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Design E - Notice Board using Effective web Technologies for Educational Organizations

Mrs.A.S.Khandagale, Ms.Rakhi Mondal, Ms.Anushka Darvatkar, Ms.Roshni Bhoirkar

Department of Information Technology, All India Shri Shivaji Memorial Society, Pune, India

ABSTRACT: Notice board is the one of the best medium to communicate with the mass media. Notice boards are commonly used at the public utility places, Schools and Colleges. The project, GSM Supported E-Notice Board is an SMS-based and Web-Based notice display board system, designed to improve the noticing processes by using GSM. There is need to have system which can update notice on different location simultaneously. The proposed system will help user to display notices from anywhere with the help of web application. User sends the notices by SMS, which is received at GSM modem and display on web application. Notice will display in the form of text and Image also. This project is our experiment on real time noticing. This gives you an overview of how to design a wireless electronic notice board. This notice board displays the information on LCD display whatever you sent from the mobile.

KEYWORDS: Android, GSM (Global System for mobile), Notice Board, SMS (Short Messaging Service).

I. INTRODUCTION

This document will provide a general description of our project, including user requirements, product perspective, and overview of requirements, general constraints. In addition, it will also provide the specific requirements and functionality needed for this project – such as interface, functional requirements and performance requirements. In our project, we are using Centralized system because there are number of users, who access data. All updates are taken place on one database so there are no chances on duplication. All modules have its own method to access database.

The display boards are one of the major communications medium for mass media. Also we realize that this project saves time, energy and hence environment. Cost of printing and photocopying is also reduced as information can be given to a large number of people from our fingertips. Thus we can conclude that this project is just a start, an idea to make use of wireless in communications to a next level.

Data objects that will be managed/manipulated by the software are described in this section. The database entities or less or data structures required to be described. For data objects details can be given as below. For storing the all the details of the users we are using the MySQL database.

Observing the current technology trend a need of digital notice board that is smart enough is essential. E – Notice board notice which saves time, energy and hence environment. Cost of printing and photocopying is also reduced as information can be given to a large number of people from our fingertips. Thus we can conclude that this paper gives an idea to make use of GSM in communications to a next level.

This project divides into two major parts. First is super admin, in that super admin adds notice in the form of text as well as image. While adding notice admin add date and expiry time of particular date. Second part of system is staff/faculty; staff adds students with name and contact number. Department wise notice send to student who belongs to that department.

The main objective of the system will be:

1. To develop a wireless technology for user.
2. To design simple user friendly system.
3. To easily keep track of notice board by the user with respect to date and time.

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4. To develop a dynamic notice structure/model.

II. LITERATURE SURVEY

1). N. Jagan Mohan Reddy et al, "Wireless electronic display board using GSM technology", International Journal of Electrical, Electronics and Data Communication, vol. 1, no. 10, pp. 50-54, 2013.

This paper carries out a detailed review of the various techniques employed in the recent years in GSM technology. It discusses the current innovations in technology, and within this context, the operation of wireless electronic display boards using GSM technology has been reviewed. The important techniques used in past are also tabulated. Various technical papers and articles on wireless technology have been analysed. The paper takes an inquisitive approach to the proposals and prototypes of an electronic display board obtained using GSM, which can be used in public areas for information dissemination. Although this review paper cannot be all-inclusive, it may serve as a reference for further analysis in the domain of GSM and its application in wireless notice boards[1].

2). GaminiJayasinghe et.al. "A GSM alarm device for disaster early warning," in IEEE conference on Industrial and Information Systems, pp. 383-387, 2006.

The paper describes the design and development of an alarm device that can disseminate disaster early warnings to threatened communities over the GSM network. The device is capable of generating audible, high-volume alarms, flashlights and turning on an in-built radio in response to a warning message from an authorized entity via GSM's short message service (SMS) or cell broadcast (CB). The design of the device follows international guidelines on emergency communications, such as the ability to reach a large number of people very fast, awaken sleeping communities, and be able to acknowledge warning messages. The alarm has been designed as a last-mile technology in a larger Disaster Early Warning network (DEWN). It is intended to be placed in selected locations such as police stations, places of religious places and community centres. Thus the DEWN System and thus the Alarm Device presents a unique opportunity to test the concept of GSM for Warning" [2].

