



ENGINEERING COLLEGE AUTOMATION SYSTEM

APPLICATION

A Report for the Evaluation 3 of Project-2

Submitted by

SWATI KUMARI
(1613101773/16SCSE101244)

*in partial fulfilment for the award of the degree
of*

Bachelor of Technology

IN

Computer Science and Engineering

SCHOOL OF COMPUTING SCIENCE AND ENGINEERING

**Under the Supervision of
Mr. Jay Prakash, Assistant
Professor**

APRIL/MAY-2020

TABLE OF CONTENTS

CHAPTER No.	TITLE	PAGE NO.
1.	Abstract	1
2.	Introduction	2
4.	Existing System	5
5.	Proposed System	7
6.	Implementation and Architecture Diagram	10
7.	Output/Result/Screenshot	15
8.	Conclusion and Future Enhancement	18
9.	References	20

ABSTRACT

This paper gives the thought regarding how the mechanization in getting to of any data should be possible in the Engineering College. The exchange that should be possible is as per the client and client prerequisites. This paper will empower universities to lead exchange and have robotized checking data of the task's dependent on the handling of school. This paper presents the framework that will likewise give the office to discover how data is moved in everywhere throughout the branches of the school. All the exchange is done in the divisions of the school and afterward can be sent to the University.

will work on college area network. It will include all the four departments in the college. It will have admission system for, class attendance, online notes and notice board, placement systems so that their students can get all the information by using their valid registration id and password. Let us see how this College Automation System Project will work. College Automation System Project will also help the college administrator. Administrator will able to get all the information regarding any faculty members on particular day and time. Admin panel will also able to edit the login display panel of teachers, staff members, students etc. Admin can add person, delete person, can give special permission. Admin can schedule classes, their lectures time. Teachers can get information of any students under their particular class. Teachers can also make query by using grade, percentage, can see list of students who comes

under the category of attendance shortage and many more under this one roof. For student section, they can get any particular teacher's notes of particular day and other information regarding their campus, such as placement session details, upcoming companies in particular month, their criteria, their venue details and many more. Student section will also include learning section, so that students can prepare for their exams.

INTRODUCTION

College Automation System is a software that helps both the students and the management authorities of the college. Our College Automation System is capable of storing the details of the students and the teachers and also maintain their details in a dynamic order. This software can help us explore all the activities happening inside the college which we as students do not have any knowledge about. It can handle the details of students, teachers and head of the departments . In this system the HOD can maintain every detail of a particular student in his department. He can also post any notice corresponding to his department. He can also grant a student his attendance and allowance to appear for the examination. There is also a question and answer portal in our project in where anybody is able to post a question and anybody is able to answer that question. In case of a student the name and the department of the student will also be displayed in the question bar. This system provides detailed structure of the departments of the college and the facilities of the college. Our system synchronizes the working of all departments. This software can help us explore all the activities happening inside the college which we as students do not have any knowledge about. It can handle the details of students, teachers and head of the departments. In this system the HOD can maintain every detail of a particular student in his department. He can also post any notice corresponding to his department. He can also grant a student his attendance and allowance to appear for the examination. There is also a question and answer portal in our project in where anybody is able to post a question and anybody is able to answer that question. In case of a student the name and the department of the student will also be displayed in the question bar. This system provides detailed structure of the departments of the college and the facilities of the college. Our system synchronizes the working of all departments.

LITERATURE SURVEY

Definition Of The Problem:

Today all the major work of a college is done by pen and paper method. The admission department has to manually forward the details of the students to other departments like examination department so that they can insert their details into their database. Technically until and unless the student has been registered into the university their details do not go to the examination department. The pen and paper method is very time consuming and takes in much more effort and time. Since each day the number of students is growing and so is the amount of data relied to them, it is facing difficulties in maintaining the records of the students. It is thus required to build up a computerized system that can both work as the representing side of the college and the working side of the institution. It is necessary to build up a system that can work automatically with lesser effort than the previous method and also be hundred percent trustworthy..

Objective:

The main objective of the system is to reduce the consumption of time during maintenance of record of the college students. The Head of the department's role also include the maintenance of the details of the teacher. He can also maintain the attendance of each of his students under his department. He will fill in the internal of the student that will directly go to the examination department in a tabular format so that they do not have any hesitation in calculating the final marks of the students. In other words our College automation system has, following objectives:

- Simple easy database maintained.
- To manage the tasks related to the students and authorities.
- User interface are user friendly.

