INSTITUTE OF PUBLIC ADMINISTRATYION AND MANAGEMENT (IPAM)

UNIVERSITY OF SIERRA LEONE

FIRST REPORT

GROUP THREE

BSC. INFORMATION SYSTEMS YEAR 3

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Problem Statement

The quest to have access to complete, accurate, and timely information about students and teachers has been a household challenge. The need for an automated software system that the students and teachers can use to record and retrieve required information will be a great instrument for development for the school.

Thus, minimizing corruption while eliminating the ghost teachers in the school payroll system taking measures from the information acquired. The school has been recording information using paper based documentation system for performing various tasks and the school management/administrators apply their knowledge of hit and miss approach in scheduling classes and courses (preparing the timetable) which waste manpower and much time unnecessarily that does not utilize the current technology.
The school need a system that will take attendance of students and teachers in order to control absentees, the units or modules they are offering, the courses they are doing and know the number of days that a student has been absent from school during school days.

In addition to that retrieving records of students who have graduated couple of years ago has been a difficult task and the manual system also has difficulty of producing different reports which is required by the school stakeholders such as students, teachers, administrators or official from Ministry of Education and other stakeholders.
It has been difficult to search for records from thousands of manual paper documentation. Due to the inefficiency of the current manual system, the need for an automated school management system (SMS) is a must in order to efficiently handle student's attendance, teacher's attendance, units, courses and improve the rate of collecting data and view information easy.

Glossary of Terms

CSV (Comma Separated Values): These are file that stores tabular data in plain text.

Initiating: initiates a use case by initiating an external event. This functionality is initiated by an actor.

Participating: These are actors the system needs assistance from to achieve the primary actors goal.

Actors: An actor specifies a role played by a user.

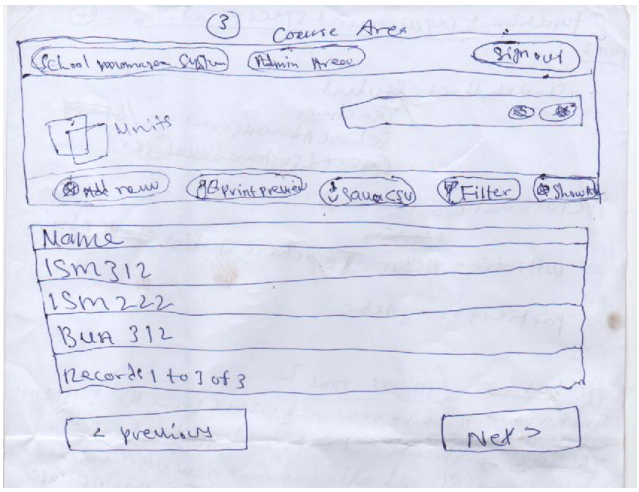
A. Functional Requirement

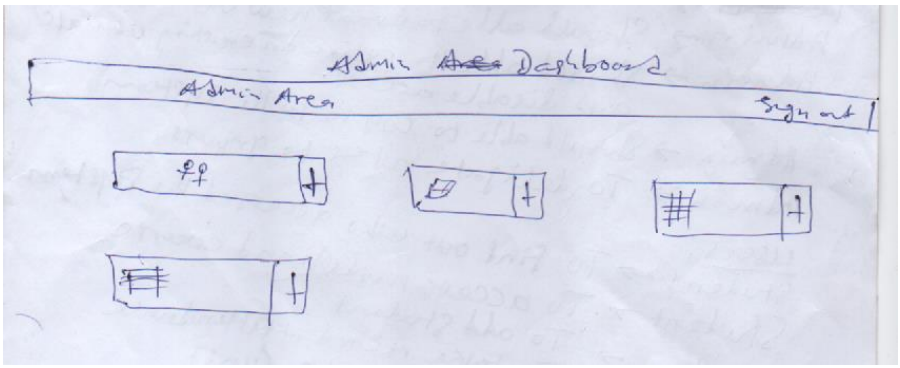
REQ#	Priority	Requirement
REQ1	7	The system should be lock at all-time unless commanded by an authorized user. When the authorized user log into the system he gets access automatically.
REQ2	4	The system shall logout or keep the authorized user out when they clicked the sign out button.
REQ3	2	The system should be able to allow users to sign up.
REQ4	5	The system shall keep records of all students
REQ5	1	The system shall keep records of all unit
REQ6	3	The system shall keep records of all courses
REQ7		The system shall keep record of attendance.
REQ8	1	The system should allow adding new authorize person at runtime or removing existing ones.
REQ9	6	The system should be able to import CSV data
REQ10	2	The system should be able to email all users
REQ11	3	The system should be able to backup data at all time.
REQ12	1	The admin area of the system must have user and admin section

