. It manages multiple projects and ensures that they are completed on time and avoids repetition of already done projects in the SOT community in the school.

The University of Hong Kong's Department of Computer Science created the project management system known as PMS. The system may display news, scheduling, and project allocation information. The system provides features including blogs, a calendar, and form downloads on its home page. Additionally, there is a list of projects and accompanying information, as well as some advanced features like offering students virtual machines to use as servers for their senior project work.

2.2 Existing Projects

2.2.1 Trello project Management system.

Project management software for educational institutions is called Trello. By including features like editable templates, task lists, deadline setting and monitoring, tools for teamwork and communication, and a card-based system, it caters to the demands of educational institutions. Trello's ability to integrate with other products and platforms makes it a good choice for organizing all aspects of a school project in one location. Therefore, it's a terrific option for educational institutions that wish to enhance the way that teachers and students collaborate on assignments.

2.2.2 Web-based project management system.

A variety of researchers have looked into how DBMSs may be used for project control. A Construction Information Management System (CIMS) was introduced by William J. Rasdorf and Mark J. Herbert in 1990 for the management of information utilized in project management. Using standalone software, a DBMS programming language, and a spreadsheet, CIMS connects application applications for scheduling, cost, inventory, and document management with a central Database Management System. A DBMS was created by Abudayyeh (1991; Abudayyeh and Rasdorf, 1993) to facilitate automated cost and schedule control operations. He represented the project data using the work package model. However, his method only permits the use of

earned value for progress reporting. (1998) suggested a rule-based expert system prototype for better project control.

2.3 Case of Project Tracker System.

SOT is a school faculty that manages the school technology projects. The school has a lot of projects of different types. To address issues related to the redundancy of projects. The SOT community is facing the redundancy of projects. To address this issue, a Project Tracker System is implemented to help reduce redundancy.

CHAPTER THREE: METHODOLOGY.

Agile Methodology.

Agile project management is a flexible and cooperative method for teams to self-organize. Project planning and task management are flexible, incremental in development, pursuing early delivery, and always open to change if it results in process improvement when using the agile approach. In contrast to waterfall project management, it is quick and adaptable.

The project was designed using the agile software design methodology because of the high level of SOT engagement and incremental testing of features. Additionally, the system was created utilizing MySQL as the database management system and the Java programming language.

- Software Development Life Cycle (SDLC) as applied to the development of a project tracker system and how Agile principles can be incorporated into each phase:
 1. Feasibility Study: Evaluate the possibility of creating a project tracking system. Think about the operational, economic, and technological issues. Determine any possible dangers that could compromise the project's success. To determine whether developing the project tracker system is both technically and economically possible, do a feasibility study. Develop solutions for mitigating possible hazards, such as financial limits or technological limitations.
 2. Requirement analysis: Gather and record the system's user needs for the project tracker. Specify the qualities it should have and the operation it should have. Implementation: To collect user needs, employ agile approaches including user interviews, surveys, and feedback sessions. Create user stories for these needs, and prioritize them with the help of the SOT.

3. Design Phase: Make architectural and design standards for the project tracker system, including how it should appear and perform. Implementation: To demonstrate the system's architecture, I shall utilize DFD. Ascertain that designs are adaptive to changing needs.
4. Coding phase: Develop the project tracking system in line with the design guidelines. Front-end development: Use web technologies such as HTML, CSS, and JavaScript. Agile development promotes continual improvement and regular releases. Back-end development: Create the database using tools like MySQL to store data and think about adopting an agile methodology to adjust to changing requirements.
5. Testing phase: Verify and validate the project tracking software to make sure it complies with the requirements. Testing types: Include Agile testing techniques like frequent user acceptability testing, ongoing development, and automated testing (alpha and beta testing). Continually address problems and criticism.
6. Maintenance: Maintain the functionality of the project tracking system, deal with problems, and update or enhance it in response to user input. Maintenance: Use agile maintenance techniques to fulfill your goals for corrective, adaptive, perfective, and preventive maintenance. Continually collect input from customers to inform continuing improvements.

Advantages of using Agile.

Flexibility: Agile allows for adapting the tracker system to changing project management needs and evolving user requirements.

Frequent Deliveries: Agile enables the delivery of regular updates and improvements to the tracker system, ensuring it stays aligned with user needs.

User-Centric: Agile emphasizes user involvement, ensuring that the tracker system is designed to meet the specific needs of project managers and stakeholders.