3). N. Khera, A. Verma, "Development of Simple and Low Cost Android Based Wireless Notice Board International Conference on Reliability, Infocom Technologies and Optimization. 978-1-5090-1489-7/16, 2016.

In this paper, the development of simple and low cost Android based wireless notice board is presented. The proposed system uses either Bluetooth or Wi-Fi based wireless serial data communication. For this purpose Android based application programs for Bluetooth and Wi-Fi communication between Android based personal digital assistant devices and remote wireless display board are used. At receiver end, a low cost microcontroller board (Arduino Uno) is programmed to receive and display messages in any of the above communication mode. Using the developed system, two different applications for displaying messages on a remote digital notice board and wireless person calling has been implemented. The developed system will therefore aim at wirelessly sharing the information with intended users and also helps in saving the time and the cost for paper and printing hardware[3].

4). Z.Wanli, "The design of communications dispatch module based on GSM", in IEEE conference on Computer Technology and Development, pp. 583-585, Nov. 2010.

This paper introduces a kind of intelligent communications dispatch terminal equipment. The equipment is applied to taxi. Its core technology is GSM short message module. The paper describes the overall design of this application in detail. And it studies the power system in terminal blocks, the overall circuit design, short message sending and receiving control. The module of taxi communications scheduling provides an economical and practical technical project for vehicles tracking, call and management[4].

5). N. Deblauwe, "GSM-based Positioning: Techniques and Applications", Vubpress, Brussels university press, 2008.

This dissertation reports on the opportunities for GSM-based positioning techniques anno 2008. Practically, this means that both the typical structure of dense (sub)urban networks and the possibilities of modern handsets are taken into account. The potential of the techniques under study is every time evaluated for the stringent demands of the upcoming generation of location-based services (LBS). Though privacy issues are not explicitly dealt with, it is noteworthy that all developed techniques focus on a terminal-based implementation. This means that a user keeps full control over his position information. This work shows that GSM-based positioning techniques – especially in a terminal-based implementation – have their use within a context of location-based services[5].

6) Transmission Policies for Multi-Segment Short Messages [2015]:

This paper proposed analytic models to investigate two multi-segment XI short message transmission policies. The analytic models were validated against by more than 100 million measured data obtained from a 6-month commercial SMS operation. This analytic model can effectively speed up network planning for commercial SMS operation[6].

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III. SURVEY TABLE

Project name	Year	Author	Advantages	Limitation	Application
GSM Wireless Communication System	2010	GuifenGu and GuiliPeng	1. Knowledge about GSM Seviles. 2. we can connect without internet	Communication consumes cost. Its not free service.	Cellular Communication System.
Display Message on Notice Board using GSM	2013	ForamKamdar, Anubbhav Malhotra and PritishMahadik	1. we can use in advertisement world. 2. we can use in public utility areas	There is limitation of number of cahtraters used in SMS.	LCD Display's used to Notify Notices.
Wireless Electronics Display Board Using GSM Technology	2013	N. Jagan Mohan Reddy and G.Venkeshwaral u	1. Effective use of LCD display. 2. Effective use of electronic boards.	Network problem could happens at some palces.	Remote Notice Board by using GSM device.
SMART NOTICE BOARD	2013	Shruthi K., HarshaChawla, Abhishek Bhaduri	1. Quick communication with digital system. 2. Effective use of LCD Notice board.	Only one notice shows at a time.	Notice board with many features.
A Protocol for End-to-End Secure Transmission of SMS	2014	NeeteshSaxena and Narendra S. Chaudhari	1. Define woking of Transmission Protocols.	Speed of transmission of notices depends on network.	Transmission protocol for SMS service.
Transmission Policies for Multi-Segment Short Messages	2015	Yi-Bing Lin, Sok-Ian Sou	1. Define process of communication. 2. Shows working of SMS (Short message services).	Limited Characters should be accepted while Transmitting SMS.	Transmission policies for SMS service.

