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Android Application for National Engineering College

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ABSTRACT

The need of digitization is growing fast that people don't have time to access the website which is somewhat complicated and it needs a PC or a laptop to access it conveniently. This is the era of switching over to mobile applications from web applications. Nowadays people prefer to access any applications in their mobile phone itself which gives them a user friendly feel. By accessing the website as an application in their mobile phones in anywhere and at any time since they can view and update details in their mobile phone itself which can be updated in the database. The application includes various modules which allow the students and staffs to access the datas and to update the datas respectively. This paper proposes an android application for accessing the website of our college in a user friendly manner. The students can view their details like personal biodata, marks updates and the attendance updates which are updated by the staffs.

Keywords: Digitization, user friendly, data updates, modules for student and staff.

1. INTRODUCTION

An Android application for the website of our college includes the home page and the Student and Staff ERP which holds the major role in the website usage. This mobile based application helps the user to access all the details by logging into their account. This paper is done to made easier, the access for our college website and the Student ERP and the staff ERP. The application starts with the splash screen and in the next two tabs includes the login pages for student and the staff. by entering their unique Id and the Password they can login into their account which includes all the details. the validation can be done using the php connectivity and web service as the database. The details can be retrieved when the constraints are met. Each and every details are unique according to their ID. This mobile based application saves a lot of user's time. It also helps in a major improvement in digitization of the society.

2. BACKGROUND AND RELATED WORK

The existing system of having website for the college to know about the college and all the details of the college and to access the ERP details of students and staffs and the news and upcoming events of the college is quite complicated.

Problems:

1. The user needs a PC or a laptop to access the website clearly and it needs to be responsive.
2. To make website responsive it needs some complicated codes for the developer.
3. The updates can be made anywhere by using this android application at anytime which cannot be done in the website.

3. SYSTEM ARCHITECTURE

This system provides majorly three modules, which are mentioned below. The system provides user friendly GUI and data flows to all modules in dynamic way. The three major modules of the system are,

Modules:

1. Student Login and Staff Login
2. Student ERP
3. Staff ERP

3.1. Student Login and Staff Login

This module is specifically designed for the home page of the college which includes the about us page of the college and separate login pages for Student and Staff. The about us page includes the details of the college and the Managing Director, Principal, Chairman's message about the college.

The features provided in this module are

1. MD's Message
2. Principal's Message
3. Chairman's Message
4. Student Login
5. Staff Login

3.2. STUDENT LOGIN

The Student login includes the fields to enter the ID and the Password and it is validated with the backend data where the web service of the college includes the previously stored data about the student details like register number and the date of birth which are used as login Id and Password respectively.

3.3. STAFF LOGIN

The Staff Login includes the same fields as the student login has. All the staff login process are validated with the backend data where the web service of the college includes the previously stored data about the staff details like their unique Id and personal password respectively.

3.4. Student ERP

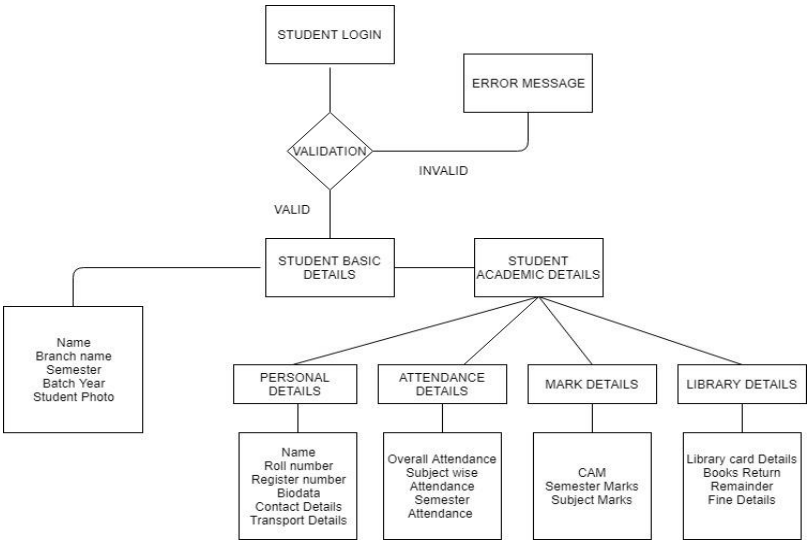
The student ERP includes two main sections- the basic student details and the students personal biodata, the attendance details, the marks details, and the library details. Personal Biodata includes many attributes like the name, application number, admission number, the Adhaar number, date of joining, parents details, communication details and transport details. The attendance details includes the daily attendance, weekly attendance, subject wise attendance and the overall semester attendance. The mark details includes the internal marks, each semester marks. The library details includes the remainder about the books, fine details, books pending details etc.