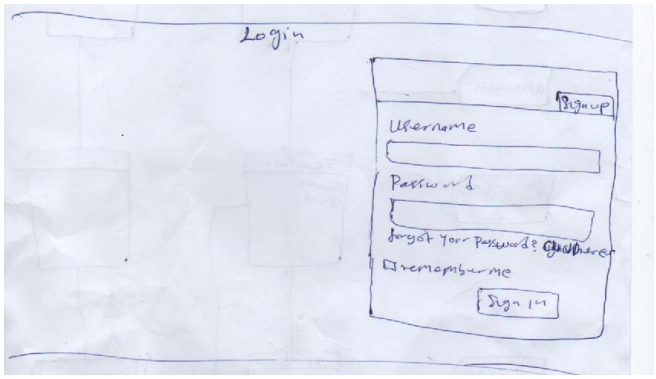
B. Non- functional Requirement

REQ#	Requirement
REQ1	The system can run any OS
REQ2	The password should be encrypted for safety
REQ3	The software will not cause the user computer to explode
REQ4	The system can run decent on 56K modern or above
REQ5	The system must run on any browser
REQ6	The system should be accessed from any location with access to the WWW
REQ7	The user should have interest
REQ8	The system should be used 24/7
REQ9	The system should be intuitive or easily understood

C. User Interface Requirements







Part 2

A. Stakeholders: Student

Teachers

School Admin

Group three developers

B. Actors and Goals

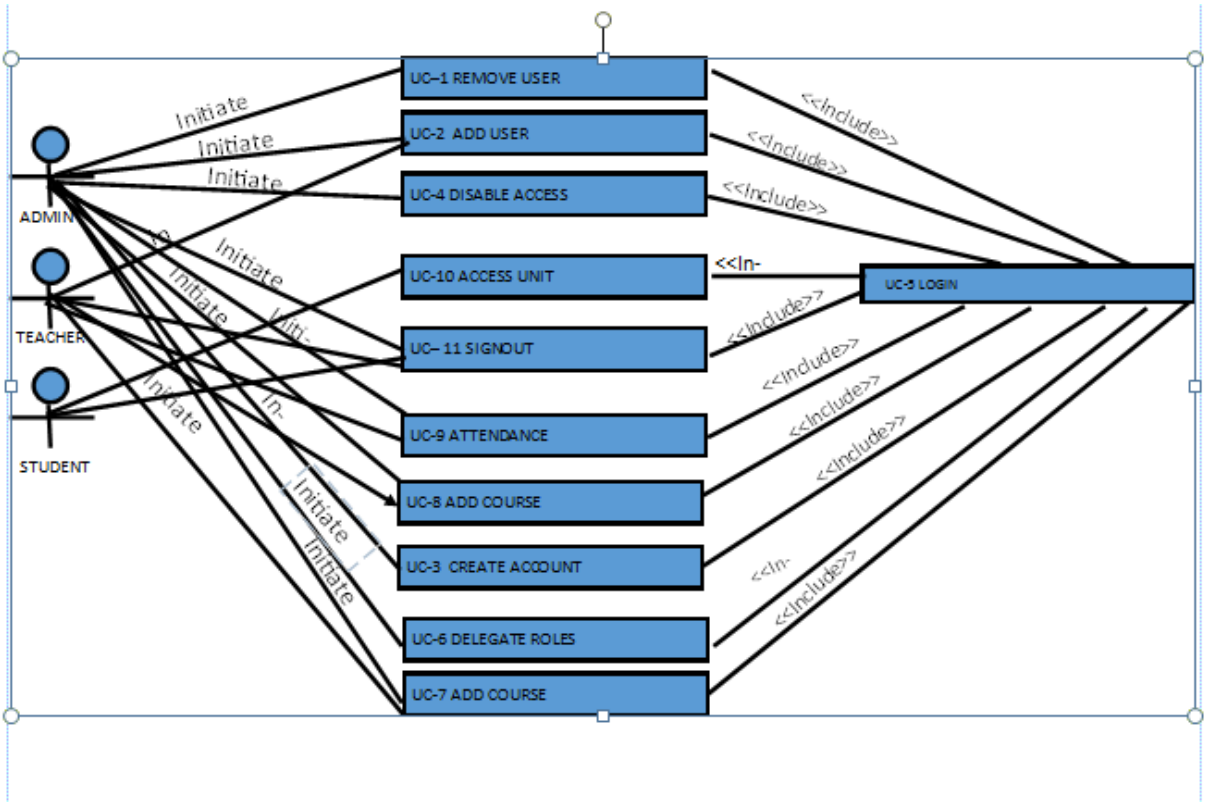
Actors	Types	Goals
Admin	Initiating	Should remove users from the system
Admin	Initiating	Should able to add students
Admin	Initiating	Should be able to create new users account
Admin	Initiating	Should be able to log into the system
Admin	Initiating	To delegate roles to groups
Student	participating	To find out who accesses the system
Student	participating	To access units and course
Teacher	participating	To add student
Teacher	participating	To take records of attendance

