PROJECT REPORT

ON

STUDENT INFORMATION MANAGEMENT SYSTEM

-: GUIDED BY :-

Prof. A. D. Thete

(Lecturer in Computer Engineering)

-: DEVELOPEMENT TEAM :-

1. Umesh Dadarao Dange
2. Rutu Rajendra Ware
3. Prathmesh Chandrashekhar Sawaikar
4. Hrutik Arun Khade
5. Pralhad Sudhakar wakte
6. Rushikesh Govind Jadhav

Name of Guide :-

Prof. A. D. Thete

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Name of HOD :-

Prof. Mr. S. U. Rathod

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Principal

GOVERNMENT POLYTECHNIC MURTIZAPUR

Introduction

1.1 Project profile

Project Name	**STUDENT INFORMATION MANEGMENT SYSTEM (SIMS)**
Project Objective	To provide end users
Developed For	Maharashtra State Board Technical , Mumbai
Developed At	Government Polytechnic, Hendaj, Murtizapur
Front-End	NetBean 7.3.1, JAVA
Back-End	MsAccess
Internal Guide	Prof. A. D. Thete
Developed By	Umesh Dadarao Dange Rutu Rajendra Ware Prathmesh Chandrashekhar Sawaikar Hrutik Arun Khade Pralhad Sudhakar wakte Rushikesh Govind Jadhav

1.2 About The Topic

Normally in every institute the documents generation like Leaving Certificate, Bonafied Certificate, etc and other documents are given handed written. But these project covers the generation work of documents, it generates the pdf document of college documents with information filled.

1.3 About The Project

The Desktop application has been developed for our college (GPMZR) in an effort to make the document generation very easy. Compared to the existing condition the whole data of students is managed.

The working of the project is as follows.

In account section there is registration page. In these page the students have to enroll themselves by providing there whole information. After filling there information the whole information is added in database. Another feature is to modify which helps the student to modify its whole information if it needs to change. Also the user can delete its enrollment details and its whole information by entering its enrollment number.

In Create section the student can generate the BT card, Bonafied, TC and Identity card .To generate BT card the user have to enter the enrollment no then a BT card is generated in pdf format. To generate the BC the user have to enter Enrollment no, reason, Date and year then it will generate a bonafied in pdf format .To generate the tc user have to enter whole information. To generate ID card user have to enter enrollment no, mobile no and phone number.

In ROLL Call list section the user can view the list of roll call. The user has to select the branch, the semester and the current scheme. In remove dc student section the user can remove and add the DC student so each student can be assign as dc student. In class section the user can change its branch and class status If the user has change branch then he has to change its details from these section. Also if the user is gone from one sem to other he has to change it from here.

Technology Overview

➢ Netbeans IDE 2013

NetBeans is the IDE that we use to program FRC robots in Java. IDE stands for "integrated development environment", which means it's the program that acts like a text editor for your code, but also compiles and deploys the code. Other popular IDEs you may have heard of include Eclipse, jGRASP, and WindRiver. Compiling is the the IDE's way of checking your code for errors and translating your code to a binary file that's readable by the computer (in our case, the brains of the FRC robot: the cRIO). Deploying the code involves downloading such files onto the cRIO so that the robot can run it.

Features of Netbeans IDE 2013

The Netbeans IDE 2013 preview included many new features that enhanced the way developed work with everything for desktop application.

Some of the features of Netbeans 2013 are:

1. Templates and Sample Applications

NetBeans IDE gives you skeleton applications in the form of project templates for all the technologies it supports. In addition, it provides a set of sample applications, some of which can be recreated step by step by following a related tutorial available on NetBeans.org.

The IDE provides project templates and sample projects that help you create Java SE applications, Java EE applications, Java ME applications, HTML5 applications, NetBeans Platform applications, PHP application, and C/C++ applications.

2. Databases and Services

The Services window gives you access to many ancillary resources, such as databases, servers, web services, and issue trackers. You can start and stop databases and servers directly in the IDE. When working with databases, you can add, remove, and modify your data in the IDE. When you have deployed an application to a server, you can manage your deployed resources because they are displayed in the Servers node.

3. Plugin Manager

While using the IDE, you can always go to the Plugin Manager from the Tools menu to add, remove, or update the installed set of features. A wide variety of plugins are available for all types of development, from Java SE, Java EE, Java ME, HTML5, Groovy, and PHP to C/C++ development. Community contributed plugins are also available in the NetBeans Plugin Portal.

4. Action Items

The Action Items window automatically scans your code and lists commented lines containing words such as "TODO" or "FIXME", as well as lines with compilation errors, quick fixes, and style warnings.

➢ JAVA - Front-End

Java is a general-purpose computer-programming language that is concurrent, class-based, object-oriented, and specifically designed to have as few implementation dependencies as possible. It is intended to let application developers "write once, run anywhere" (WORA), meaning that compiled Java code can run on all platforms that support Java without the need for recompilation.

There are different styles of programming. Object-oriented approach is one of the popular programming styles. In object-oriented programming, a complex problem is divided into smaller sets by creating objects. This makes your code reusable, has design benefits, and makes code easier to maintain.

One of the reasons why Java is widely used is because of the availability of huge standard library. The Java environment has hundreds of classes and methods under different packages to help software developers like us.

➢ Microsoft Access 2010 – Back-End

- Microsoft Access is a database management system (DBMS) from Microsoft that combines the relational Microsoft Jet Database Engine with a graphical user interface and software-development tools. It is a member of the Microsoft Office suite of applications, included in the Professional and higher editions or sold separately.

- Microsoft Access stores data in its own format based on the Access Jet Database Engine. It can also import or link directly to data stored in other applications and databases.

Software developers, data architects and power users can use Microsoft Access to develop application software.

➢ Features of Microsoft Access 2010

1. Ideal for individual users and smaller teams

Microsoft Access is a simple desktop application that does not require any specific hardware or license to function. Hence, it is ideal for individual users and smaller teams who do not require larger and complicated data bases for extra price.

2. Is easier than client-server database to understand and use

Personal computer applications like Microsoft Access have taken over many applications which were earlier relegated to client-server database in the past. Users of Access need not undergo any special training to acquire the skills necessary to use the application

3. Import and export to other Microsoft Office and other applications

One of the most useful features of Microsoft Access is its ability to interface with data from many other programs. It is also easier to combine data that was created in other programs, transfer data between two other programs, or to accumulate and store data over the long term, occasionally exporting data to other programs such as Excel for analysis.

4. Hide/Show option for Ribbon

The Microsoft Access window consists of a variety of components helping users to work more efficiently. The important components are the Navigation Pane, Access work area, ribbon, shortcut menus, and Quick Access Toolbar. Some of these components are common to other Office apps whereas others are unique to Microsoft Access.