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IV. SYSTEM ARCHITECTURE

The proposed system uses Wi-Fi based wireless serial data communication in displaying messages on a remote digital notice board. Android based Application programs available for Wi-Fi communication for personal digital assistant (PDA) devices are used for transmitting the alpha-numeric text messages. Using the Wi-Fi based serial data communication technique, the corresponding transceiver module has been interfaced with microcontroller board at the receiver end. For this purpose, a programmed is developed to receive alphanumeric text messages in any of the above selected communication modes. The proposed system will help in reducing the human effort, paper, printer ink and cost for manual changing of the notices.

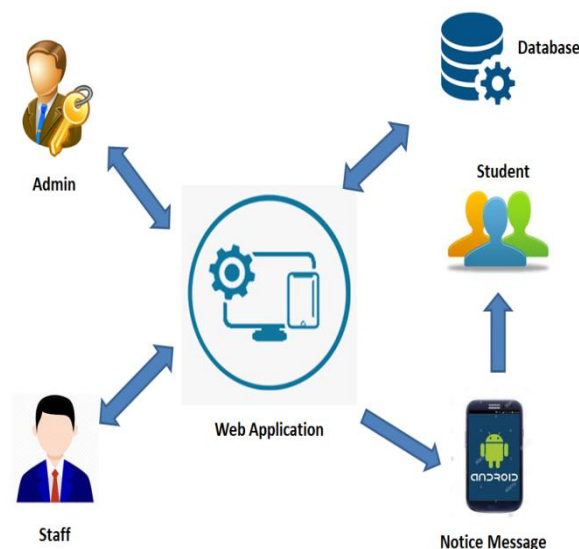


Figure 1: System Architecture

Module Description

Add Notice

In this module user is going to add the notices. For adding notices, only the authenticate user will add the notices. For adding notices user must be login into the system. Before login user should have to register. While adding notice User has to enter the notice, its title and also priority. Priority is mainly use to send notices for display. If the priority is important, then that notice is immediately displayed on the notice board .User also have to set date and time for particular notice.

Update Notice

In this module user will update the notices. Updating of notice will be performing on the basis of search by title and date.

Delete Notice

In this module user will delete notice. Notices will get deleted on the basis of search by title and date.

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Send Notice

My SQL is mainly use for the sending notice to display on the notice board also scheduling will be performed using My SQL on the basis of date and time. My SQL will be periodic check for any new notice which needs to be schedule.

Problem Definition And Scope

To design and develop real time Bluetooth based wireless notice board system which can be change through voice input.

Goal and Objectives:

- To develop a Bluetooth based notice board.
- To change contents of message of notice board through voice input.
- To design a system simpler to handle.

Statement of scope

The main function of the project is to reduce manual paper work and developing system which schedule notice and display it as per scheduled.

Software Context

To develop this application we will require JAVA as development language. MYSQL will be the back end of our application. All this software's are available on internet and they are free of cost.

Major Constraints

- Accessibility: Initially, this application should be available as a android application for a small set of users to test.
- Other Constraints: The application should be built using Java, and it should, initially, be accessible through the Android studio.

Methodologies of Problem Solving And Efficiency Issues

The methodology approach used for this application; is the top down approach is essentially the breaking down of a system to gain insight into its compositional subsystems. In a top down approach an overview of the system is specified but not detailing any first level.