C. Use case casual description

i.

Use Case	Casual Description
UC-1	Admin will be able to remove users
UC-2	Admin and Teachers will be able to add user/student
UC-3	Admin will be able to create account
UC-4	Admin will be able to disable access
UC-5	Admin will be able to login to the system
UC-6	Admin will be able to delegate roles
UC-7	Admin and Teachers will be able to add unit
UC-8	Admin and Teachers will be able to add course
UC-9	Admin and Teachers will be able to record attendance
UC-10	Student will be able to access unit and course
UC-11	Student and Teachers will be able to sign out

ii. Use Case Diagram



iii. Traceability Matrix

REQ#	PW	UC-1	UC-2	UC-3	UC-4	UC-5	UC-6	UC-7	UC-8	UC-9	UC-10	UC-11
REQ1	7	X										
REQ2	5		X									
REQ3	6			X								
REQ4	1				X							
REQ5	6					X						
REQ6	2						X					
REQ7	3							X				
REQ8	1								X			
REQ9	4									X		
REQ10	3										X	
REQ11	2								X			
REQ12	1											X
REQ13	5		X									
REQ14	4							X				
REQ15	2								X			
REQ16	1											X

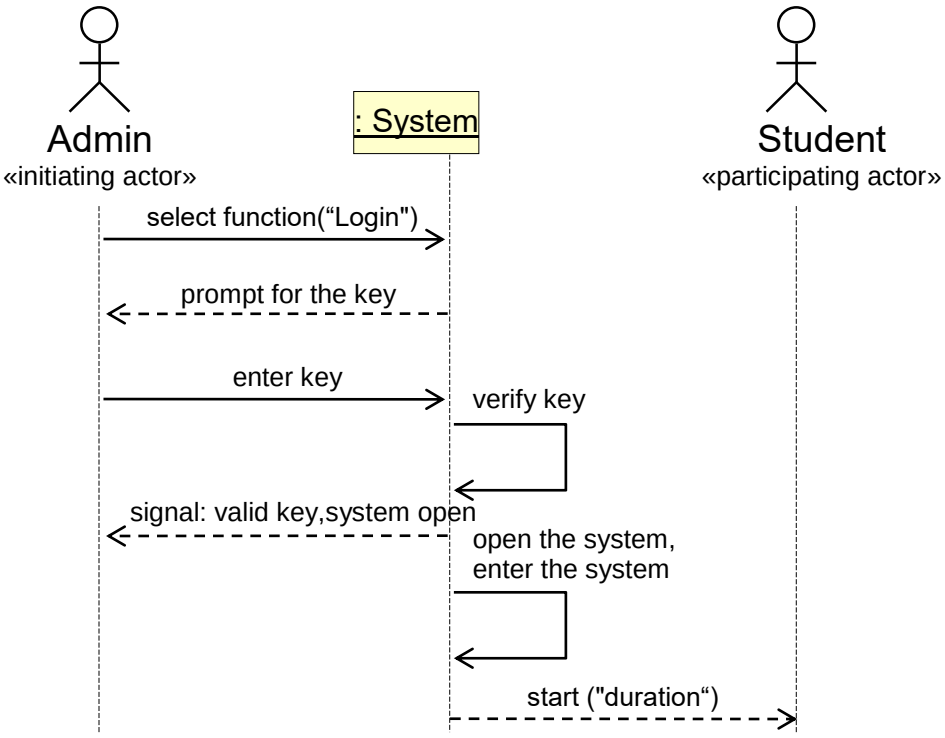
iv. Fully-Dressed Description

UC-2: Admin will be able to add user when he clicks on the + icon in from the student area. In the add student section, he can input the user registration number, name and course and then click on save new button. He can also click on the back button after saving the new inputted user or if he wants to cancel.

UC-10: Student will be able to access unit and course. When student click on the unit button, he will be able to view the different modules and also when he clicks on the course button, he will also be able to view different courses.

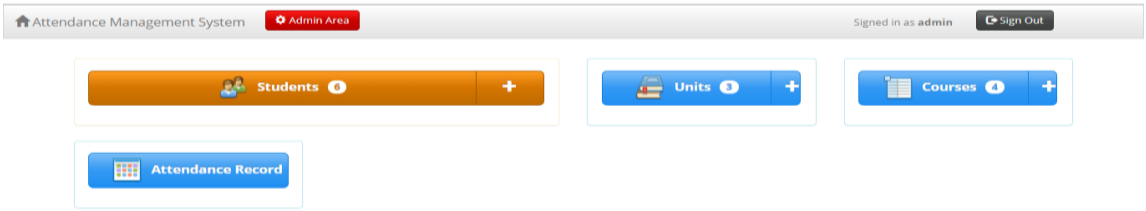
UC-9: Teacher will be able to take record of attendance. When he clicks on the attendance record button, he will be able to view the attendance list of the student. And when he clicks on the add new button, he will be able to take record of the student name, registration number, week and date of attendance and also the unit the teacher is teaching. There is also a check box for attendance, which shows if the student attended or not.