- **Waterfall Model**

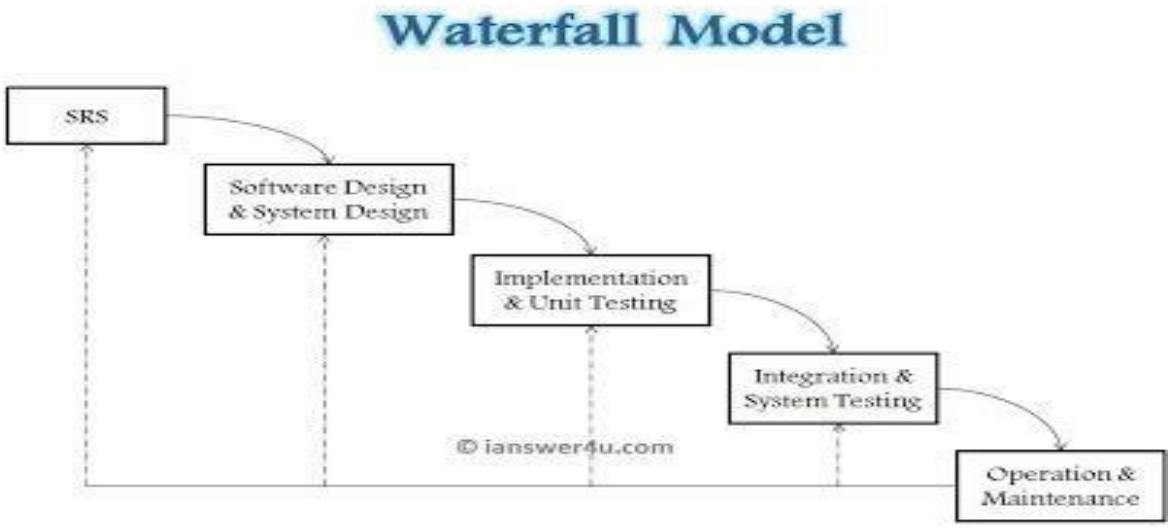


Fig :- Waterfall model

- **Incremental Model**

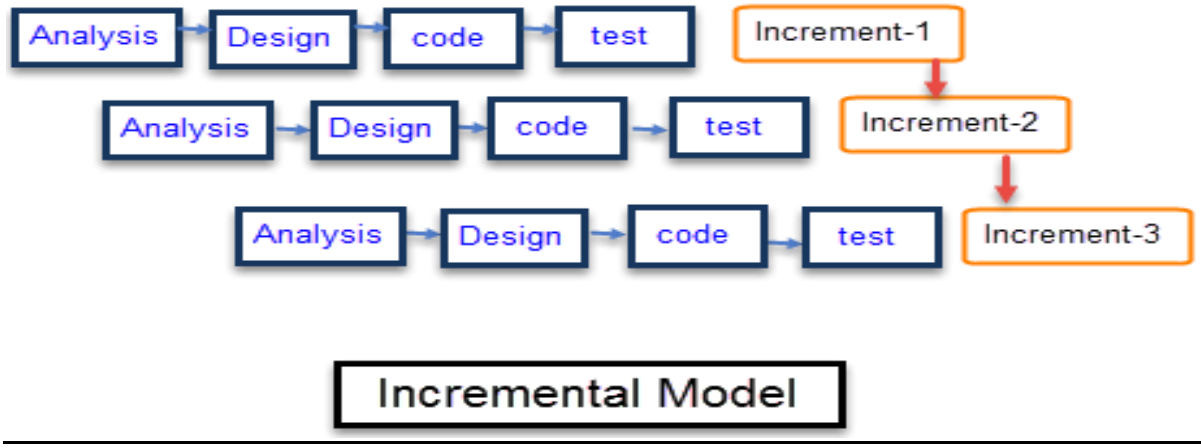


Fig :- Incremental Model

SYSTEM ANALYSIS AND DESIGN

3.1 INTRODUCTION

System analysis is the process of gathering and interpreting facts, diagnosing problems and using the information to recommend improvements on the system. System analysis is a problem solving activity that requires intensive communication between the system users and system developers.

3.2 EXISTING SYSTEM

The existing college website is static which makes it less interactive. It doesn't have a database connectivity. Moreover students didn't have an access to the details of the college through the site, hence they were not updated about the latest notices.

3.3 PROPOSED SYSTEM

In order to make the site dynamic and more interactive we have added different functionalities and features through different modules like Faculty Feedback system, Lost & Found System, Buy & Sell books, Search Friends, Dynamic Notice board, Query Forum, Library module. Hence, it makes it more dynamic when it comes to adding, deleting and editing notices, tenders etc. In response to which students can submit their willingness to appear for the drive along with his personal details. Provision has also been made to display the latest events and announcements associated with the college online. We have developed our project using the **three tier architecture** which uses the following languages.

3.4 SOFTWARE REQUIREMENTS

OPERATING SYSTEM : ANY VERSION OF WINDOWS

FRONT END : JAVA

DATABASE LAYER : MICROSOFT ACCESS 2010

3.5 MINIMUM HARDWARE REQUIREMENTS

PROCESSOR : i3

CLOCK SPEED : 2.5 GHZ

SYSTEM BUS : 64 BIT

RAM : 4 GB

HDD : 40GB

SYSTEM DESIGN

System design is the solution to the creation of a new system. This phase is composed of several systems. This phase focuses on the detailed implementation of the feasible system. It emphasis on translating design specifications to performance specification. System design has two phases of development logical and physical design.

During logical design phase the analyst describes inputs (sources), out puts (destinations), databases (data sores) and procedures (data flows) all in a format that meats the uses requirements. The analyst also specifies the user needs and at a level that virtually determines the information flow into and out of the system and the data resources. Here the logical design is done through data flow diagrams and database design.

The physical design is followed by physical design or coding. Physical design produces the working system by defining the design specifications, which tell the programmers exactly what the candidate system must do. The programmers write the necessary programs that accept input

from the user, perform necessary processing on accepted data through call and produce the required report on a hard copy or display it on the screen.

TIME BASED ANALYSIS

DOCUMENT TYPE	MANUAL APPROACH		SIMS APPROACH	
DAY TYPE :-	BUSY DAY	NORMAL DAY	BUSY DAY	NORMAL DAY
LEAVING CERTIFICATE	15 MIN	10 MIN	2 MIN	1 MIN
BONAFIED CERTIFICATE	15 MIN	10 MIN	2 MIN	1 MIN
BORROWERS TICKET	2 DAY	1 DAY	5 MIN	3 MIN
IDENTITY CARD	1 DAY	HALF DAY	5 MIN	4 MIN
ROLL CALL LIST	3 DAY	2 DAY	5 MIN	2 MIN

ACCURACY RATE

DOCUMENT TYPE	NORMAL WAY		SIMS WAY	
DAY TYPE :-	BUSY DAY	NORMAL DAY	BUSY DAY	NORMAL DAY
LEAVING CERTIFICATE	96%	97%	100%	100%
BONAFIED CERTIFICATE	97%	98%	100%	100%
BORROWERS TICKET	95%	98%	100%	100%
IDENTITY CARD	96%	98%	100%	100%
ROLL CALL LIST	92%	95%	100%	100%

WORKING METHODOLOGY

Module Wise Description :

- The Project modules are like :

1. Login Module
2. Create Module
3. Account module
4. Roll Call list module
5. DC Student module
6. Class and Help module

- **Login Module**

The Login Module provides following:-

1) Login Page
2) Change User ID and Password

This is a Login Page of our Module. We can login and change User ID and Password successfully by using this login module.