V. DIAGRAMTIC REPRESENTATION

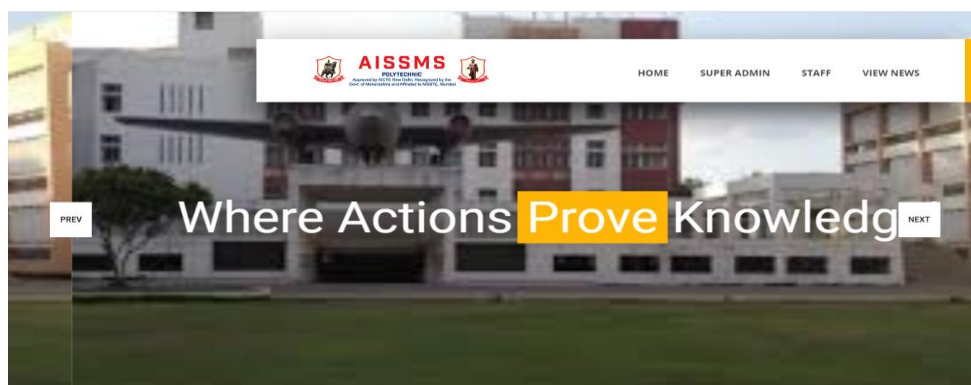


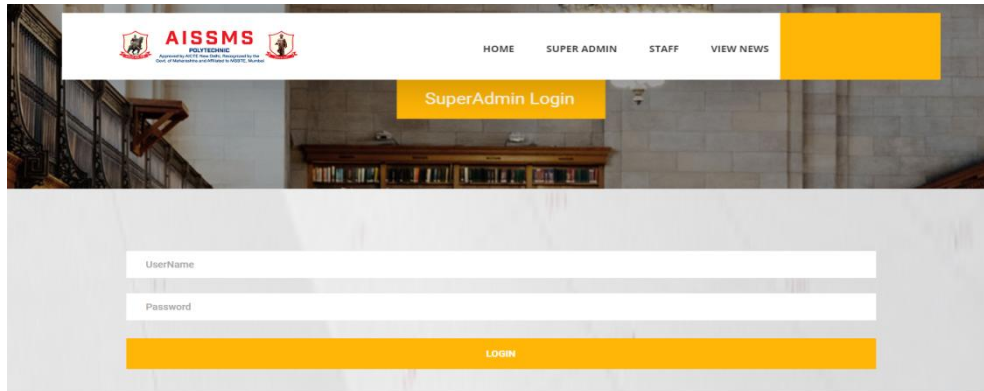
Fig 2: Home Page

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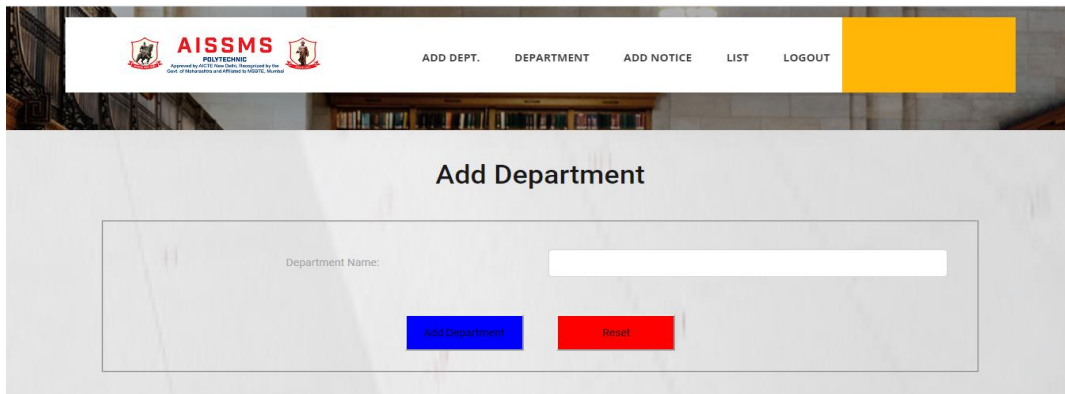
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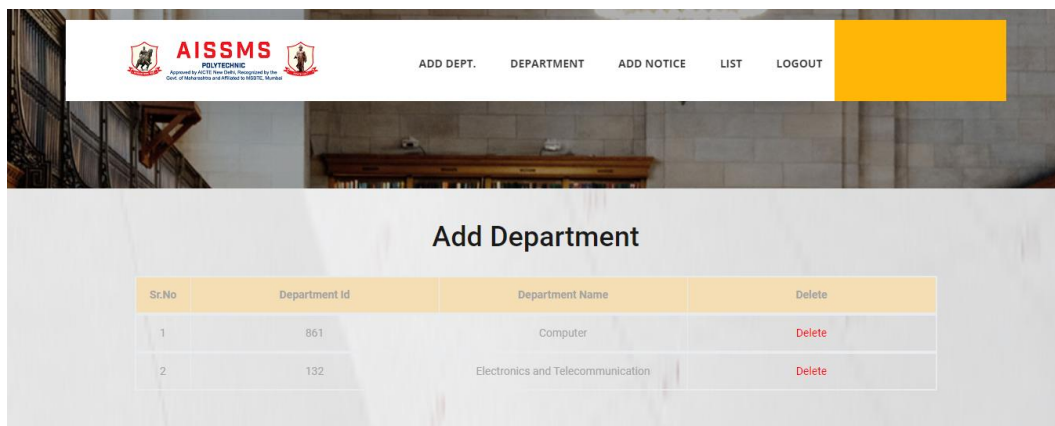
The screenshot shows the SuperAdmin Login page. At the top, there is a navigation bar with the AISSMS logo and menu items: HOME, SUPER ADMIN, STAFF, and VIEW NEWS. Below the navigation bar is a yellow button labeled "SuperAdmin Login". The main content area contains a login form with two input fields: "UserName" and "Password". Below the input fields is a yellow button labeled "LOGIN".

