Student Performance Evaluation System Web Application

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Abstract: *Managing the result sheets using traditional approach is a cumbersome process. The person must maintain the result records in registers and files using pen and paper. The problem with this approach is, it requires lot of paperwork which is the part of our non-renewable natural resources. We are in the age, where we must think about sustainable development. The manual method of students' academic result processing was found to be tedious, especially when carried out for many students, this makes the entire process time-consuming and error prone. Managing the results using mobile phones, provide an alternative way in this direction. The aim of the project is to provide the evaluation result to the student in a simple and accurate way. The application will provide summary report regarding students' performance report and semester wise marks list. The whole result analyzer will be under the control of the local and global evaluator, and they will have full privileges to read, write and execute the result. The system presents a single platform that will be used to manage the processing of all examination records within the institution. It gives the privileges to the Teacher and students to access the result and the student can also download his result. The web application will be designed using HTML, CSS, JavaScript & developed using visual Studio code. For Front End of this web application, we use Bootstrap is a free and open-source CSS framework directed at responsive, front-end web development. It contains CSS- and JavaScript-based design templates & the backend of application we used PHP & MYSQL.*

Keywords: Performance Evaluation, Web Application.

I. INTRODUCTION

Nowadays most of the education system practice online learning mechanism rather than using the traditional teacher centered teaching mechanism to enhance the learning ability of the students by making a student-centered learning mechanism. The teachers must evaluate the student's performance.

Student performance evaluation system is a web-based application that mainly focuses on providing the evaluation to the student. The student gets their respective evaluation report of that semester. The student can access their evaluation through a web application is more convenient and the faculty can easily analyze the performance of student. The system is divided into three modules- Student, Faculty and Administrator. The student using his login credentials view his report similarly faculty using their login credentials evaluate students respectively. The administrator can add new users in faculty and student sections, it can also add new subjects, classes as per the sessions. The admin is provided with the privileges to modify the student and faculty information by updating their details in web application.

The update of any current session or previous one is done by the administrator. Information about the grades obtained in various semesters. Information regarding evaluation of each semester of a student. Visualization of evaluation report that conveys the overall student's performances in a particular subject. The main objective of this system is to provide the student a convenient and simpler way to check their results and for evaluating the semester results available. It assists the faculty and student to analysis his/her and the whole class performance in a subject. The application is reduced as much as possible to avoid errors while entering the data. It also provides error message while entering invalid data. No formal knowledge is needed for the user to use this system. Thus, by this all it provides it is user-friendly. Student performance evaluation system, as described above, can lead to error free, secure, reliable, and fast networking system. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus, it will help organization in better utilization of resources.

II. EXISTING SYSTEM

In the existing system the evaluation is done by manual process where faculties can give evaluation about the students by using paper and pen. But by our process, faculty can give evaluation through online system without wasting their time. In the manual system after when the feedback is given by all the faculties and the overall grade for each subject and each student is calculated. After that all those grade reports given by the faculties are checked by the University Authority. Hence the performance of students is estimated, and counseling of the students can be done. So, the existing system requires more time to do a piece of work, for this reason the online system evaluation is implemented. This is the major limitation of the existing system for giving evaluation about the students and viewing report of the students.

Design of Student Performance Evaluation System:

Collaboration is a society of classes, interfaces, and other elements that work together to provide some cooperative behavior that's bigger than the sum of all its parts. Collaboration is also the specification of how an element, such as a classifier or an operation, is realized by a set of classifiers and associations playing specific roles used in a specific way.
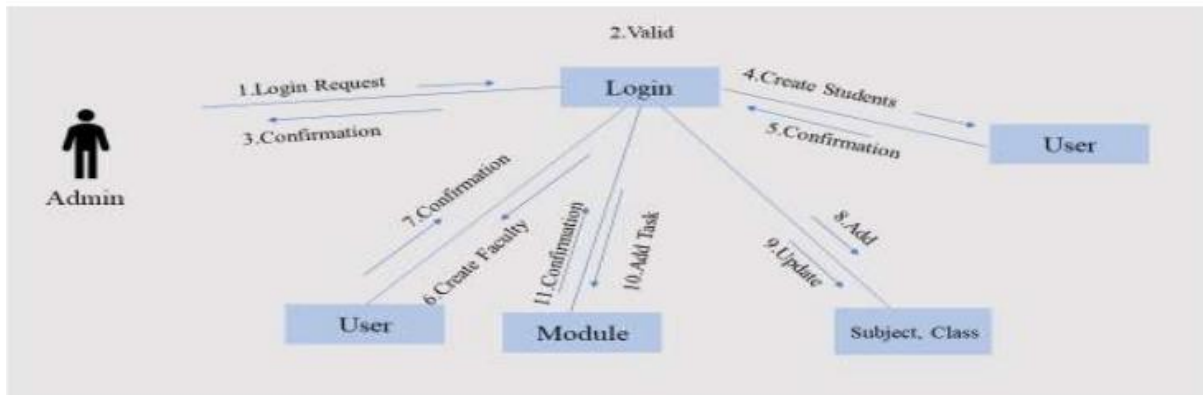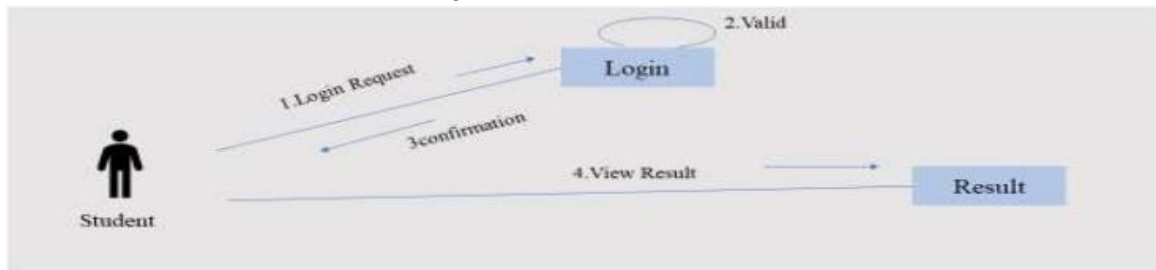