- **Create Module**

The Create Module provides functionalities to create following:-

a) Bonafied Certificate
b) Borrower's Ticket
c) Leaving Certificate
d) Identity Card

The above documents are directly generated in PDF format with the printed information of particular student. To generate Bonafied Certificate the handler has to put Enrollment No, Reason, Date and Year of particular Student.

To generate Borrower's Ticket the handler has to enter Enrollment No. Then the BT card is directly generated in the particular format. To generate Leaving Certificate the Handler has to enter all the official information of the particular student.

And at last to generate the identity card the handler has to enter the Enrollment no , Mobile No, Phone No.

- **Account Module**

The Account module handles all the accounts and information of particular student. The End user can do Registration of particular users in the database of software so it can be retrieved from the database in the documents. In registration the end user has to fill the whole information of student in the database.

The Next option is to modify information. If a particular's information of a user is changed so from here the end user can change the information of the particular student. The end user has just to enter the information and have to modify it then it will be directly changed in database.

- **Roll Call List Module**

In these module the user can see the roll call list of the whole department. The user has just to select department the scheme and the year then the user can directly see the list of roll call so it is very helpful.

- **DC Student Module**

In these module the user can add the year down student or remove the year down student so it will not come in current roll call. The added student will directly be remove from the roll call list. And if the DC student is now not a DC student so it needs to remove from the option as DC student.

- **Class and Help Module**

In these module the user can change the class as first year to second year of a particular student. If any student has change its branch or class it can be updated from here. In change class option the user has to select the branch, semester and scheme.

In the change branch option the user has to select enrollment no the semester, branch and scheme. The next section is help which the rules are given which helps the end user.

SCHEDULING OF OUR PROJECT

We had started our project journey at the last of 5th semester, around in a month of Janavary. Firstly we had discussed about what to implement, and then at the last we decided to make a software for student's section which is a Desktop Application that will be friendly for the officials.

Then the time came for deciding the title for the project. We thought, as we are implementing this project for Managing the Students Information then why shouldn't we keep **"SIMS – STUDENT INFORMATION MANAGEMENT SYSTEM"** as our project title. Thus we choose this as our project title.

TESTING

For testing we have adopted the build and test methodology. We used to test the modules manually like when one of our team members completed implementing his module then remaining used to test that module. We have used incremental model in our software development process as our requirements were going on increasing while implementing the project. All members coordinated and tested each other's modules.

Role and Responsibility

For Creating SIMS in our team each & every member did many different activities. For planning the design & necessary activities in group **Rutu Rajendra Ware** and **Prathmesh Chandrashekhar Sawaikar** played a standard role. To plan the activities which are essential for us, then at that time we all gathered together and decided & took important decisions. In our team for creating the modules of SIMS we had unique ideas and different knowledge that's why we all member performed Designing and Coding as per our module and each member tested the modules developed by other one.

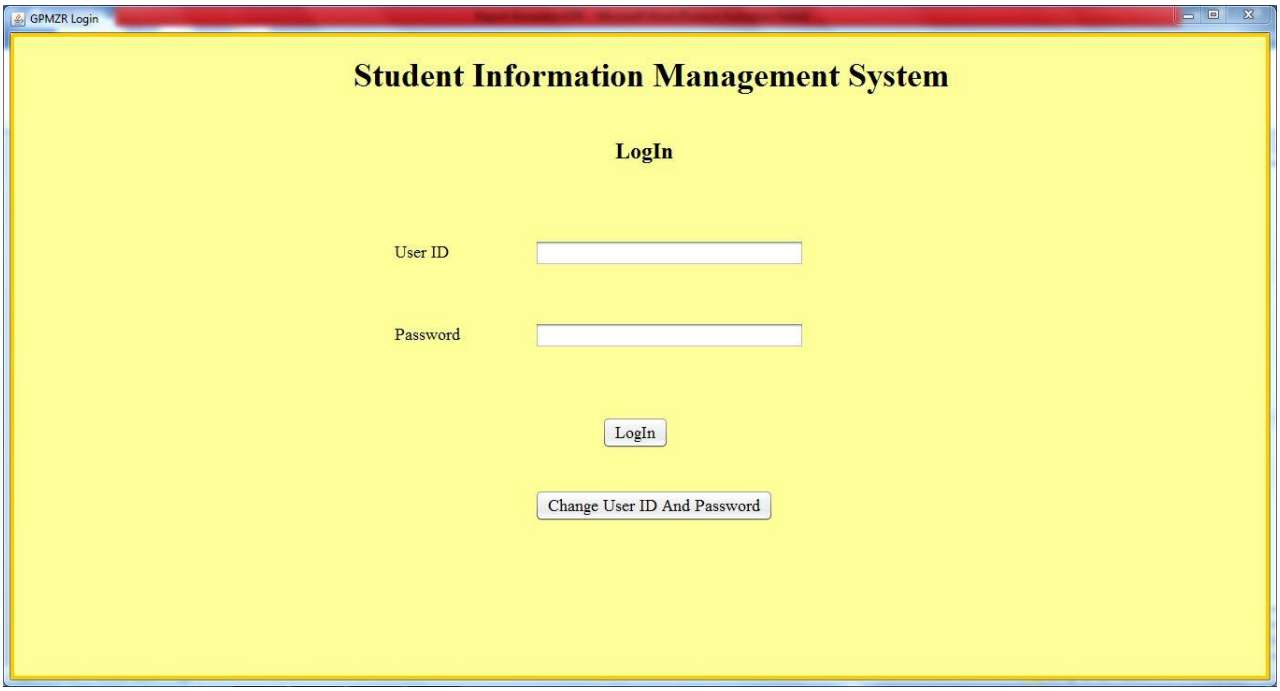
1. Similarly Coding of the various module in our project **Umesh D. Dange** played an essential role. **Pralhad S. Wakte** and **Rushikesh Govind Jadhav** do the essential work of Testing the SIMS. And the documentation work is done by **Rushikesh Govind Jhadhav**

