: MINOR PROJECT SYNOPSIS ON :

Student Management System – Web Application

JABALPUR ENGINEERING COLLEGE

Department of Master of Computer Application

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PREFACE

The student management system is an environment where all the process of the student in the institution is managed. It is done through the automated computerized method. Conventionally this system is done using papers, files, and binders.

This system saves the time of the student and of the administrator. It includes processes like registration of the student's details, assigning the department based on their course, and maintenance of the record. This system reduces the cost and workforce required for this job. As the system is online the information is globally present to everyone.

INTRODUCTION

"Student Management System (SMS) is a solution tool that is designed to track, maintain and manage all the data generated by a School, including the grades of a student, their attendance, their interpersonal activities records, etc.,"

A student management system is a software application designed to help educational institutions efficiently manage various aspects of student information, academic records, administrative tasks, and communication. It typically includes features such as enrollment management, attendance tracking, grade recording, course scheduling, and communication tools. This system streamlines processes for schools, colleges, and universities, enhancing overall organization and communication between students, faculty, and administrators.

SCOPE and OBJECTIVE of the SYSTEM

Student Registration: Managing the process of enrolling new students and storing their personal information.

Course Enrollment: Allowing students to select and enroll in courses for each semester or term.

Attendance Tracking: Recording and monitoring student attendance in classes.

Grading and Assessment: Managing grading criteria, entering grades, and calculating overall student performance.

Communication: Providing a platform for communication between students, teachers, and administrators.

Timetable Management: Creating and maintaining class schedules to avoid conflicts.

Student Records: Maintaining a central repository of student records, including academic history.

Payment Processing: Handling tuition and fee payments, and providing payment history.

Report Generation: Generating various reports such as attendance, grades, and progress reports.

User Roles and Permissions: Assigning different levels of access to administrators, teachers, students, and parents.

Notifications: Sending notifications for important events, deadlines, and announcements.

Data Security: Ensuring the security and privacy of student data.

The objectives of a student management system are →

- Efficiency: Streamlining administrative tasks to save time and resources.
- Accuracy: Ensuring accurate and up-to-date student information and records.
- Transparency: Allowing students and parents to access relevant information easily.
- Communication: Improving communication among students, teachers, and administrators.
- Data Analysis: Enabling data-driven decision-making through insights from attendance and performance records.
- Automation: Automating processes like generating reports and reminders.
- Accessibility: Providing a user-friendly interface accessible from various devices.
- Organization: Facilitating better organization of student-related information.
- Compliance: Helping institutions adhere to regulations and reporting requirements.
- Scalability: Handling growing numbers of students and courses without sacrificing quality.
- Collaboration: Fostering collaboration among stakeholders for improved educational outcomes.

FEASIBILITY STUDY

1. Technical Feasibility

In this project, I can say that this project will be technical feasible. This is successfully satisfying the users of the basis requirement. The tools and application software are used in this project are very popular and easily available across the world. My project is demo project completely applicable the ground level of department desktop computer this can easily enhanced by a team of experts on the basis of my project and its data collection report.

2. Operational Feasibility

There wouldn't be any of problem in this type of project, because "**Student Management System**" taking every possible decision to implement this type of system Anyone can easily use and understand the interface and features that are provided to the user or the viewer.

3. Economic Feasibility

Economic feasibility requires one to make the cost benefit analysis, if l say it in technical term. In a layman's language it is a comparison of the cost of installing system and benefits according from it. At this level the project may be called a demo project at desktop level. Therefore, it is not possible to measure the benefits accruing and cost of installtion. Such study can be made only the project advances to a higher level.

4. Legal Feasibility

This project is not expected to violate any statute made 3 under the Constitution of India and adition it is approved by 1GNOU to do this project.

5. Time Feasibility

This is depended on the internet speed and quite hardware specification of the user's computer system

SYSTEM REQUIREMENTS

H/W Required: →

- Processor type - Intel Pentium quad Core or above
- Ram-2 GB (at least)
- Graphic card type - If available (optional)

S/W Required: →

- Operating System- Windows/ Mac OS, Linux, etc.
- Web browser - Microsoft Edge, Mozilla Firefox, Google Chrome Etc., or any latest version of browser.

TECHNOLOGIES USED

Front End: →

1. **HTML**→

   Html or HyperText Markup Language, is a standard language used to create and structure content on the World Wide Web. It forms the foundation of web pages, allowing you to define the structure, layout, and elements that make up a webpage. HTML is not a programming language; it's a markup language used to describe the structure of content.

