**UNIVERSITY FOR DEVELOPMENT STUDIES**

**(UDS)**

FACULTY OF MATHEMATICAL SCIENCES

DEPARTMENT OF COMPUTER SCIENCE

A PROPOSAL ON THE DESIGN AND IMPLEMENTATION OF A TIMETABLE DRAFTING AND MANAGEMENT SYSTEM; A CASE STUDY OF THE UNIVERSITY FOR DEVELOPMENT STUDIES

PRESENTED TO:

SIR STEVEN AKOBRE

BY:

**MAHMUD SULEMAN SHEIKH WUNNAM**

**FMS /0131 / 16**

**DECEMBER, 2019**

**INTRODUCTION**

The issue of the general timetable of the University for development Studies, Navrongo campus being difficult and confusing to read has been around from the very first beginning and the reason as to why it has not been resolved yet is unclear, perhaps no one has ever seen it to be a bigger problem enough which actually is indeed a problem to be addressed considering the fact that students sometimes missing lectures and also students having to leave their hostel and go to campus just to check on updates which has been made on the timetable. Also not forgetting the fact that most students misses exams due to sudden change in the exam schedule whenever exam commences.

Students don’t have to keep referring to the general time table each time they want to check their lecture or exam time. The student body especially the level 100s finds it difficult reading and drafting a timetable for the courses they have registered whenever there is a new timetable or when there is an update in the lecture schedules which results allocation of wrong times to some lectures which may lead to them missing certain lectures.

The aim of this project is to address these issues so that the student can have their timetable with them all the time without worrying about any updates when there is any, by presenting to the student body a web base application (website) where they will only have to log in and specify the courses they have registered and will be able to print out a drafted copy of the timetable based on the courses they have registered. **The application will be able to keep track of whatever timetable have been drafted in the past.**

When the proposed innovation is implemented, student and lecturers will not have to worry whenever a timetable is being released of whenever there is an update in the school’s already existing timetable. Missing exams schedule or exams should not be a problem at all too.

The application will be integrated with a notification feature being an email notification system where by users registered on the application will be notified each time there is an update to the time schedules or whenever a new timetable is being released.

(“Key Factors in Writing a Strong Proposal Introduction | Halbert Research,” n.d.)

# **METHODOLOGY**

Rapid application development (RAD) is a software development methodology, which involves iterative development and the construction of prototypes. Rapid application development is a term originally used to describe a software development process introduced by James Martin in 1991.

The basic principles are:

* Key objective is for fast development and delivery of a high-quality system at a relatively low investment cost.
* Attempts to reduce inherent project risk by breaking a project into smaller segments and providing more ease-of-change during the development process.
* Aims to produce high quality systems quickly, primarily via iterative Prototyping (at any stage of development), active user involvement, and computerized development tools. These tools may include Graphical User Interface (GUI) builders, Computer Aided Software Engineering (CASE) tools, Database Management Systems (DBMS), fourth-generation programming languages, code generators, and object-oriented techniques.
* Key emphasis is on fulfilling the business need, while technological or engineering excellence is of lesser importance.
* Project control involves prioritizing development and defining delivery deadlines or “timeboxes”. If the project starts to slip, emphasis is on reducing requirements to fit the timebox, not in increasing the deadline.
* Generally, includes joint application design (JAD), where users are intensely involved in system design, via consensus building in either structured workshops, or electronically facilitated interaction.
* Active user involvement is imperative.
* Iteratively produces production software, as opposed to a throwaway prototype.
* Produces documentation necessary to facilitate future development and maintenance.
* Standard systems analysis and design methods can be fitted into this framework.

(Boehm, 1986)

# **PROBLEM STATEMENTS**

To make scheduling of exams and lectures well organized and structured, the university for development studies has a timetable management system which is responsible for scheduling of lectures and exam times. Though it is in place to make things simple, most of the time, schedules keep changing during the course of the trimester and even when examination is going on. When there is a sudden change in the lecture timetable, students tend to miss lectures for not being noticed. Also, there has been times that the examination timetable will change in the course of writing examination which may lead to a student trailing a paper for missing the time schedules for the examination. For example, an examination that is scheduled for afternoon can be changed to the morning and any student who is not informed immediately can miss the paper.

On several occasions, lecturers have missed lectures due to the fact that they have no knowledge of the timetable being changed.

(“Tips on Writing a Problem Statement,” n.d.)

# **TOOLS**

* PHP ( HyperText Preprocessor)
* HTML (HyperText Markup Language)
* CSS ( Cascading Style Sheet)
* Javascript
* AJAX and JQuery (Javascript braries)
* Database engine (MySQL)

# **REFERRENCES**

Boehm, B. (1986). A spiral model of software development and enhancement. *ACM SIGSOFT Software Engineering Notes*, *11*(4), 22–42. https://doi.org/10.1145/12944.12948

Key Factors in Writing a Strong Proposal Introduction | Halbert Research. (n.d.). Retrieved December 1, 2019, from http://halbertresearch.com/writing-strong-proposal/

Tips on Writing a Problem Statement. (n.d.). Retrieved December 1, 2019, from https://grammar.yourdictionary.com/for-students-and-parents/tips-on-writing-a-problem-statement.html