Statistical Info

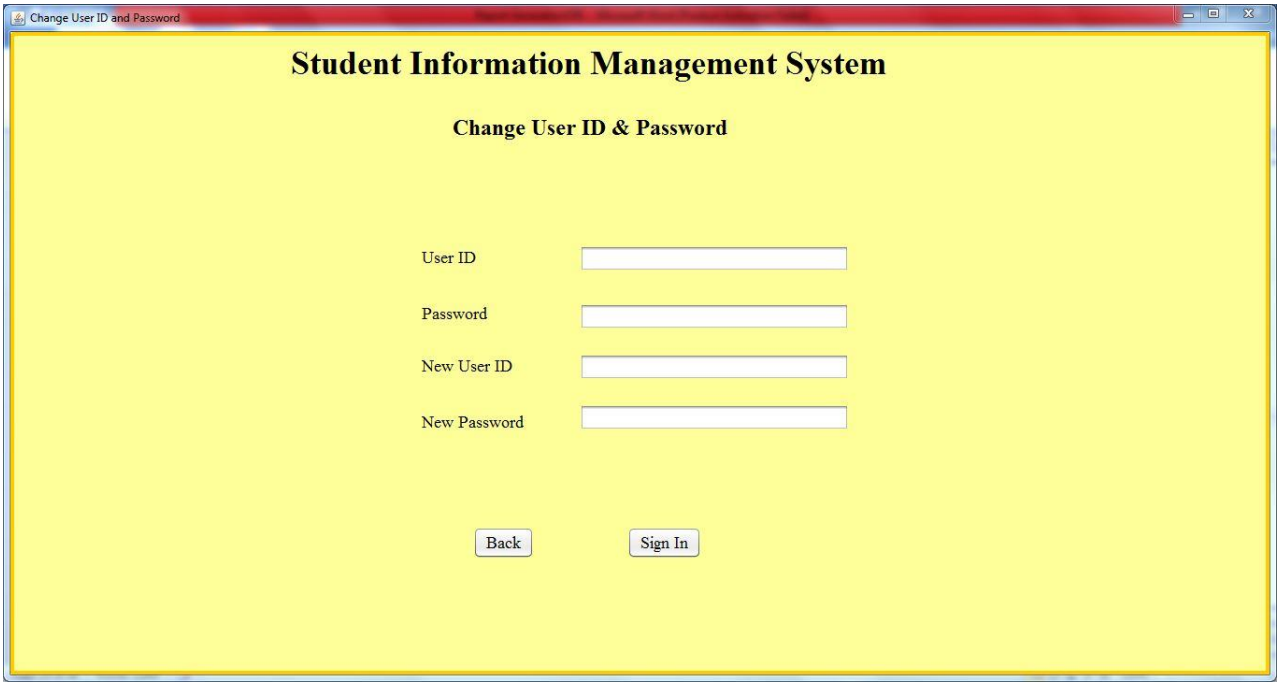
Total number of .java pages	19
Total number of tables	3