Figure.1. Admin Collaboration
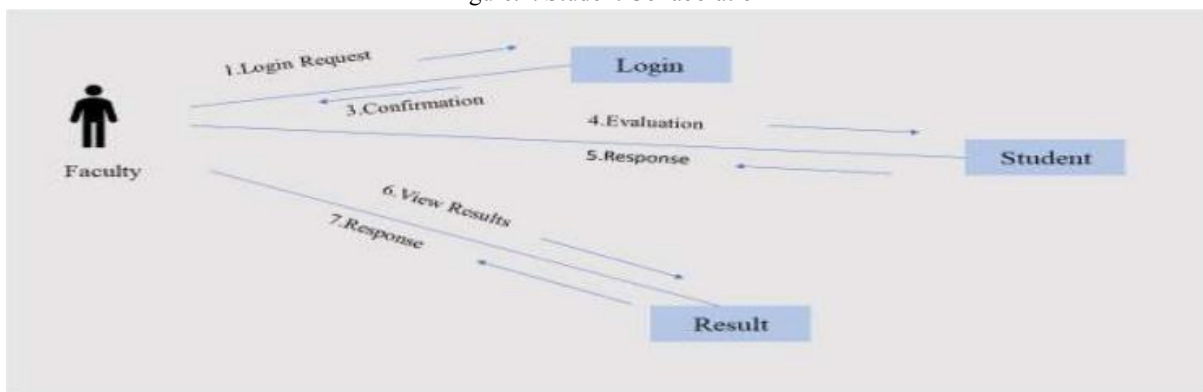

Figure.2. Student Collaboration
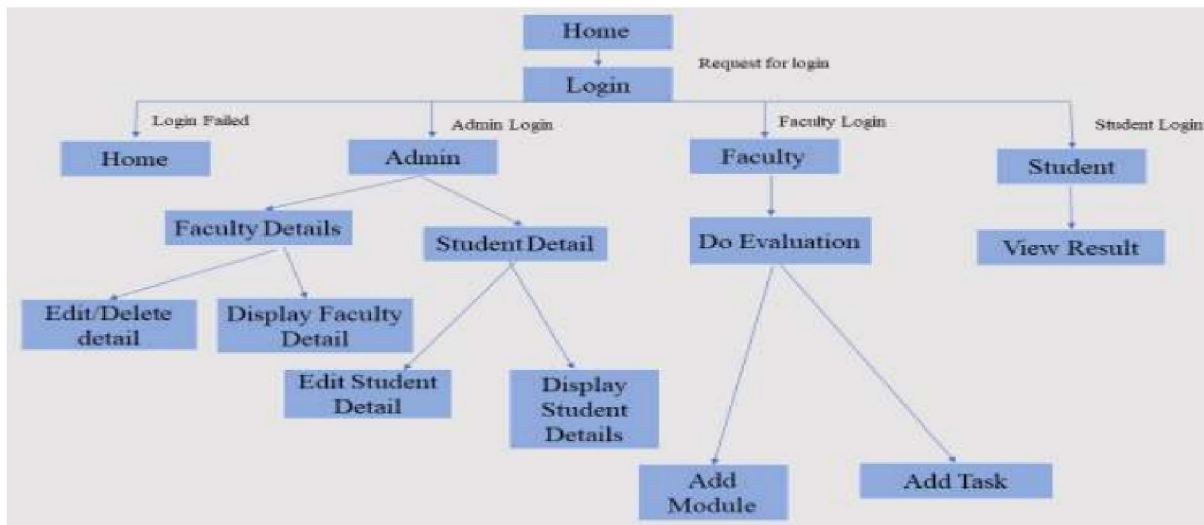

Figure.3. Faculty Collaboration

Figure.4. Project flow

III. REQUIREMENT ANALYSIS

Software Requirement
- Operating System: Window 10
- Front-end: HTML, CSS, JavaScript
- Database: MYSQL
- Back-end:PHP

Hardware Specifications
- Processor: Core i3,1.5MHz
- RAM:2GB
- Hard Disk:150G

VI. TECHNOLOGY DESCRIPTION

A. HTML:

Hypertext Markup Language (HTML) is the standard markup language for creating web pages and web applications. With Cascading Style Sheets (CSS) and JavaScript, it forms a triad of cornerstone technologies for the World Wide Web. Web browsers receive HTML documents from a web server or from local storage and render them into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document. HTML FORMS

HTML Forms are required when you want to collect some data from the site visitor. For example, during user registration you would like to collect information such as name, email address, credit card, etc. A form will take input from the site visitor and then will post it to a back-end application such as CGI, ASP Script or PHP script etc. The back-end application will perform required processing on the passed data based on defined business logic inside the application.

B.CSS (Cascading Style Sheet)

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language. Although most often used to set the visual style of web pages and user interfaces written in HTML and XHTML, the language can be applied to any XML document, including plain XML, SVG and XUL, and is applicable to rendering in speech, or on other media. Along with HTML and JavaScript, CSS is a cornerstone technology used by most websites to create visually engaging webpages, user interfaces for web applications, and user

interfaces for many mobile applications.

C. JavaScript:

JavaScript often abbreviated as JS, is a high level, interpreted programming language. It is a language which is also characterized as dynamic, weakly typed, prototype-based and multiparadigm. Alongside HTML and CSS, JavaScript is one of the three core technologies of World Wide Web content engineering. It is used to make dynamic web pages interactive and provide online programs, including video games. The majority of website seem play it, and all modern web browsers support it without the need for plug-ins by means of a built-in JavaScript engine. Each of the many JavaScript engines represent a different implementation of JavaScript, all based on the ECMA Script specification, with some engines not supporting the spec fully, and with many engines supporting additional features beyond ECMA.

D. Hypertext Preprocessor (PHP)

PHP started out as a small open-source project that evolved as more and more people found out how useful it was. Rasmus Lerdorf unleashed the first version of PHP way back in 1994.PHP is a recursive acronym for " PHP: Hypertext Preprocessor " PHP is a server-side scripting language that is embedded in HTML. It is used to manage dynamic content, databases, session tracking, even build entire e-commerce sites. It is integrated with several popular databases, including MySQL, PostgreSQL, Oracle, Sybase, Informix, and Microsoft SQL Server. PHP performs system functions, i.e., from files on a system it can create, open, read, write, and close them.PHP can handle forms, i.e., gather data from files, save data to a file, through email you can send data, return data to the user. You add, delete, modify elements within your database through PHP.