D. System Sequence Diagrams



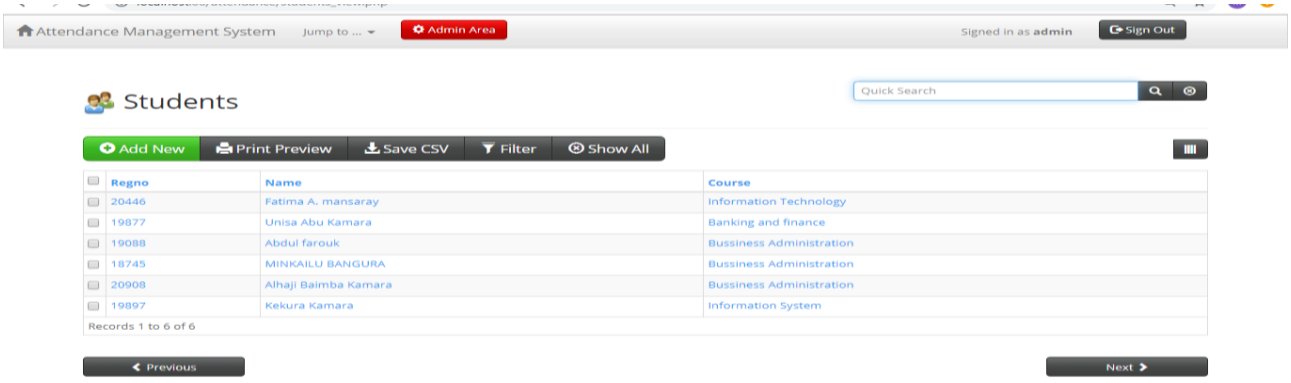
4. User Interface Specification

A. Preliminary Design

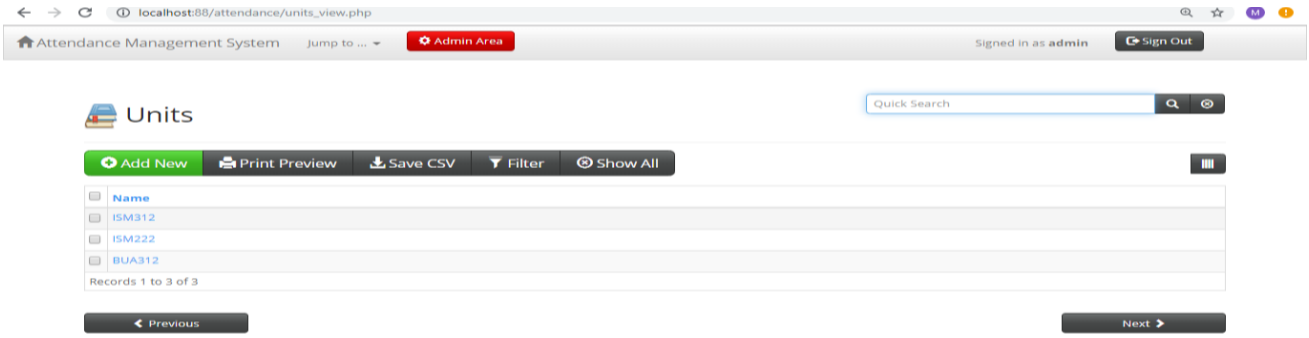


This School Management System (SMS) dashboard contains a student, unit, courses and attendance record button. Each of the above performs various activities which will be discuss below.

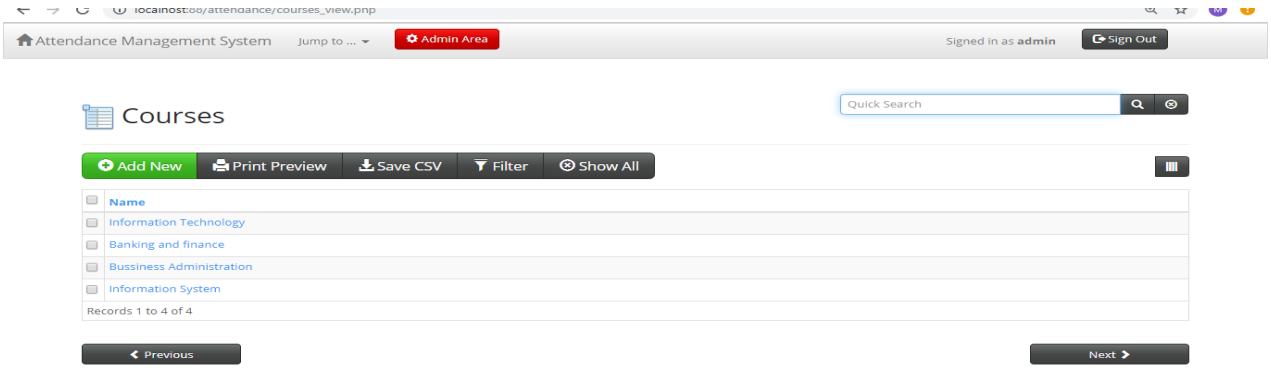
When you click on any of the above button, its redirect to their respective dashboard where you can find the activities which they perform.