Continuous Improvement: Agile retrospectives provide opportunities to reflect on and improve the system's features and usability over time.

Risk Management: Agile's iterative approach allows for early identification and mitigation of project risks, such as performance bottlenecks or usability issues.

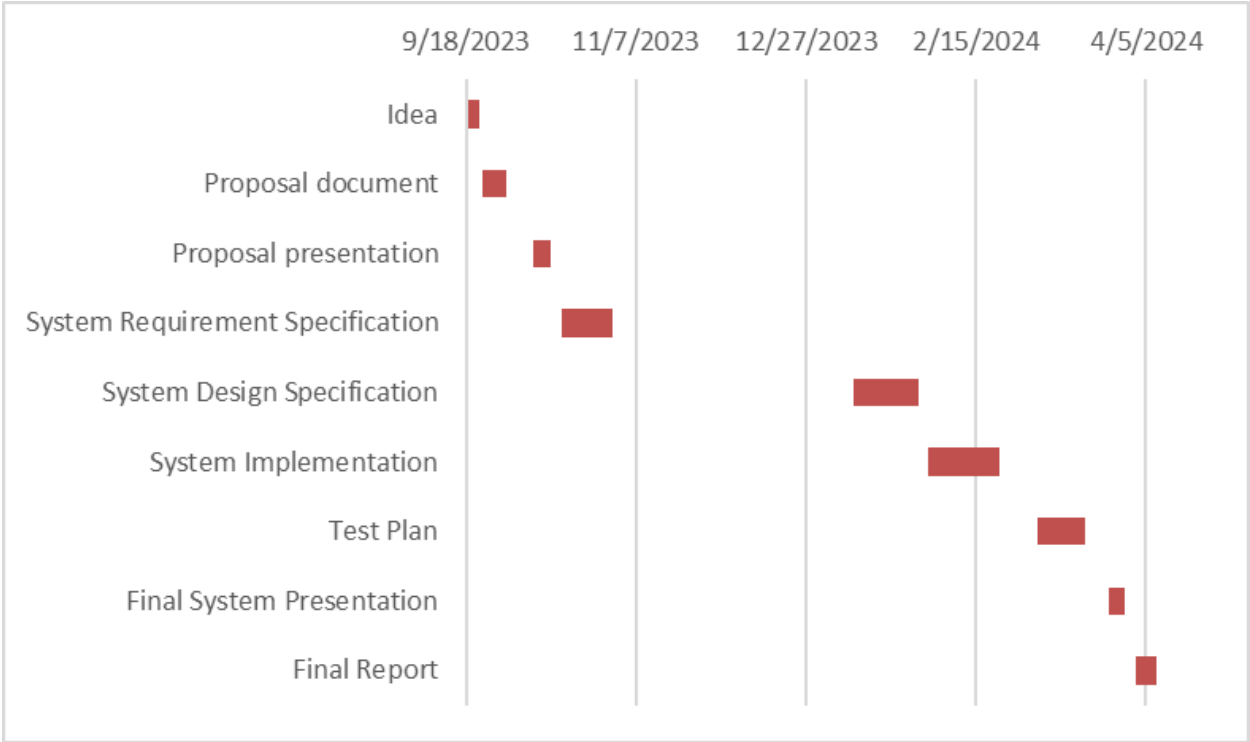
Collaboration: Agile practices promote close collaboration among project teams, stakeholders, and users, facilitating better communication and alignment with project goals.

APPENDICES

Resources.

NO	RESOURCES	SPECIFICATION	USAGE
1	Computer	4GM RAM, SSD	Used to access the website or the system.
2	Programming Languages	JAVA programming language, HTML, CSS, Laravel.	For programming and designing the system.
3	Internet Connection	10MBPS	For internet connection that helps in system access.
4	DBMS	MySQL	Store the projects.

Gantt Chart.



Budget.

NO	Resource	Quantity	Availability	Estimated cost (Kshs)	Actual cost (Kshs)
1	Internet	10HRS	Own	4500	2500
2	Flash disk	2	Own	1000	800
3	Laptop	1	own	45000	43000
4					
5					

Risks and Mitigations.

SN	Risk	Effect	Mitigation
1	Loss of power	Code running delayed	An uninterruptible power supply
2	Virus Attack	System crushing.	Backup the information
3	Theft of laptop	Loss of data/system	A backup of the data about the system.

4	Flash theft	Loss of system	Having another flash with backed-up data
5			

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