All of the works of a college are under one system so that there is no chance of external errors. A portal that can cater the questions of a student and a teacher will directly see them and answer their questions.

Methodology

The process development used in our project is the waterfall model. The waterfall model: The waterfall model is a sequential design process of a software, in which progress is seen as a process flowing steadily downwards (like waterfall). through the process of conception , initiation, analysis, design, construction, testing, Production / implementation and maintenance.

The waterfall model are used in industries were the cost of after the fact changes are prohibitively costly, if not impossible. This is also called a hardware–oriented model for development of software.

. Reasons for Selecting Waterfall Model for Our Project:

- Since we have well known, clean and fixed requirements therefore it best suits our project.
- Our project definition is stable.
- Technology is clearly understood.
- The project is comparatively short.

Disadvantages of Waterfall Model:

- Once an application in its testing phases, it is very difficult to go back and change something that was not thought well through the concept stage
- High amount of risk and uncertainty.
- Poor model theoretically for long and ongoing projects.

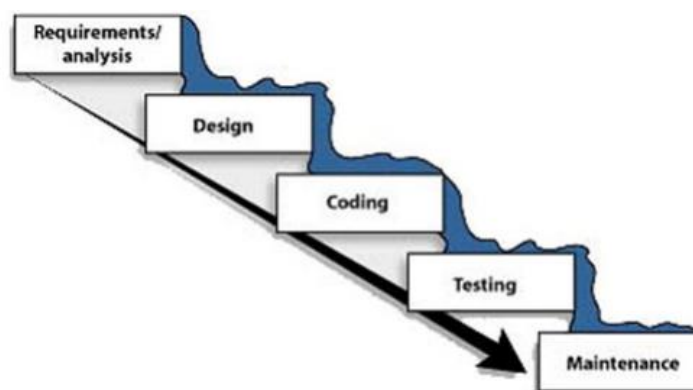


Fig.I: Development Process

EXISTING SYSTEM

In customary class seating, student participation record is one of the significant issues manage any school, school and college. To keep the student participation, record legitimate and right, the personnel staff ought to have an appropriate component for confirming and keeping up or dealing with that participation record on standard premise. Workforce staff may encounter trouble in both confirming and keeping up every student's record in study hall condition on ordinary premise, particularly in classes went to by countless students. By and by, the manual framework likewise requires more opportunity for recording and figuring the normal participation of each selected student. Then again looking and issue books from library, checking charge duty are tedious and exhausting work. The majority of the guardians are unconscious about their kid conduct and progress. Because of constrained stockpiling new records can't be added. Staff need to fill participation and transfer manually. Images with static face is distinguished appearances with demeaners can't be recognized.

PROPOSED SYSTEM

In a cutting-edge time Automated participation framework is a generally excellent showing of computerization. It requires less time, less massive. This framework is utilized for producing a participation report of faculty and utilized for security reason too. In the market different mechanized participation frameworks are accessible. Biometric participation framework, punch card, swipe card are instances of robotized participation framework. To conquer a few issues related with these frameworks. We are joining to strategies that are RFID card and Face acknowledgment. Huge database is utilized to look after records. The framework additionally causes the staff to effectively discover defaulters in a solitary snap. In this framework we can gauge participation of student at school entryway by utilizing face acknowledgment, here info is face of student. Square calculation is utilized for face acknowledgment to coordinate countenances of student with learner information. Again, in study hall participation is taken by RFID tag, RFID Reader. These two records at that point converge to outline create last participation report. Month to month, feebly participation report of student is produced by framework, normal participation of student is determined and educators can give term work marks rely upon normal participation of specific student. Participation report is sent to the online interface by the framework. Approved individual chooses to which notice, sees send to parent and Student Application through web-based interface. Android application is utilized for association between instructor, guardians and student. Instructor can send student participation, marks, every day record of student to guardians, additionally can send significant notes, test timetable, Library data notice to student. Student can offer criticism to instructor utilizing same android application.