Login Module

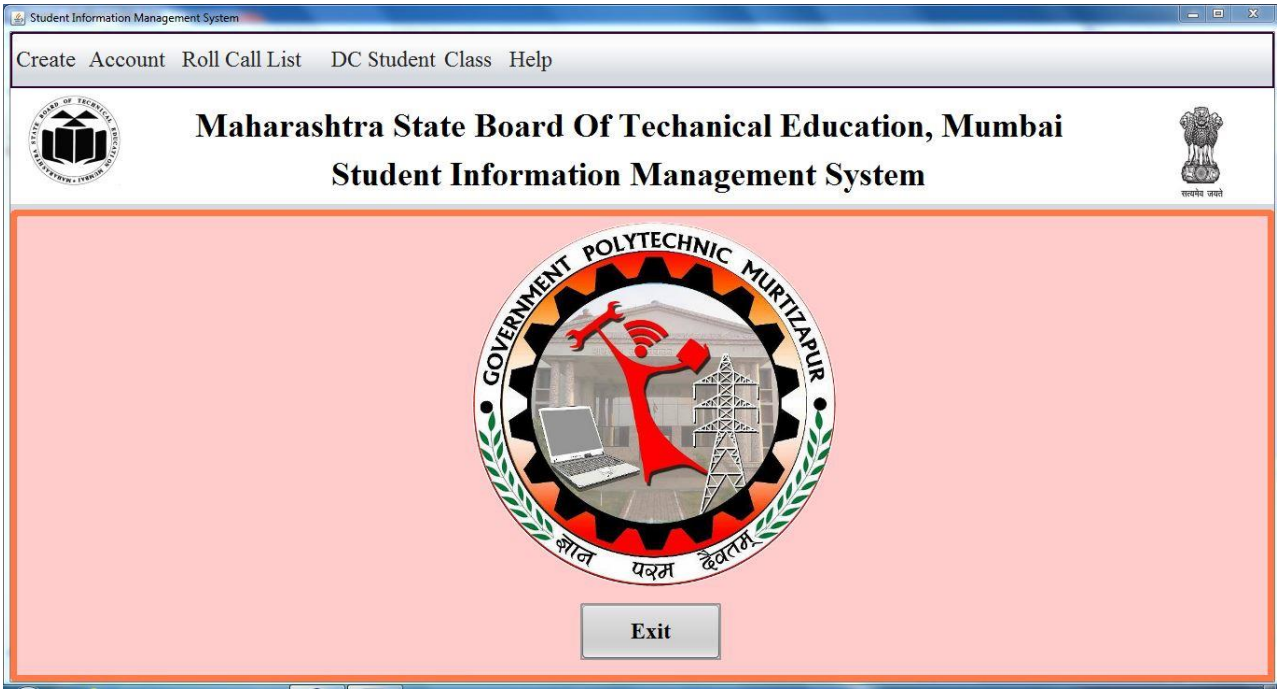
1) Login Page



2) Change User ID and Password

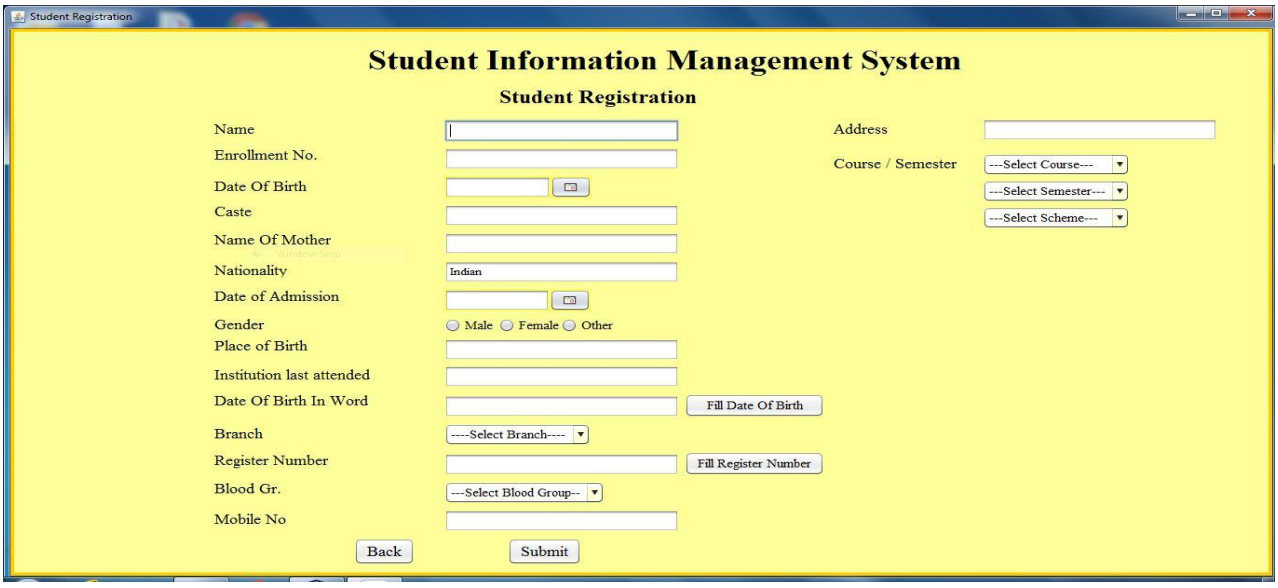


Home Page

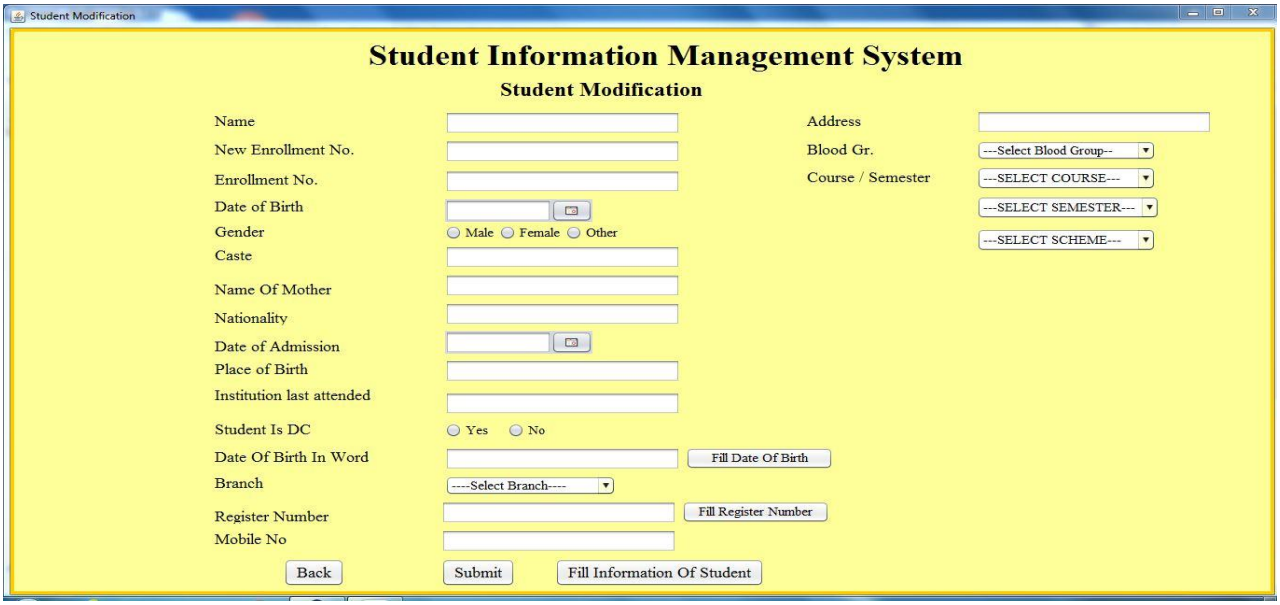


Create Module