2. **CSS** →

   Cascading Style Sheets (CSS) is a style sheet language used to describe the presentation of a document written in HTML or XML. CSS3 is the latest major revision of CSS, building upon the foundation of CSS2 and bringing many new features and enhancements to web styling.

3. **JAVASCRIPT** →

JavaScript is a widely-used programming language that adds interactivity, dynamic behavior, and functionality to websites and web applications. It allows you to create dynamic content that can respond to user actions, manipulate the DOM (Document Object Model), and interact with servers.

4. **BOOTSTRAP →**

   Bootstrap is a popular open-source front-end framework that simplifies and speeds up the process of building responsive and visually appealing websites and web applications. Created by Twitter, Bootstrap provides a collection of pre-designed HTML, CSS, and JavaScript components that you can easily customize to create a modern and consistent user interface.

Back-end

1. PYTHON →

   Python is a popular high-level programming language known for its simplicity, readability, and versatility. It was created by Guido van Rossum and was first released in 1991. Python emphasizes code readability and allows programmers to express concepts in fewer lines of code compared to languages like C++ or Java.

2. DJANGO →

   Django is a high-level web framework written in Python that enables developers to build dynamic and robust web applications quickly and efficiently. It follows the "Don't Repeat Yourself" (DRY) principle and

encourages clean, reusable code. Django provides a wide range of tools and features that simplify various aspects of web development.

3. Math Library →

   The math library in Python is a built-in module that provides various mathematical functions and constants to perform mathematical operations. It is part of the Python Standard Library, meaning you don't need to install any additional packages to use it. The `math` module offers a wide range of functions for basic arithmetic, advanced mathematical calculations, and trigonometric operations. Here's an introduction to some of the

4. My Sql →

   MySQL is based on the relational database model, where data is organized into tables with rows and columns.
   Tables are related through keys, ensuring data integrity and enabling efficient querying.

5. SQL →

   Structured Query Language (SQL) is a domain-specific language used for managing and manipulating relational databases. It serves as a standard interface for interacting with databases,

allowing you to create, modify, retrieve, and manipulate data.

GOALS

- **Efficiency:**

  Automate tasks, reduce paperwork, and streamline administrative processes.

- **Data Accuracy:**

  Ensure precise student records for informed decision-making.

- **Communication:**

  Facilitate seamless interaction among students, parents, and staff.

- **Enrollment:**

  Simplify the enrollment process and manage student admissions efficiently.

- **Attendance Tracking:**

  Monitor student attendance for better engagement and intervention.

- **Academic Progress:**

  Monitor grades and assignments to track student performance.

- **Resource Allocation:**

  Optimize resource allocation based on enrollment and demand.

- **Reporting:**

  Generate accurate reports for regulatory compliance and performance analysis.

- **Security:**

  Safeguard student data and maintain data privacy and integrity.

- **Collaboration:**

  Foster collaboration between stakeholders for improved educational outcomes.

EXISTING SYSTEM →

In the current student management system is a basic file system that might be used in a college environment to manage student data and information. In such a scenario, a simple file-based system might involve using text or spreadsheet files to store and organize student-related data. However, keep in mind that modern college environments often utilize more sophisticated student management systems or databases for better efficiency and security.

PROPOSED SYSTEM →

A student management system streamlines administrative tasks, enhances communication, and improves data accuracy. It simplifies enrollment, attendance tracking, and grade management, while fostering collaboration among teachers, students, and parents. Automation reduces workload, analytics

provide insights, and data security ensures privacy, leading to efficient and effective educational management.

MODULES

1. Enquiry Management :- This module will help you to make the enquiry system more efficient in terms of follow up & enhance utilization of time of management as it works on self automated system. Since admission depends up on the no. of enquiry & how it is being handled & followed up on time.
Features:

- Online enquiry form.
- Course wise enquiry system.
- Different approach for different course enquiry.
- Centralized enquiry details of tables enquiry, telephonic enquiry & online enquiry. · Report generation of enquiry as per day, week and month.
- Automated per day follow up list generation.
- Automated email/sms follow up system.
- .