E. MYSQL:

MySQL is an open-source relational database management system (RDBMS) based on Structured Query Language (SQL). MySQL is a popular choice of database for use in web applications and is a central component of the widely used LAMP open- source web application software stack (and other " AMP " stacks). LAMP is an acronym for" Linux, Apache, MySQL, Perl/PHP/Python" Free software open-source projects that require a full-featured database management system often use MySQL. Applications that use the MySQL database include: TYPO3, MODx, Joomla, WordPress, phpBB, MyBB, Drupal and other software. MySQL is also used in many high-profile, large-scale websites, including Google (though not for searches), Facebook.

F. XAMPP

XAMPP is the most popular software package which is used to set up a PHP development environment for web services by providing all the required software components. During the process of software deployment, most of the web servers use almost similar components, so use of XAMPP provides easy transition from local server to live server. XAMPP is a AMP stack which stands for Cross platform, Apache, MySQL, PHP, Perl with some additional administrative software tools such as PhpMyAdmin (for database access), FileZilla FTP server, Mercury mail Server and JSP Tomcat server. Other commonly known software packages like XAMPP are WAMP, LAMP, and others. The XAMPP server is used to test PHP pages. It works as local server. It contains a MySQL database to manage or save data on a local server.

G. WEB SERVER: APACHE

The Apache HTTP Server, informally known as Apache, could be a free and opensource cross-platform net server, discharged below the terms of Apache License two.0. Apache is developed associated maintained by an open community of developers below the auspices of the Apache software system Foundation. The Apache HTTP Server is cross platform as of one June 2017 ninety-two of Apache HTTPS Server copies run on UNIX distributions. Version 2.0 improved support for non-Unix operational systems like Windows and OS/2. recent versions of Apache were ported to run on OpenVMS and NetWare.

Impact Factor: 6.252

V. METHODOLOGY

There are 3 modules. They are

1. Admin Module 2.Faculty Module 3.Student Module

The system can be developed using web technologies HTML, CSS, PHP and using the database MySQL. The front end can consist of user registration with the respective university registered number and the password by the user. The student can view his results in the tabular format with the respective aggregate and percentage of that semester. The data based on the roll number of the student all the data can be retrieved back to the table and displayed as results. The PHP can also be used for visualization of data. We use fusion charts for the dynamic visualization Primarily the data can be collected from the college administration. This data includes university registered number of every student currently collected is then classified and tabulated into useful and understandable manner.HTML is used for structuring the web page and its content. It is used to develop different pages like user registration, login page and the page for providing results.CSS is used for styling the web page. PHP is used for connecting to the database and perform operations on it through queries.

VI. IMPLEMENTATIONS

Implementation is the process of building the web according to its design. A web implementor uses hypertext markup language (HTML), Cascading Style Sheets (CSS) to develop structure and design of web. PHP has been used as server-side scripting language, were as sql is used to communicate with the data base. These make it possible for a web to be dynamic so that it could interact with the user.

The implementation process resembles web development because it involves using a specific syntax for encoding web structures or a programming language in a formal language in computer files.
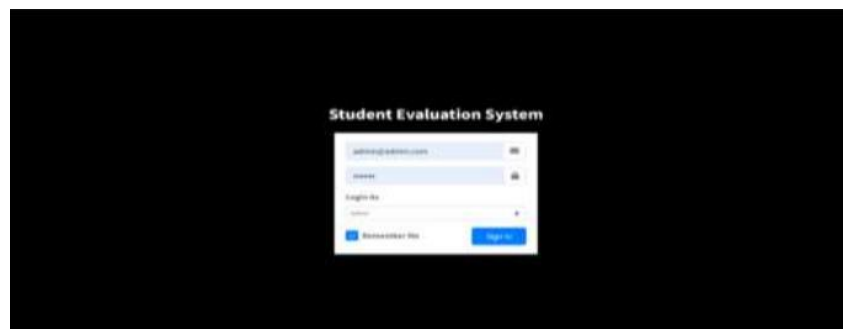
Home Page