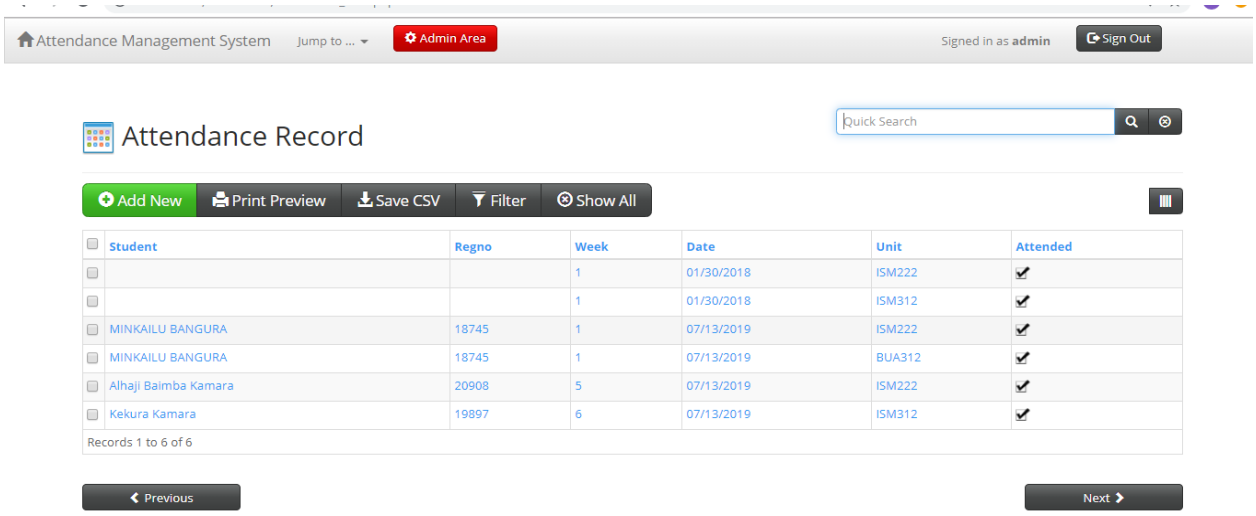
You get this sub-dashboard when you click on the student button in the afro mention dashboard. In this section, we have all the details pertaining students. You can add new students, print selected preview, save CSV and filter student information. We have the registration number, name and courses corresponding to each student. There is an area where you can quick search and get information on any student.