2. Students Management : - The student module enables you to store all personal, academic, professional and history data regarding a student, his/her parents, and his/her siblings..
Features:

- Maintain record of all valuable information about every student
- Student?s record can be edited as per requirement.
- Information about alumni students would be given in this module.
- Change of course & batch can be done easily.

6. **Fees Management** :- The fee module enables you to maintain registers of fee receipts and outstanding amounts on a student/class basis. The fee module has a configurable structure for different fee head, and its calculations thereof. This module also provisions for fee waivers and optional fees.

Features: →

- Computerized Billing
- Various modes of payment by internet banking, credit or debit cards.
- Different type of fee, fine and other charges can be customized as per student and class.
- You can verify fee structure of different classes.
- Amount dues and amount received can be viewed as per month and year with all/specific, class/section or individual student.
- Easy Counter payment process.
- Fee dues alert.
- Online fee payment
- Printing facility is not mandatory, payment and receipt can be generated on one go.
- Report on the basis of fee recovered.

4. Examination Management :- The examination is the excellent module which covers planning execution, maintenance and monitoring progress. All examination?s result like class test, quiz, internal/ external exams etc. will be online.

Features: →

- Online result of every exam.
- Online planning execution, maintenance and monitoring progress
- Can be effectively used to create examination schedules.
- Take printout of every exam/test report instantly.
- Students and teachers have profile-based access to the schedule
- Send result of every exam/test to parents mobile automatic
- Get details of every exam/test, student wise/batch wise.

5. User Management :- This module is used by the administrator to prevent unauthorized access to the system. Any user logging into the system can access only those functions for which he/she has been granted rights for.

Features: →

- Transparency in Institute management
- Secure in case of unauthorized access
- Can reserve the rights to access

6. Open Test Results :- This module is very much helpful to publish results of any open tests conducted by institution for scholarship purpose.

Features: →

- Different exams results can be published online on institution?s website
- Students results can be managed very easily.
- Students will get his results by entering his BOD & Enrollment no.

7. Manage Attendance :- This module is very much helpful to manage attendance of students of all courses & batches. Absentee remarks can be managed very easily.

Features:

- Manage attendance course & batch wise.
- Summary of attendance can be viewed at one place.
- Attendance report can be filtered course & batch wise.
- Total absentee reports with remarks can be viewed.

8. Staff :- This module is very much helpful to manage all staffs personal information & information can be updated time to time as per requirement.

Features:

- Keep all staffs records at one place

- Very easy to maintain & update staff records.

9. Library :- All books details can be stored at one place with management of issuing & receiving books.

Features:

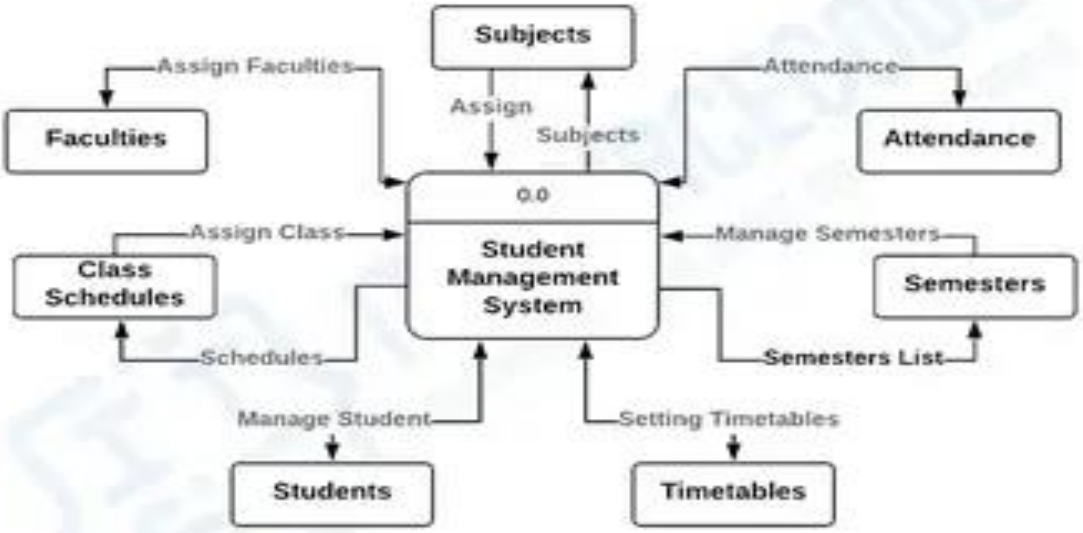
- Manage all books details at one place with no. of books, volume, author, etc
- Issuing & receiving books can be managed.