Fig 4.1 Home page

 Home page consist of login form through which all the three portals of admin, faculty and student can be accessed. All the three users have been assigned with credentials of email id and password by which they can login to student performance evaluation system.
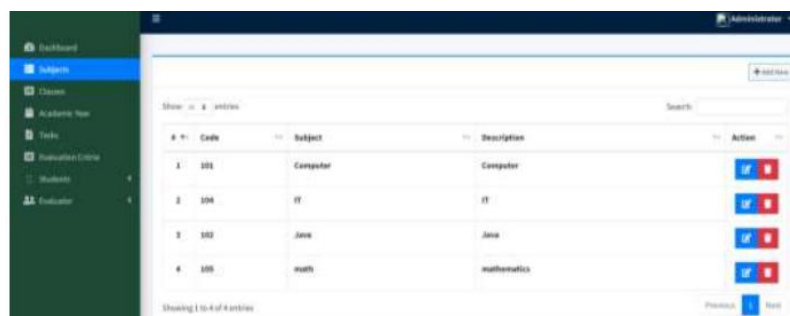
Admin portal

Fig 4.2 Subject list

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After logging in as admin, it has different controls to manage the system. Admin can different subjects present in current academic year.
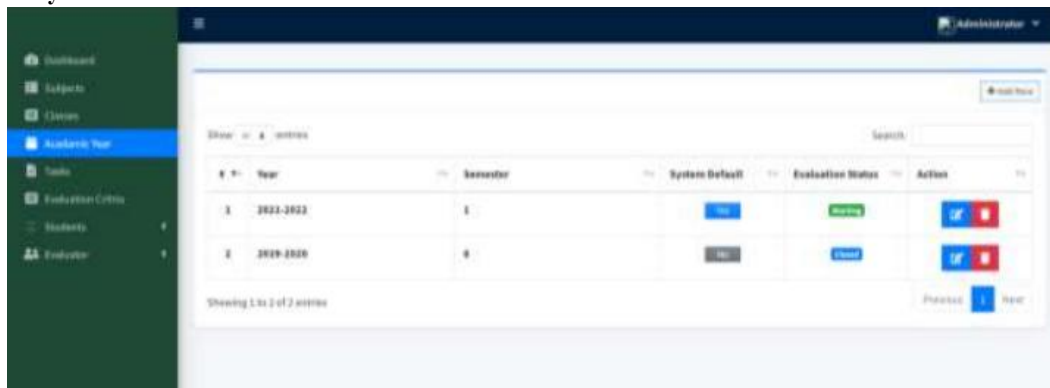
Add class