Fig 3: Superadmin Login



The screenshot shows the Add Department screen. At the top, there is a navigation bar with the AISSMS logo and menu items: ADD DEPT., DEPARTMENT, ADD NOTICE, LIST, and LOGOUT. Below the navigation bar is a yellow button labeled "Add Department". The main content area contains a form titled "Add Department" with a single input field labeled "Department Name:". Below the input field are two buttons: "Add Department" (blue) and "Reset" (red).

Fig 4: Add Department Screen



The screenshot shows the Added Department List screen. At the top, there is a navigation bar with the AISSMS logo and menu items: ADD DEPT., DEPARTMENT, ADD NOTICE, LIST, and LOGOUT. Below the navigation bar is a yellow button labeled "Add Department". The main content area contains a table titled "Add Department" with the following data:

Sr.No	Department Id	Department Name	Delete
1	861	Computer	Delete
2	132	Electronics and Telecommunication	Delete

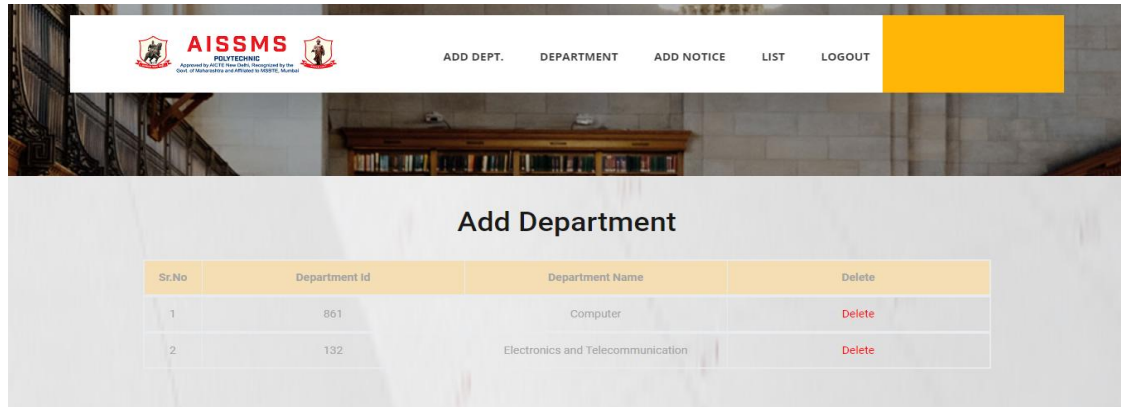
Fig 5: Added Department List

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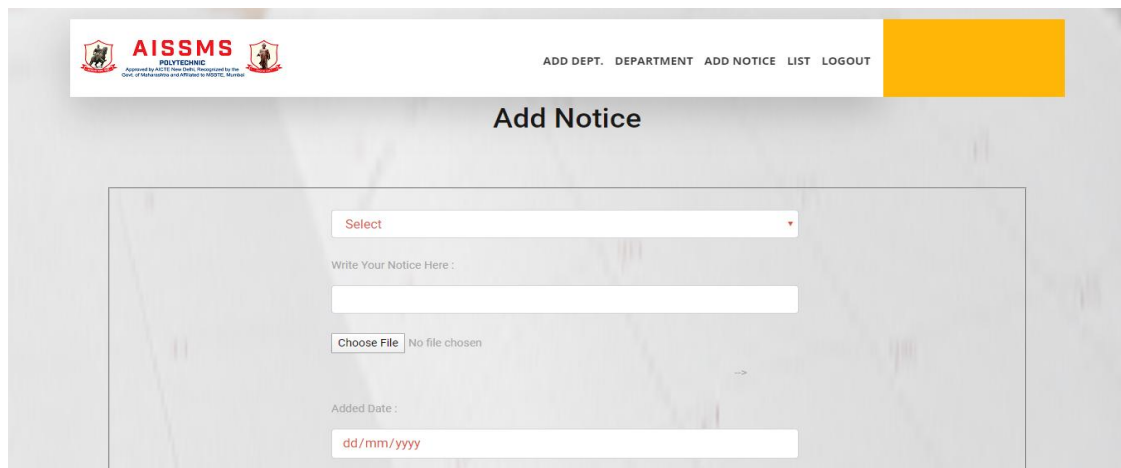


ADD DEPT. DEPARTMENT ADD NOTICE LIST LOGOUT

Add Department

Sr.No	Department Id	Department Name	Delete
1	861	Computer	Delete
2	132	Electronics and Telecommunication	Delete

Fig 6: Added Department List



ADD DEPT. DEPARTMENT ADD NOTICE LIST LOGOUT

Add Notice

Select

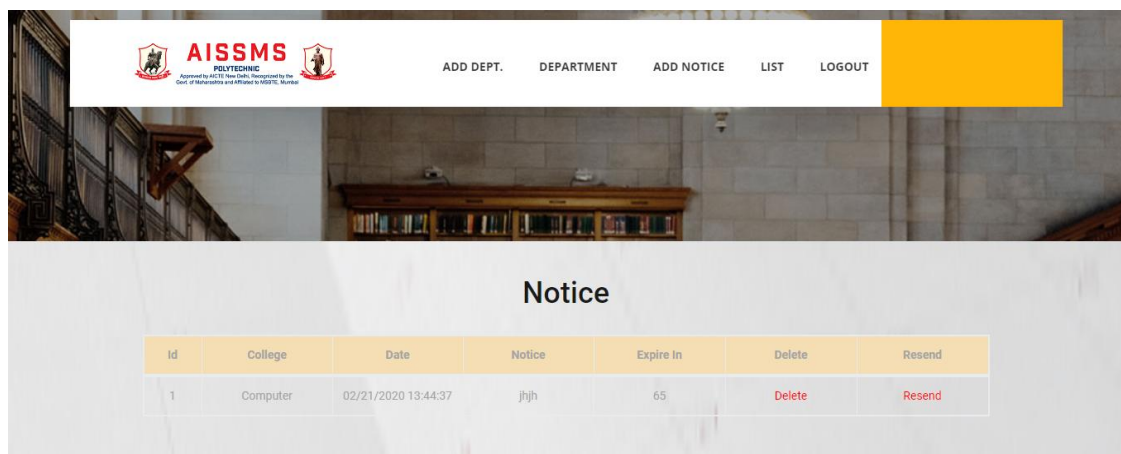
Write Your Notice Here :

Choose File No file chosen

Added Date :

dd/mm/yyyy

Fig 7: Superadmin Add Notice



ADD DEPT. DEPARTMENT ADD NOTICE LIST LOGOUT

Notice

Id	College	Date	Notice	Expire In	Delete	Resend
1	Computer	02/21/2020 13:44:37	jhjh	65	Delete	Resend

