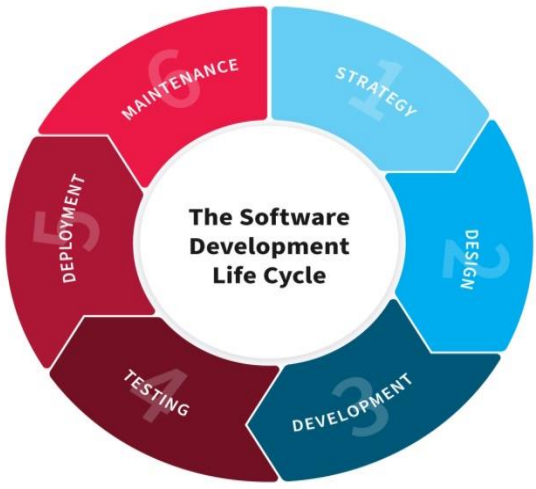
NAME:UMUTESI Aliane

REG no:221007425

PROJECT NAME: STUDENT MANAGEMENT SYSTEM



1.<u>Student management system is</u>: Student Management System is software which is helpful for students as well as the school authorities. In the current system all the activities are done ..and manage those activities. such as marks, scores, and course and student registration. also
Student Management system is a management information system for education establishments to manage student data.

Problem Statement: The common issue faced by student management in educational institutions is the data loss, manual monitoring of students' performance and etc. These activities create loads of tasks to be done by the educators and school administrators. Their records were also prone to losses due to a lack of security. There are still a lot of problems to be discussed but we only highlighted the major ones.

Solution: The main purpose of the Student Management System is to track profiles, courses, logins, tests, and fees. It keeps track of all profile, student, fee, and profile-related information. Student management systems

make it easier for professors to retrieve and sort information, which makes their jobs easier. Professors and student supervisors can use this method to keep track of their students' involvement. These objectives foster, support, and sustain an atmosphere inside educational institutions that promotes, supports, and sustains effective teaching and learning.

PLANNING

A student management system can mean several different things. However, context clues give away that this software is for managing students. But handling students can mean many things. So what really is a student management system?

These systems work to coordinate scheduling and communications between faculty regarding students. This system exists to simplify information tracking for both parents and administrative staff.

The project aims:

- Admission and registration automation as per board, cab ,rank, and available seat
- Assistance in decision-making
- To handle student ,faculty ad course record
- Consistently correct the details for all students
- Report

2.DESGNING STAGE

Once the planning and analysis of the project are completed, the design phase begins. **The goal of system design is to transform the information collected about the project into the blueprint structure which will serve as a base while constructing the system**.

This will includes determining how users interact with the system ,such as thought an application interface .

Non-functional requirements:

- ✓ **Reliability**: The system is safety critical. If it moves out of normal operation mode, the requirement to drop or down the server and fix it as soon as possible and open it again.

- ✓ **Performance**: Easy tracking of records and updating can be done.

- ✓ **Availability**: When in normal operating conditions, request by a user for an online system shall be handled within 1 second.
- ✓ **Security:** There shall be a strong security mechanism should be place in the server side of the system to keep unwanted users to hack or damage the system.
- ✓ **Maintainability:** There shall be design documents describing maintenance of the software and database used to save the user details as well as the daily updated and modification done in system.

- ✓ **Portability:** There is portability requirement as far as our system is concern because it is an online as well as offline (local server based) system so we can access it from anywhere through the internet connection.

Functional requirements:

- ✓ Admin Create, edit and delete student account
- ✓ Admin Change user information
- ✓ Admin Search student's grade per name or per ID
- ✓ Student View their marks per subject.
- ✓ Student Change their account's information.

3.DEVELOPMENT STAGE

In development stage the system can be developed by using java ,Apache, NetBeansIDE, MySQL database, MySQL connector, jdk, j calendar. This may

include for creating an interface in Net Beans and developing app with java swing.

Database design and setup:

Creating database schema and database model with system (admin, student, courses, and score)

Relationship with tables

Connecting to MYSQL using mysql-connector-java-8.0.26 driver

Project development

Open apache NetBeansIDE

Create new java project for student management system

Develop interface of the system using java swing

Handling communication with application and database

Implementing login system

Make sure data is well stored retrieve and manipulation

4.TESTING STAGE

For manual testing

As in testing by human. Letting your testers hunt for new problems. For everything you can't automate. For everything you haven't had time to automate. The aim is to automate the existing manual system by the help of computerized . student MANAGEMENT SYSTEM A PROJECT .Scalable & Unified Test Management. Organize & Track your Testing Efforts in Test Monitor. Organize Every Test.

- The testing was done by testing each unit of the system (unit testing) to ensure that it is working according to the user's needs for example databases, login pages.

- We also conducted integration testing we combined all features and parts of the system to ensure that the system is free of errors when the parts of the system are combined together then when we found errors in the system we fixed those errors directly .
- We also made a system testing with a whole system to ensure that the functional requirements of the system are meets.
- We also done alpha and beta testing our team sat together and we used the system as if we are the users whose the system was developed for them in order to check its working and performance.
- We also validated and verified our system by entering both valid and invalid input in order to verify if the system is working according to the plan.

5.DEPLOYMENT STAGE

The **deployment diagram for the student management system** shows the distribution of processes using the system's physical architecture. This UML deployment diagram shows the relationships between software and hardware (physical architecture) that complete the student management process.

The student management system aids school admissions staff during the application and enrollment processes, in keeping track of potential students. The software is also able to trace the changes in the students' profiles.

This project is saved on github for the link: https://github.com/Alianekany/student-management

Installation:

- ✓ To install the system what you have to do is to download JDK, WAMMP/XAMMP, and apache Netbeans.
- ✓ Download the projects where it is saved on Github account.

Then after open the project employee in java Netbeans then you can run it on your computer when it is offline.

6.MAINTENANCE STAGE

The purpose of this project is to create a new application "STUDENT INFORMATIONMAINTENANCE SYSTEM". It is used to maintain student information which includes managing personal details, maintaining attendance, maintaining marks, internal And generating reports. We can easily add, modify, update or delete the information whenever required.

In order to make information maintenance more time efficient and to reduce manpower involved we develop SIMS.

ADVANTAGES

- Adding, deleting and updating information can be performed.
- Man power and time consumption is very minimum.
- The system is much more secure than file system.
- Multiple users can simultaneously use the system without any concurrency and consistency problems.
- Reports can be generated and viewed easily.
- The system is user friendly and interactive.

AS Conclusion.

Student management systems make faculty jobs more accessible by giving them an easy place to find and sort information. This system allows teachers and student managers to follow with their student engagement. The idea is to create a scenario that makes the lives of administration and teachers easier.