1) Registration Page

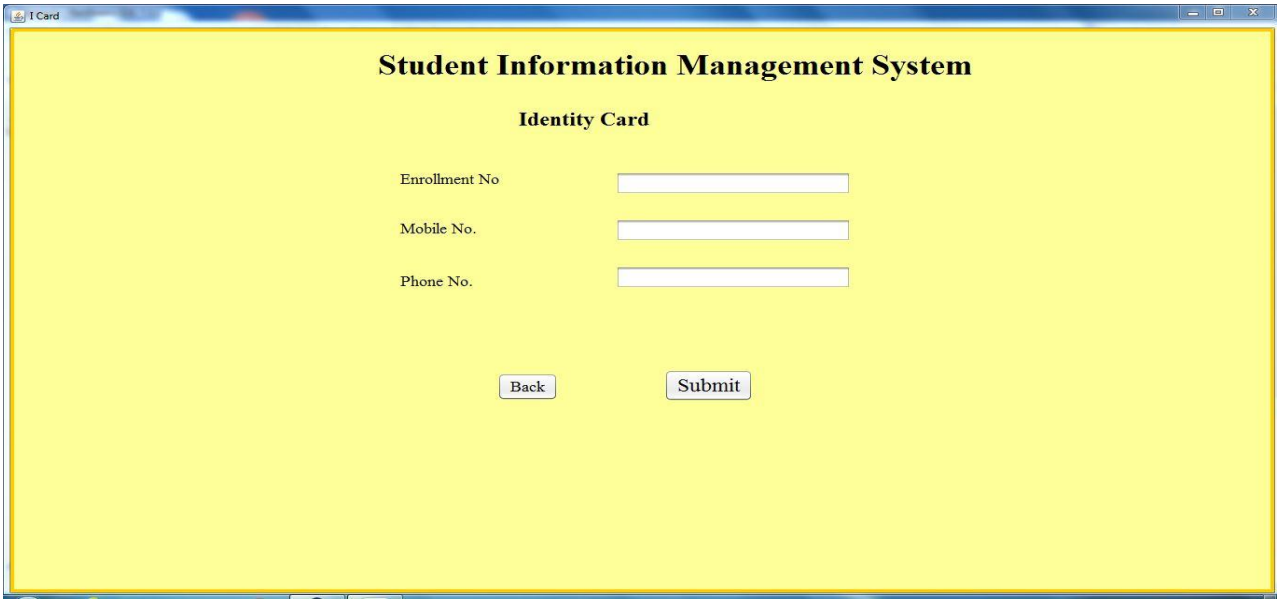


2) Modification Page

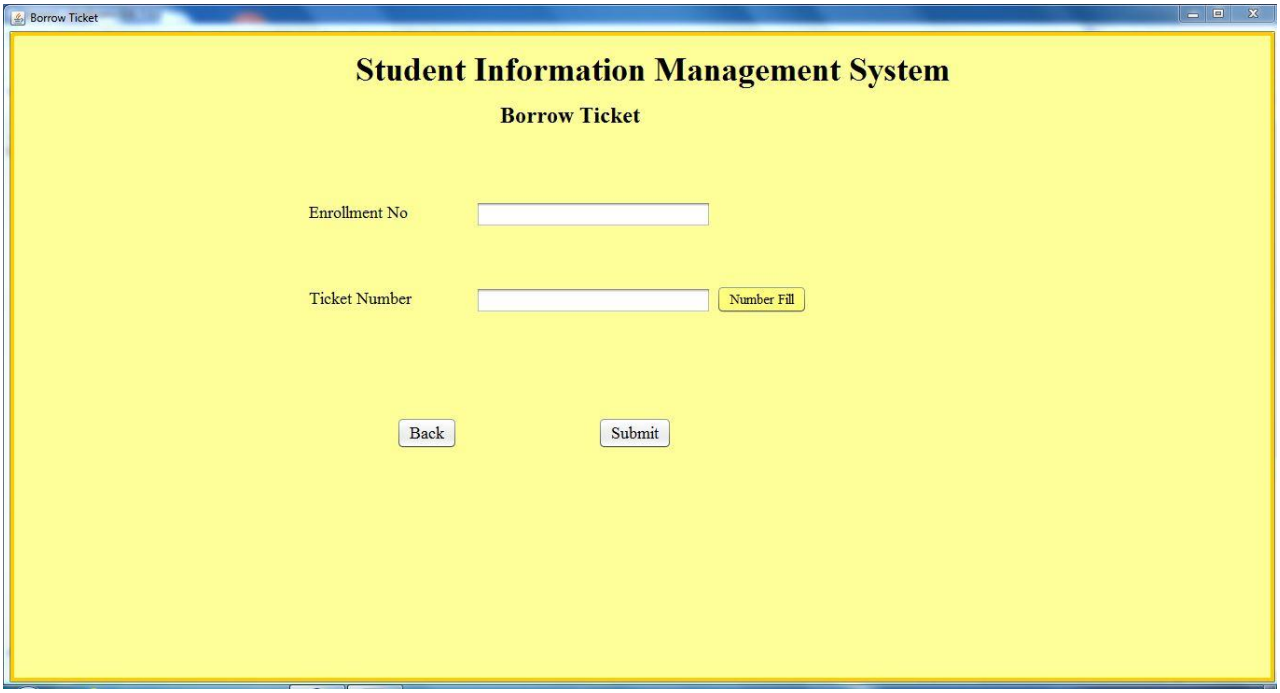


Account Module

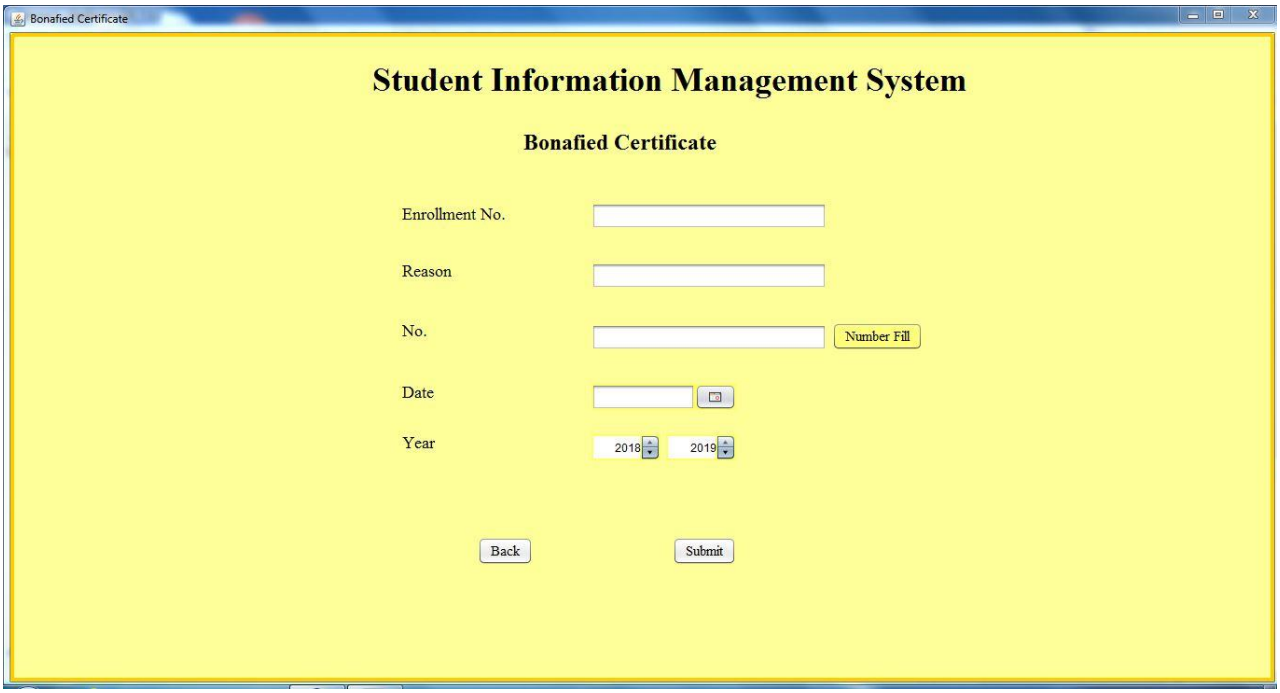
1) I card Page



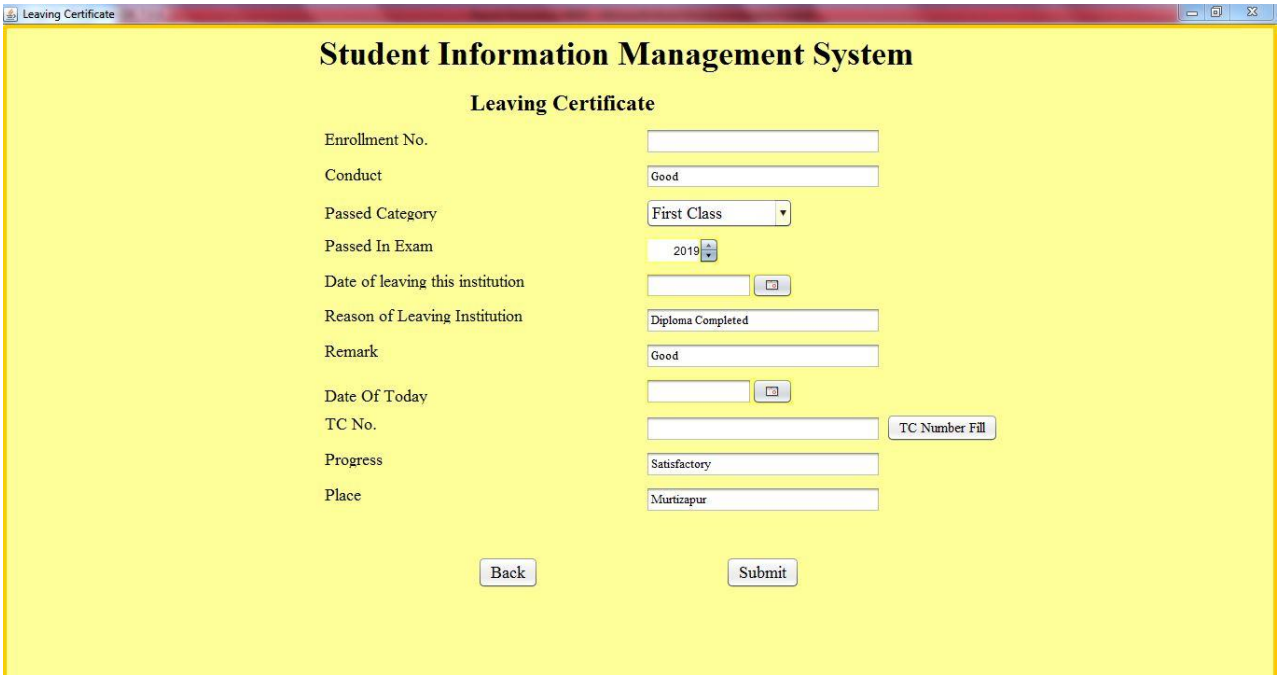