10. Configure Course/Subject :- Course/Subject modules helps to feed the details like course code, name and duration.

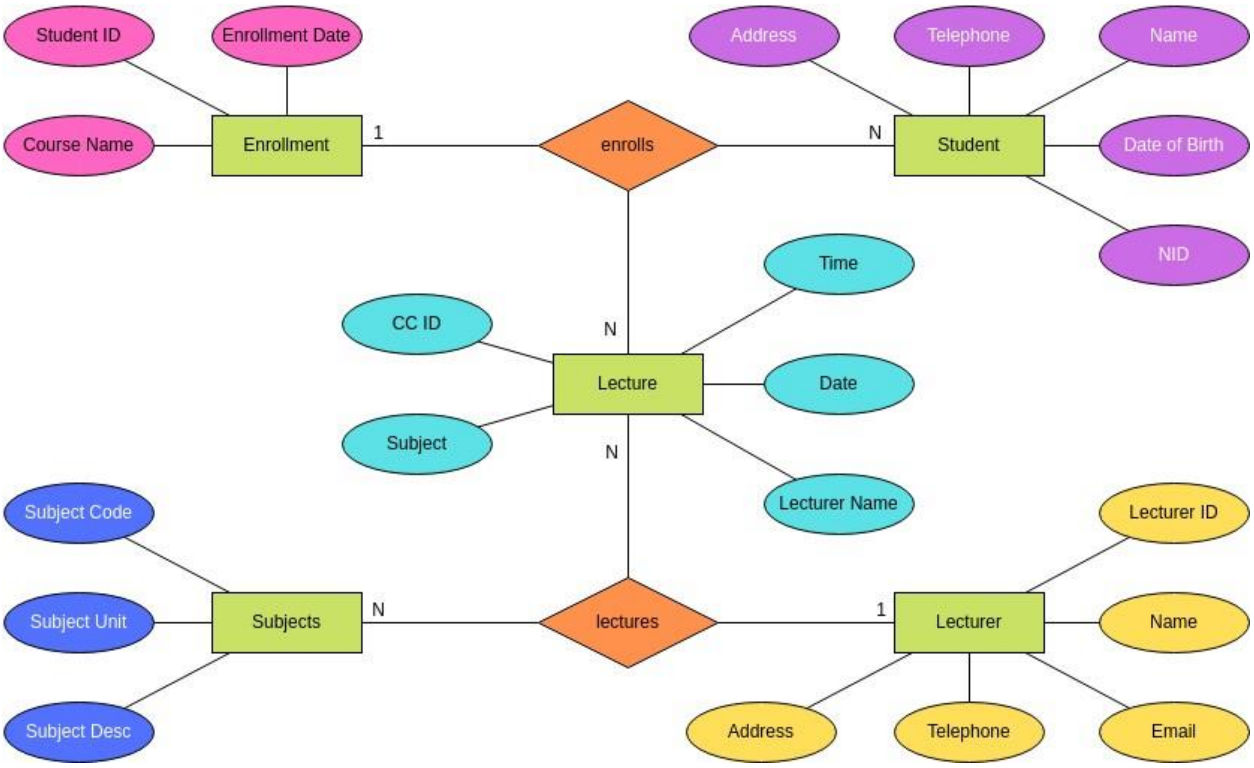
Features:

- It can specify the course like course name, duration for that course.
- Records about Session start date and end date, for which the course is defined. · Information of course fees other fee and course.
- It can also define course set like no. of sets for each course, seat category Stream etc (Science, commerce etc).
- Mail & SMS on enquiry c an be formatted time to time course wise.
- Automated follow up Mail & SMS for enquiry can be formatted according to required frequency of time & course wise.

DFD (DATA-FLOW DIAGRAM)


Subjects
Assign Faculties
Attendance
Faculties
Assign
Subjects
Attendance
0.0
Assign Class
Manage Semesters
Class Schedules
Student Management System
Semesters
Schedules
Semesters List
Manage Student
Setting Timetables
Students
Timetables

ER DIAGRAM SQL DataBase



BIBLIOGRAPHY

This project is made by the following helps and guidance

For project section:

Web developer tutorials - for application development

Training Center
YouTube Channels - for Implementation
GitHub - for sample codes to practice