Fig 8: Notice List

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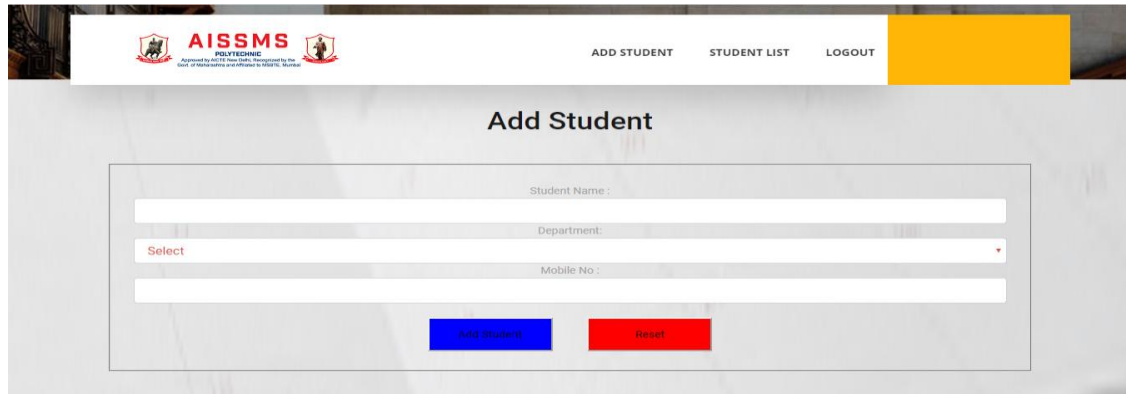
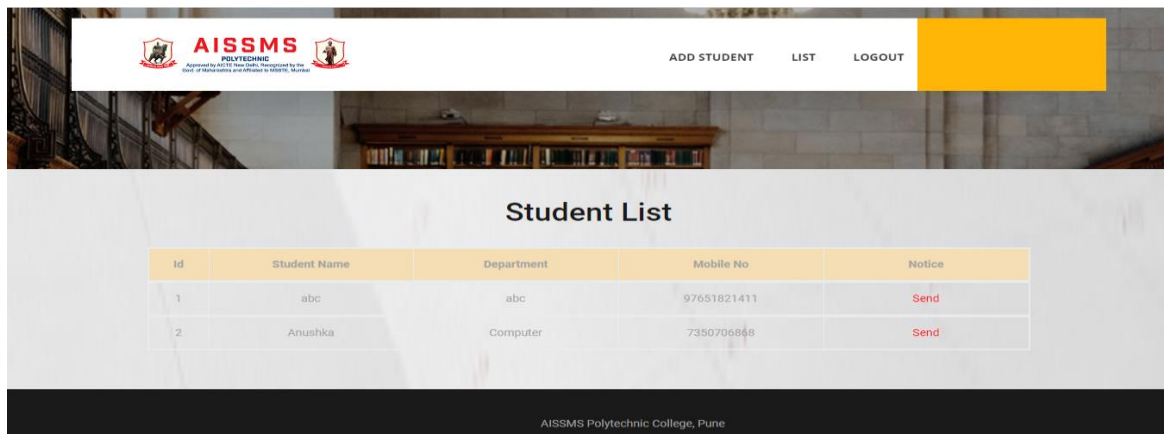


Fig 9: Staff Add Student



Id	Student Name	Department	Mobile No	Notice
1	abc	abc	97651821411	Send
2	Anushka	Computer	7350705848	Send

Fig 10: Added Student List

NOTICE BOARD

Notice Is for Electronics and Telecommunication Department
Events will be starting from tomorrow



Fig 11: Notice in the form of text and image.

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VI. CONCLUSION

As the technology is advancing every day the display board systems are moving from Normal hand writing display to digital display. In this project admin add notice in the form of text as well as image. While adding notice admin add date and expiry time of particular date. Staff/faculty, staff add student with name and contact number. Department wise notice send to student who belongs to that department. Our proposed system will display notice on web application, In the for of text and / or in image format.

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