Fig4.3 Class list

Academic year
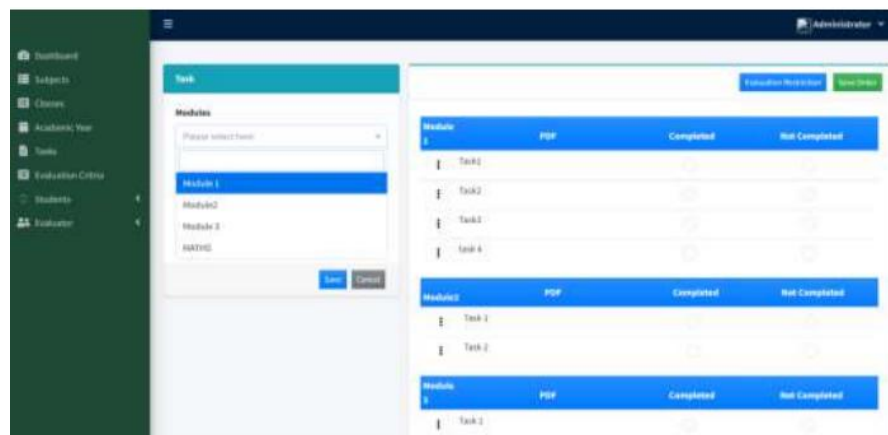

Fig 4.4 Add Academic year

Task
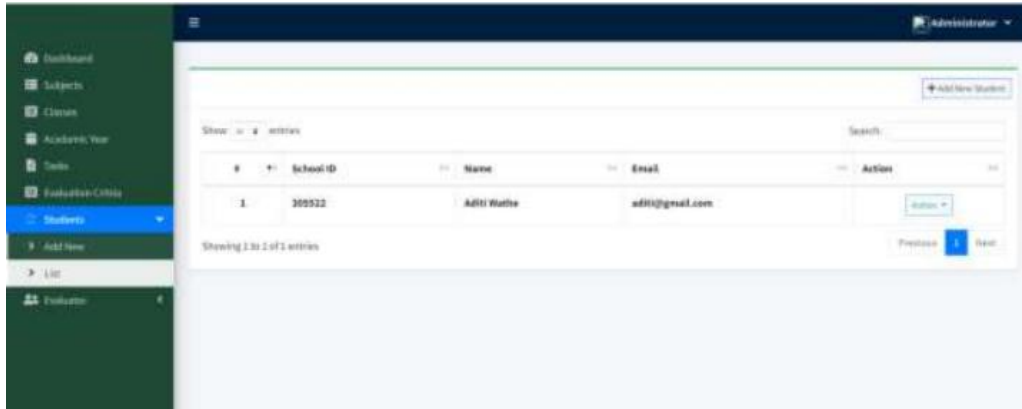

Fig 4.5 Add Task and module

Add student
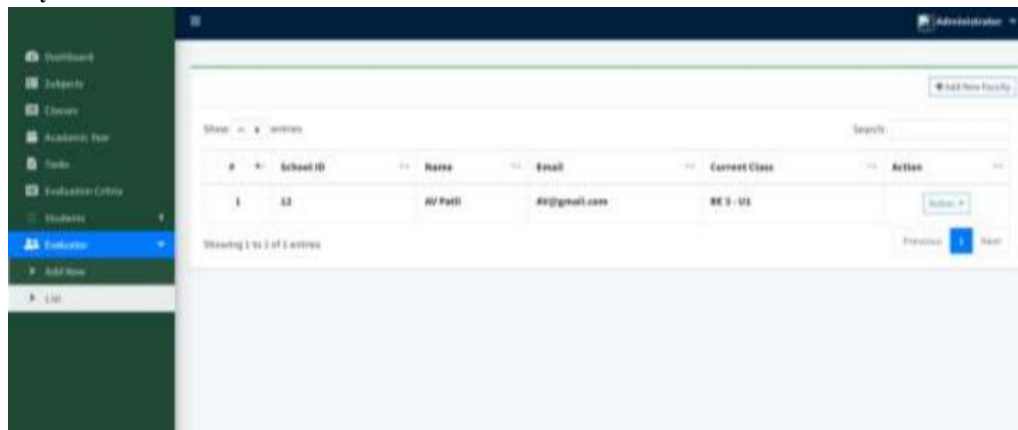

Fig 4.6 Add Student

Add Faculty

Fig 4.7 Add Faculty

Student portal

Fig 4.8 Student Portal

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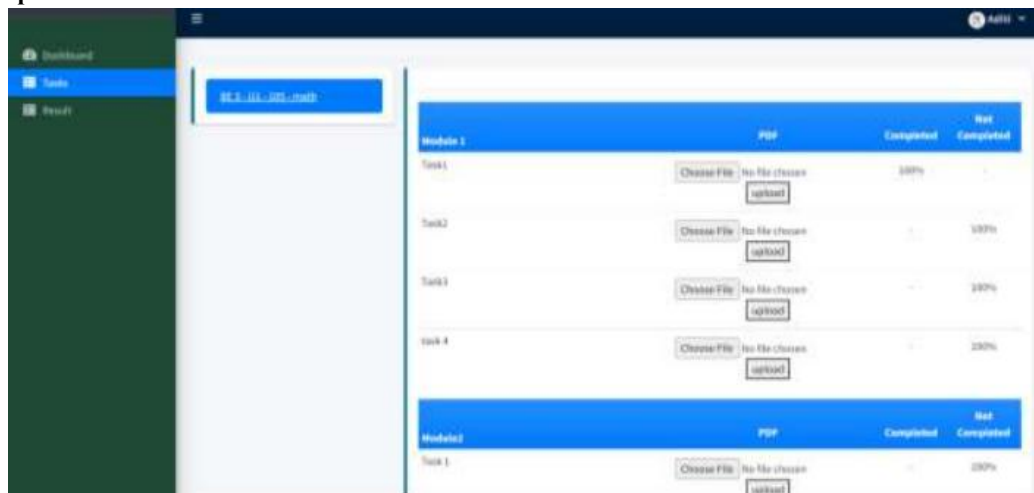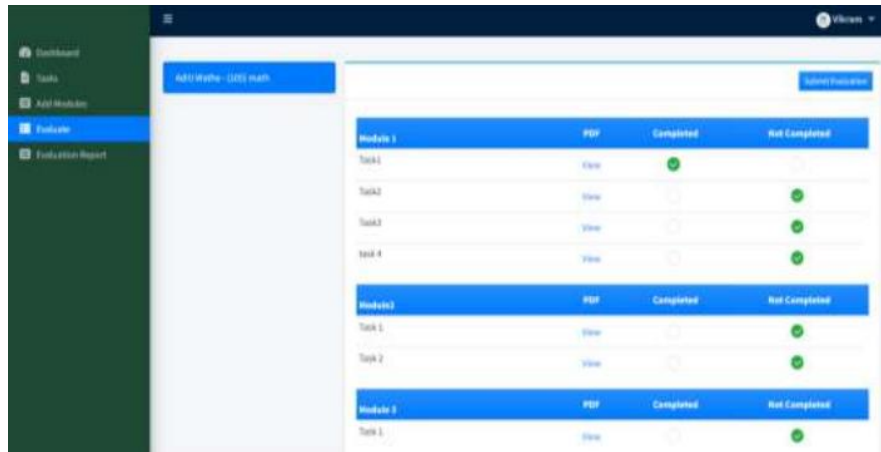**Faculty portal**

Evaluation

Fig 4.9 Evaluation portal