Implementation and Architecture Diagram

A system architecture is a conceptual model that defines the structure, behaviour, and more views of a system. An architecture description is a formal description and representation of a system, organized in a way that supports reasoning about the structures and behaviours of the system. Fig shows the web application and the android application access data from common Database server through the internet.

The proposed system has an android OS, a web services, a database server and the user as its components. The user can login to the application through an android smart phone. The development of the new system contains the following activities, which try to automate the entire process keeping in view of the database integration approach

- User friendliness is provided in the application with various controls.
- The system makes the overall project management much easier and flexible.
- It can be accessed over the Internet.
- Various classes have been used to provide file upload and mail features.
- There is no risk of data mismanagement at any level while the project development is under process.
- It provides high level of security using different protocols like https etc.
- Students can view their entire details by using their android application.

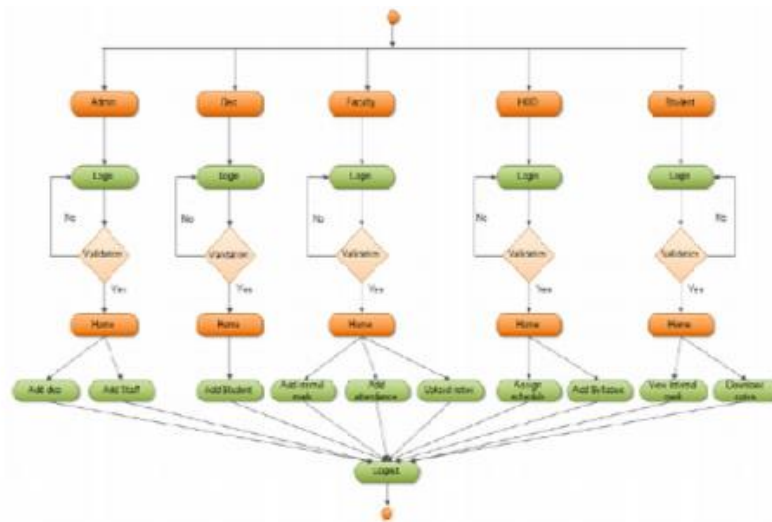


Fig 1: System Architecture Diagram

MODULES:

1 User Module: In this module we are authenticating the users by providing username and password. If username and password is valid then they will be taken to their screens. To identify user we are using unique IMEI number of android device with the number stored at server. When they get matched with each other system checks the status of that device and transfer the control to respective user-interface.

2. Attendance Module:

The purpose of Attendance Entry Module is to enter the attendance. In this module Lecturer takes the attendance and they select the branch, semester and year. After this session he enters into attendance page. Here staff makes a mark on the absentees. Lecturers are only allowed to take attendance during their lecture time.

3 .Marks Entry Module:

The marks scored by the students are stored in the database through this module. The exam cell will login, select the type of the exam e.g., unit test, model exam and then the year, section and subject in the application which displays the students list. Now, the marks for each student is entered and submitted to store in the database.

4 Report Generation Module:

This module allows the HOD and Lecturer to generate various reports on the student attendance and marks data. To generate reports, the user must login through app and ensures that internet is on. In this module, application generates PDF file dynamically using java program.

5 Auto Calculation Module:

Automatically calculate the total internal marks and attendance percentage.

WORKFLOW :

The detailed workflow of this application is as follows: The application is divided into 5 sub-groups.

1. Admin:

- Admin will maintain the entire administration like Authorization, Authentication, permissions, history tracking, troubleshooting etc.

2. DEO:

- DEO (Data Entry Operator) can add, edit and view student details.

3. Faculty:

- Faculty can view syllabus, time table, schedules, student details etc.
- They can view and add internal marks and attendance.
- Can send e-mail notifications to students and parents.
- Faculty will access all the four year student information and go through his Time table as their daily activities as scheduled.
- She/he can send or receive any kind of information by using Notification tab.
- Teachers can also upload notes and question papers to the application branch wise & subject wise.

4. HOD:

- HOD can view faculty, assign subjects, view internal marks, view attendance, add class details etc

5. Students:

- The Student will access all information (Subjects, Faculty, and Schedule) and maintain a good relation with faculty and his/her classmates as well.
- He/she can send or receive any kind of information (Clarification, Queries, Notice) by using Notification tab.
- Students can download the notes and question papers of all subjects of engineering branch wise.

Architectural Design

