**COMPUTER SYSTEM PROJECT PROPOSAL**

**Tutor Hub**

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**CHAPTER ONE: INTRODUCTION**

**1.1 Background of the Study**

The education sector has significantly evolved with the introduction of technology. However, many students still struggle to understand various academic units, leading to poor performance. Traditional learning methods rely on physical interaction, but this approach can be ineffective when students fail to get personalized assistance.

Tutor Hub aims to bridge this gap by providing a digital platform that connects students with peer tutors within the university. By leveraging technology, this system will create an interactive learning environment where students can either register as learners or tutors, depending on their expertise. This approach fosters collaborative learning, allowing students to grasp difficult concepts with ease.

Additionally, Tutor Hub provides a flexible learning model where students can seek tutoring at their convenience without being limited to specific times or locations. The system ensures accessibility across both web and mobile platforms, enhancing its usability and effectiveness in the academic setting.

**1.2 Problem Statement**

Many students find it difficult to grasp concepts in various academic units due to a lack of personalized guidance. Existing tutoring platforms are often costly, and some lack verification mechanisms, making it hard for students to find reliable tutors.

The lack of an efficient peer-learning system within universities contributes to poor academic performance and frustration among students. The limited availability of lecturers and the large number of students per class further exacerbate this issue, leaving students with minimal support outside lecture hours.

Tutor Hub seeks to solve this problem by offering a structured peer-to-peer learning environment where students can get help from fellow students who have excelled in specific units. By providing a verification process for tutors, the system will ensure quality and reliability, thus fostering an effective learning experience.

**1.3 Objectives**

**General Objective**

**To develop a web and mobile-based platform that connects students to peer tutors for academic assistance.**

**Specific Objectives**

1. To allow students to register as tutors or learners based on their academic expertise.
2. To enable tutors to upload academic transcripts for verification and credibility.
3. To create a search and filter feature for finding tutors based on academic units.
4. To provide a communication channel between students and tutors for better interaction.
5. To ensure the system is user-friendly and accessible on both web and mobile platforms.
6. To implement a rating and review system for tutors to enhance trust and credibility.
7. To integrate a scheduling system that allows students and tutors to plan sessions conveniently.
8. To ensure data privacy and security for all registered users.

**1.4 Scope of the Study**

This project will focus on developing a web and mobile application that serves university students. The system will include user registration, tutor verification, unit search, tutor-student matching, and messaging features. The key features and limitations of this study include:

* The platform will only be available to university students, ensuring that all tutors and learners are within an academic institution.
* The verification process will be based on academic transcripts to guarantee that tutors have the required expertise.
* The system will initially focus on Tharaka University before expanding to other institutions.
* Tutor Hub will not handle payment transactions between students and tutors, but it may include features for scheduling and session management.
* The system will be designed to ensure user privacy, preventing unauthorized access to students' personal data.

**1.5 Justification**

The Tutor Hub system is necessary because many students struggle with their academic units but do not have an easy way to get peer assistance.

This project provides a structured approach to peer tutoring, ensuring that students can find verified and qualified tutors at an affordable or free cost. The key benefits of this system include:

* Accessibility: Students can find tutors anytime, reducing dependency on limited university resources.
* Affordability: Unlike professional tutoring platforms, Tutor Hub offers cost-free or low-cost services.
* Verification: Ensuring that tutors are academically qualified, making the platform more reliable.
* Collaboration: Encouraging knowledge-sharing and teamwork among students.
* Flexibility: Allowing students to learn at their own pace through scheduled or on-demand sessions.

By implementing this platform, students will have better access to academic support, improving overall performance and reducing dropout rates due to academic difficulties.

**CHAPTER TWO: LITERATURE REVIEW**

**2.1 Introduction**

This chapter explores existing tutoring platforms and their effectiveness in helping students. It also highlights the gaps in these platforms and how Tutor Hub intends to address them.

**2.2 Existing Systems**

Several online tutoring platforms exist, including:

* Chegg Tutors – A professional tutoring platform that connects students with subject experts at a cost.
* Wyzant – Allows students to find professional tutors for various subjects.
* Tutor Me – Offers on-demand tutoring services, mostly for high school and college students.

While these platforms have proven effective, they present challenges that make them inaccessible or ineffective for university students seeking peer tutoring.

**2.3 Limitations of Existing Systems**

1. High Costs – Most tutoring platforms charge high fees, making them inaccessible to many students.
2. Lack of Peer Learning – Existing platforms mainly connect students with professional tutors, ignoring the potential of peer tutoring.
3. Verification Challenges – Some platforms lack proper tutor verification, leading to unreliable services.
4. Limited Institutional Integration – Many platforms are general-purpose and not tailored for specific university courses and structures.
5. Rigid Scheduling – Most professional tutors have fixed schedules that may not align with students’ availability.

**2.4 Proposed Solution**

Tutor Hub aims to overcome these limitations by providing a peer tutoring system that is free or low-cost, where students can easily find and interact with experienced peers within their institution. The system will:

* Include a tutor verification process through transcript uploads, ensuring trustworthiness.
* Provide an interactive, user-friendly platform accessible via web and mobile.
* Allow students to schedule sessions at their convenience.
* Support reviews and ratings for tutors to enhance service quality.
* Facilitate direct communication between students and tutors for a seamless learning experience.

By addressing these gaps, Tutor Hub aims to create an effective academic support system that enhances student success and knowledge sharing within universities.