Course Project Proposal

Project Identification Number-	

Project Title: Academic Course Automation

Project Area: This project covers any kind of department or program of a faculty or institute under a university.

Group Member Names:

1. Prosanto Deb (ASH1925005M)
2. Abdullah Alif (ASH1925009M)
3. Arnab Dey (ASH1925024M)
4. Md. Alamgir Hossain (ASH1925016M)

Motivation

Suppose, in a manual system, a teacher or an instructor is assigned to a specific course. From the very beginning, he/she has to collect student names from the office, then keep track of the attendance, provide class test marks and calculate the total mark of continuous assessment from the best two class tests. In some universities, teachers or instructors prefer taking two class tests and one assignment or presentation. This is a huge workload for a teacher or instructor who is assigned to multiple courses. Our motivation is to reduce this workload from teachers and make an automated web-based system to perform all operations.

Objectives

We know objectives are something we plan to achieve. Our web-based system's objectives are to create an option

1. For a teacher to insert attendance for a particular student on a particular day.
2. For a teacher to insert class test or presentation or assignment marks.
3. To calculate and show the total percentage of attendance for a particular student.
4. To find and show the student who has got the highest attendance.
5. To find and show the student who has got the lowest attendance or lower than a tolerable limit.
6. To calculate and show the best two marks of class tests and assignments or presentations.
7. To find and show the student who has obtained the highest marks in-class tests.
8. To calculate the total marks out of 30 of a particular student.
9. To count the total percentage of attendance for a particular student.

Introduction

The name of our web-based project is **Academic Course Automation**. This project will be very helpful for a teacher or the instructor who is assigned to multiple courses at the same time and the academic courses are operated manually, operations like attendance calculation, class test marks calculation, and so on. This project can be a replacement for a manual course system.

Justification of the project

A manual system consists of lots of problems. First of all, teachers need to get the attendance book from the office but at the beginning of any course, the attendance book cannot be generated or given from the office when asked. Sometimes a teacher may forget to bring the attendance book to the class. That's why some teachers keep tracking the attendance in Excel files which is not a good practice and there is no chance for a student to see what is his/her attendance after day-by-day evaluation. The same thing happens in the class test marks to. Students cannot see their

marks right after the marks given. Calculating attendance and class test marks is hard and time consuming for the teachers too. That why this project is enough capable to solve these problems and very important to implement.

Brief review of works related to the proposal

At the very beginning, we as a developer, have to collect and store in the database the names of student who has taken a particular course or is permitted to attend that course. We have to collect and store the teachers' names and also the title and code of the available courses. Then we can see how many students are attending this course and which teacher is taking this course.

Then we have to implement two login interfaces one for the teacher and one for the student. The teacher will log in to see which courses are taken by him/her and perform the operations described above and the students will log in to see which courses are attended by he/she and what is his/her attendance and class tests, presentation marks.

At the teacher's end, we have to provide a user interface for the input facility so that teacher can give attendance to a particular student. This operation will be performed on a specific day. On the other hand, the teacher will provide the class test marks and assignment or presentation marks. So this feature will also be considered as a user interface for taking input.

In the end, there will a user interface which will be available for both teachers and students to see the final outcomes.

Methodology/analytical techniques

We are going to use **HTML**, **CSS**, and **Bootstrap 5** for the front-end, **PHP** for the back-end of our project, and JavaScript that gives web-pages interactive elements that engage a user. We will use **MySQL**, which is a relational database management system (**RDBMS**) developed by Oracle that is based on structured query language (**SQL**).

We will perform the SQL **Join clause**, which is used to combine rows from two or more tables, based on a related column between them. Join like **inner join**, **outer join**, **left join**, and **right join** to get out expected output. We will also use the **UNION** operator, which is used to combine the result-set of two or more SELECT statements, and **Group By** statement, which is often used with aggregate functions (**COUNT** (), **MAX** (), **MIN** (), **SUM** (), **AVG** ()) to group the result-set by one or more columns.

Expected outcomes

Increasing efficiency and user satisfaction is our expected outcome. We will be happy to see that our system is used by every teachers and students and getting benefited from it.

Beneficiaries/users

The main users of our system are all the students and teachers who will use this system to find expected results.

References:

1. Head First HTML and CSS: A Learner's Guide to Creating Standards-Based Web Pages 2nd Edition by Elisabeth Robson
2. Head First JavaScript Programming: A Brain-Friendly Guide 1st Edition by Eric Freeman
3. PHP & MySQL: Server-side Web Development by Jon Duckett