The features provided in this module are:

1. Personal Biodata
2. Attendance details

3. Mark details
4. Library details

The module diagram for student ERP is as follows,



3.5. Staff ERP

This module has some special features which helps the staffs to enter update the students attendance and the marks in efficient and user friendly manner. The attendance update of the students can be updated by the staff. It includes the daily attendance, cumulative attendance, monthly attendance report etc. The syllabus entry includes the subject wise syllabus details and year plan etc. The marks of the students can be updated by the staff in the staff ERP Portal. The COE marks can be calculated automatically by the portal. The overall data entry and data retrieval process are done in a efficient manner by the staffs.

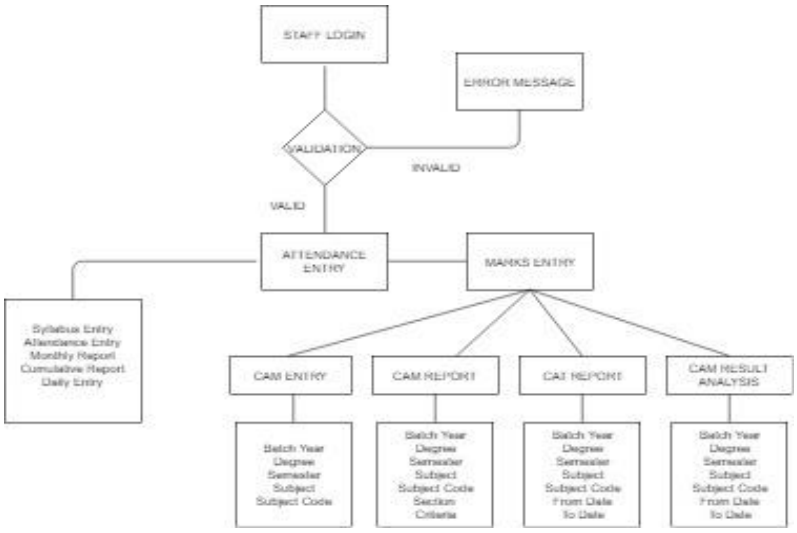
The features provided are:

1. Attendance Entry
2. Syllabus Entry
3. COE
4. Mark Entry
5. HR
6. Schedule

4. METHODOLOGY

This paper is done to made easier, the access for our college website and the Student ERP and the staff ERP. The application starts with the splash screen and in the next two tabs includes the login pages for student and the staff. by entering their unique Id and the Password they can login into their account which includes all the details. the

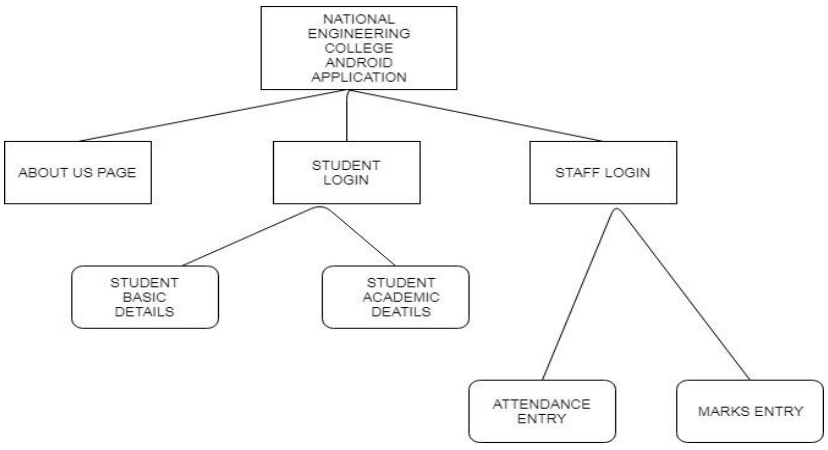
validation can be done using the php connectivity and web service as the database. The details can be retrieved when the constraints are met. Each and every details are unique according to their ID.



For example if the student want to access his/her account, he/she has to login using their register number as their login id and their date of birth as their password. It is validated in the back end data and the Unique details are displayed corresponding to their ID. For the s student account the details cannot be edited since the access for editing is denied for the students.

But, for the staff ERP, the user is allowed to update or edit the student details such as the attendance updates, Marks details, the internal marks calculation, year plan updates, syllabus updates, schedule updates and the COE and HR details.

The working of the system is shown in a flow chart.



After all the processes are done by the staffs and students the changes made are updated and committed in the database that is the web server of the college. Then the user can logout from the portal and can exit the application.

5. CONCLUSION

The current system of having website is old fashioned and time consuming and includes lot of manual work. Technologies like Android, Digitization has raised the evolution of this type of application which helps the user to access the ERP in their mobile phones which reduces their manual work and it becomes efficient since it can be accessed anywhere and at any time.

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