This is the unit dashboard where you can get all the information about any module. You can add in a new module, print preview, save CSV, and filter in this panel by clicking on their respective buttons. There is also a quick search an option where you can search for any module and get all the information relating to that module.



This is the courses dashboard where you can get all the information about courses. You can perform activities like; add new course, print preview, save CSV and filter by clicking on their respective buttons. There is also a quick search option where you can search and get all the information about any course.



This is the attendance record dashboard where you can get all the information about any attendance of students. You can add new attendance of students, print preview, save CSV, and filter in this panel by clicking on their respective buttons. We have the student name, registration number, week and date, unit and check box for attendance, which shows if the student attended or not.

There is also a quick search option where you can search for any student and get all the information about the attendance of students.

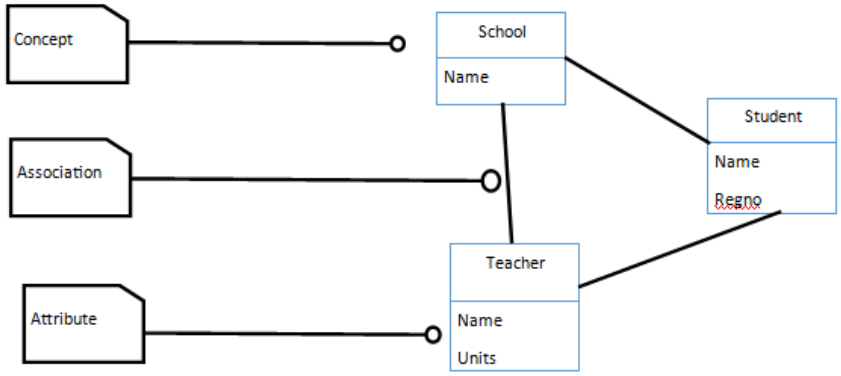
PART 3: Domain Analysis

A. Domain Model

i. Concept definition: Is the set of system engineering activities in which the problem space and the needs and requirements of the business and stakeholders are closely examined. Eg School.

ii. Association definition: Association means that a class will actually contains a reference to an object, or objects of the other class in the form of an attribute. Association is shown using a simple line connecting two classes.

iii. Attribute definition: Attribute is a changeable property or characteristics of some component of a program that can be set to different values. Eg the attribute for the class student are name, regno.



iv.

REQ#	PW	UC-1	UC-2	UC-3	UC-4	UC-5	UC-6	UC-7	UC-8	UC-9	UC-10	UC-11
REQ1	7	X										
REQ2	5		X									
REQ3	6			X								
REQ4	1				X							
REQ5	6					X						
REQ6	2						X					
REQ7	3							X				
REQ8	1								X			
REQ9	4									X		
REQ10	3										X	
REQ11	2								X			
REQ12	1											X
REQ13	5		X									
REQ14	4							X				
REQ15	2								X			

REQ16	1											X

7. Plan of Work

Gantt chart (July)

Activity	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Revisit project														
Correction														
Final report														
Final Submission														

Reference:

Miles, R and Hamilton, K. (2006). Learning UML 2.0 . United State of America: O'Reilly.