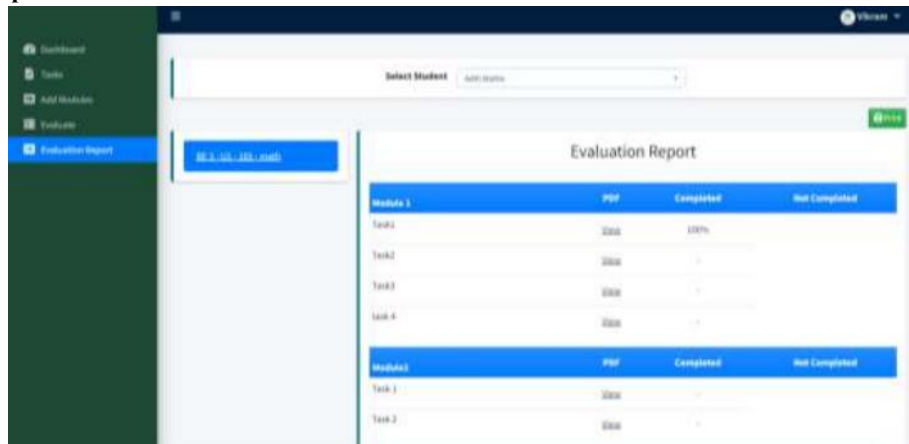
Evaluation report

Fig 4.10 Evaluation Report

Database

Create a Database Table Using MySQL. Now, start your SQL XAMPP server and select admin. This will direct you to the phpMyAdmin webpage. Now, log in with your username and password. Now, on the MyPHPAdmin, create a new databaseby clicking "New" on the left-hand side of a webpage.
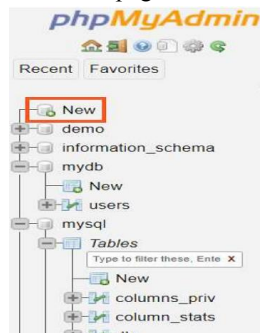

Fig 6.5 php my admin page

Next, enter a name for the database where it says "Create database.

