DEPARTMENT OF COMPUTER SCIENCES

CSC 431 PROJECT

TIME TABLE SCHEDULING SYSTEM

NAMES

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**CHAPTER 1: BACKGROUND OF STUDY**

**HISTORY**

Educational institutions have been faced with the problem of structuring and allocating courses in such a way that students, venues and lecturers would not have conflicting times in availability. Since the advent of computers, algorithms have been developed to more efficiently allocate courses, some of which are:

**SIGNIFICANCE**

The need for an automated scheduling system for educational development cannot be over emphasized. Manual scheduling of time and venue is confusing and takes a long time to produce an excellent and efficient result that is free from clashes. The time table scheduling system will help correct the errors in the manual scheduling system.

**SCOPE**

For this project, our focus is the Department of Computer Sciences, University of Lagos, Akoka to be handled by the Centre for Information for Technology Systems (CITS). The system handles proper allocation of students, courses, lecturers and venues and ensures that there are no clashes.

**METHODOLOGY**

This system is implemented using the Waterfall Model which entails Requirements Analysis, System Design, Implementation, System Testing, System Deployment and System Maintenance.

**DEFINITION OF TERMS**

**ABBREVIATIONS**

**CHAPTER 2: DESCRIPTION OF THE PROPOSED SYSTEM**

**PROJECT FUNCTIONS**

This system takes in a database containing table of:

* students to courses they are offering
* lecturers to the courses they are taking
* venues to their capacities
* courses taken in the department for the semester, to the number of weekly class hours, regular and lab.

The system also takes in the Days and Time Frame which the classes can be held.

Using the information in the Database, we allocate courses to time slots and venues to create a time table with the following characteristics:

* two different courses will not be assigned to the same time in the same venue.
* two different courses assigned to the same time slot, will not be assigned to the same lecturer.
* no two courses offered by the same students will be given the same time slot.
* no student and lecturer should have excessive consecutive lectures
* the capacity of the venue should be optimal to the number of students taking the course i.e. the number of students taking a course should not be greater than the venue capacity
* the total amount of weekly hours allocated to a course matches the specified input

And the Timetable will be presented in Spreadsheet format as output to the user.

**CONSTRAINTS**

The user must have spreadsheet management knowledge.

Windows OS is required to run the software.

**ASSUMPTIONS**

We assume that:

It is physically possible to allocate all classes without any clashes or overlaps.

All venues will always be available for classes.

The number of students taking a course does not change drastically.

Lecturers will always be available.

No student in the system is also a lecturer

**DEPENDENCIES**

The system is dependent on a windows OS

The application must be installed on the user’s computer.

**CHAPTER 3: REQUIREMENTS OVERVIEW**

**EXTERNAL INTERFACE**

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