2) BT Card Page



3) Bonafied card Page

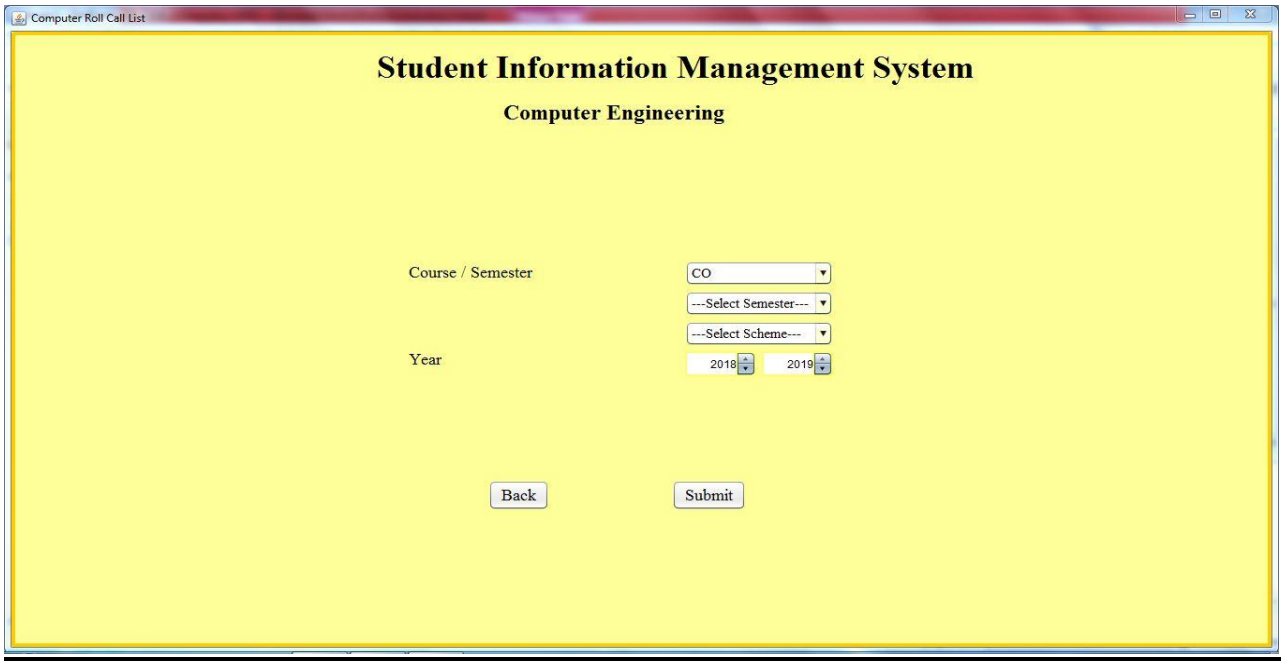


4) Leaving Certificate Page

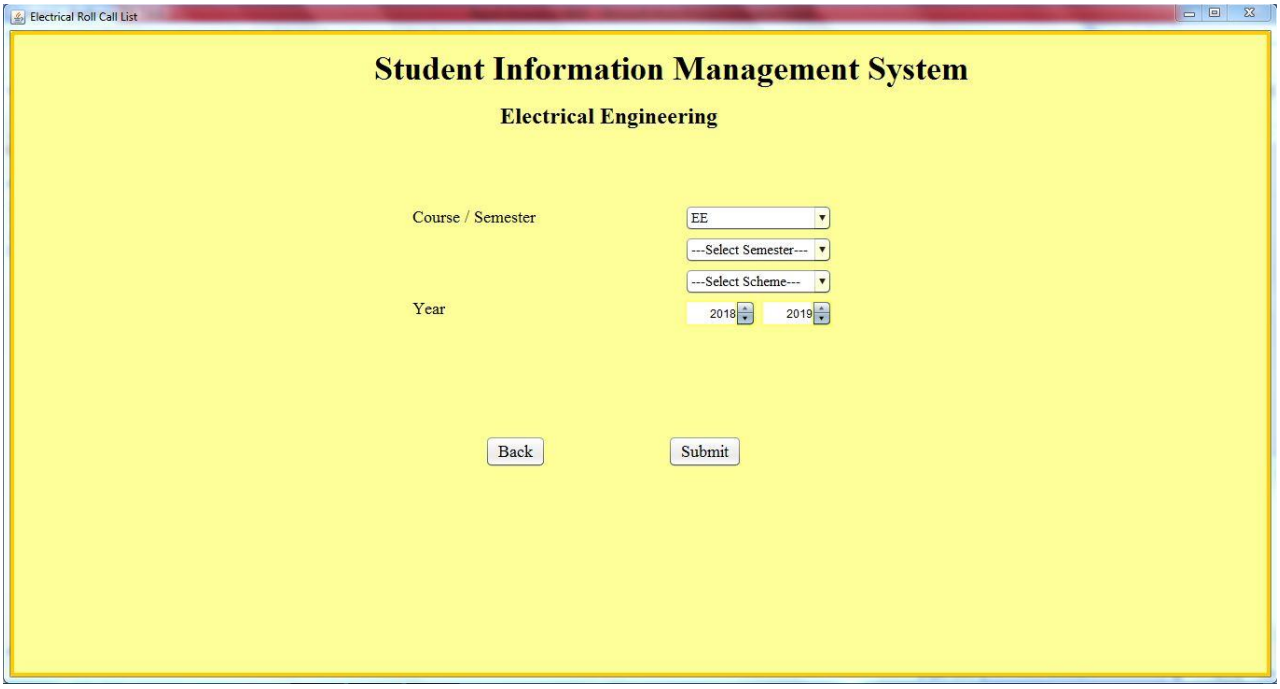


Roll Call List Module

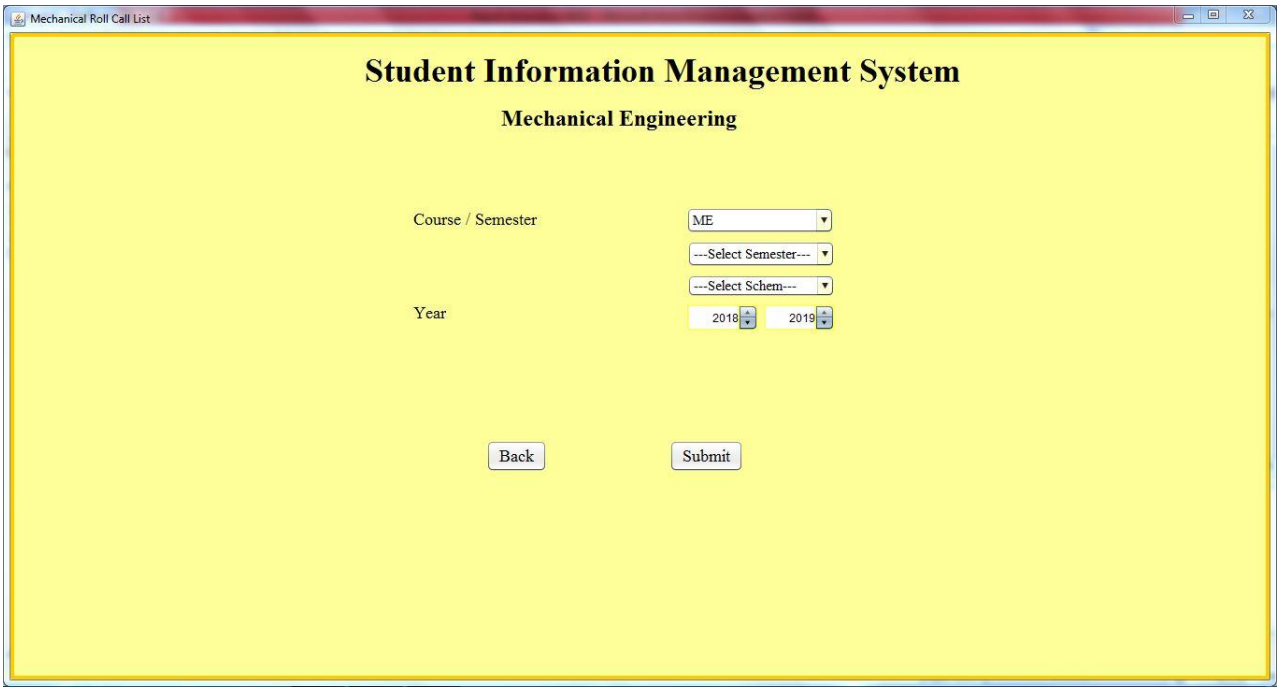