Fig 4.11 Database creation

Then, you will be directed to the next page where you will create a new table. Now, enter the desired table name.
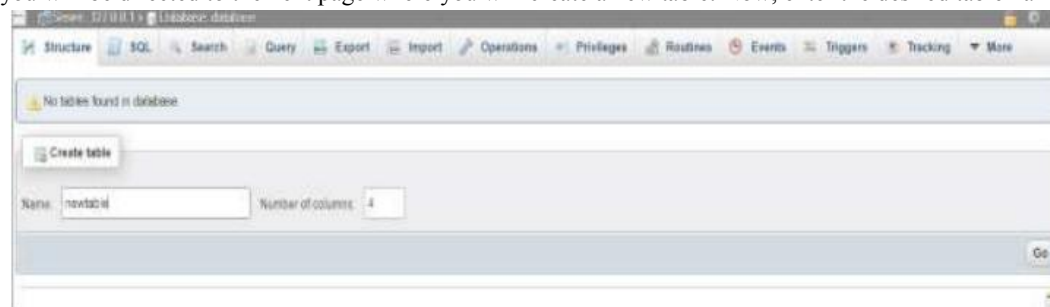

Fig 4.12 New table creation

Next, you can select the desired type of number for the 'Fields' text box. Once you have completed the steps, click the Go button. In the type of space, select these options.

Open a Connection to a MySQL Database.

Once you create a PhpMyAdmin database, your next step is to write a code on Visual Studio. Go to Microsoft visual code -
> create a new file and name it as DB connection. Now, in the code below, you will notice the function mysqli_connect().As the name suggests, it does the same task. It connects the database to the form that was

```php
<?php
$sname= "localhost";
```

$uname= "root";
$password = "";
$db_name = "test_db";
$conn = mysqli_connect ($sname, $uname, $password, $db_name);if (! $conn) {echo "Connection failed!";}
Now, execute the below SQL query to create the user table within your MySQL database.

Create the user table


```
Table structure for table `faculty_list`
--
CREATE TABLE `faculty_list` (
  `id` int(30) NOT NULL,
  `school_id` varchar(100) NOT NULL,
  `firstname` varchar(200) NOT NULL,
  `lastname` varchar(200) NOT NULL,
  `email` varchar(200) NOT NULL,
  `password` text NOT NULL,
  `avatar` text NOT NULL DEFAULT 'no-image-available.png',
  `date_created` datetime NOT NULL DEFAULT current_timestamp()
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

Fig 4.13 Query for creating table

o   id: serial number
o   School id: Faculty id
o   first name: Stores first name of the faculty
o   last name: Stores last name of the faculty
o   email: Stores email address of Faculty
o   Password: Store password
o   Date created: Stores date and time of creation.

Fig 4.14 Faculty list in database

Similarly all tables are created.

Fig 4.15 Database tables

V. CONCLUSION

Student Performance Evaluation System is an internet web site and may be used at anyplace, any time and by any student or college. This application can avoid the calculation and alter the method of visualizing results by students as well as faculty.

VI. ACKNOWLEDGMENT

REFERENCES

[1]. S. R. Bharamagoudar, R. B. Geeta, and S. G. Totad, "Web based student information management system," International Journal of Advanced Research in Computer and Communication Engineering, vol. 2, no. 6,2013.

[2]. Akinmosin James (2014). Automated Students Result Management System using

[3]. Oracle's Database, Forms and Reports. Journal of Information Engineering and Applications.

[4]. Walia S. and Gill K. S. (2014). A Framework for Web-based Student Record Management System using PHP. International Journal of Computer Science.

[5]. Ukem, E. et al. (2012). A software application for university students results processing. Journal of Theoretical and Applied Information Technology.

[6]. RSML Patibandla, AP Gopi, BT Rao (2021), Comparative Study on Analysis of Medical Images Using Deep Learning Techniques, Deep Learning for Biomedical Applications, 2021.

[7]. BT Rao, RSML Patibandla, (2021), Comparative Study on Security and Privacy Issues in VANETs, Cloud and IoT-Based Vehicular Ad Hoc Networks, 2021

[8]. A Peda Gopi, (2020)," Design and Analysis of CMOS LNA with Extended Bandwidth for RF Applications", Journal of Xi'an University of Architecture & Technology, Vol. 12, Issue. 3,pp.3759-3765.

[9]. SK Kotamraju, PG Arepalli, SS Kanumalli (2021), Implementation patterns of secured internet of things environment using advanced blockchain technologies, Materials Today: Proceedings, 2021.

[10]. Bijoy C., Sanjay K.P., Bhibak S., Nishal M. and Zarmit L. (2016). Accessing a portion of MIS: Result Management System. International Journal of Engineering Trends and Technology.