1) Computer Roll Call List



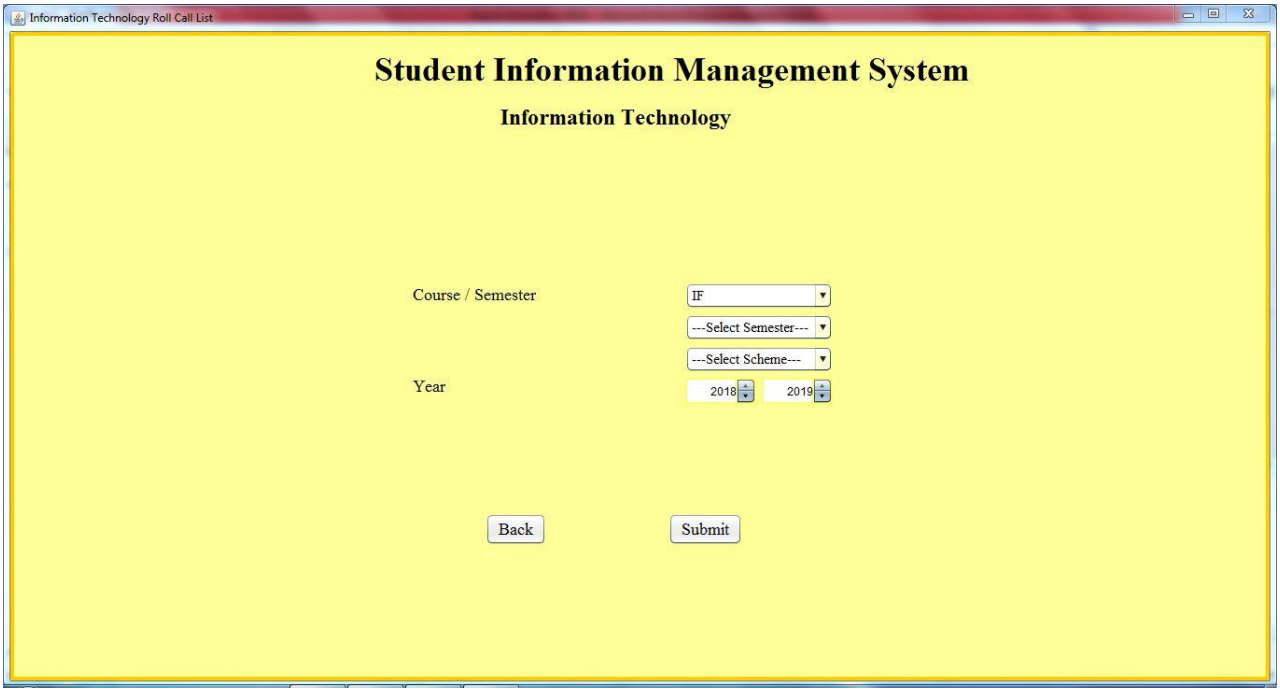
2) Electrical Roll Call List:-



3) Mechanic Roll Call List:-

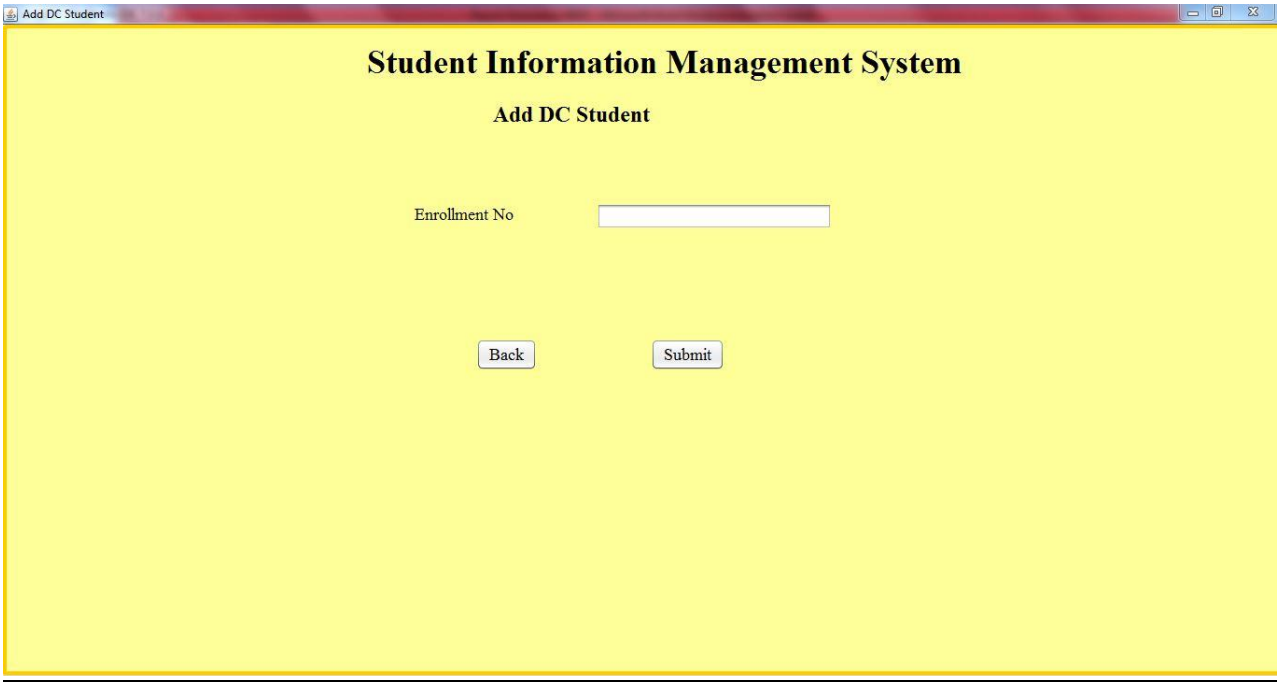


4) Information Technology Roll Call List:-

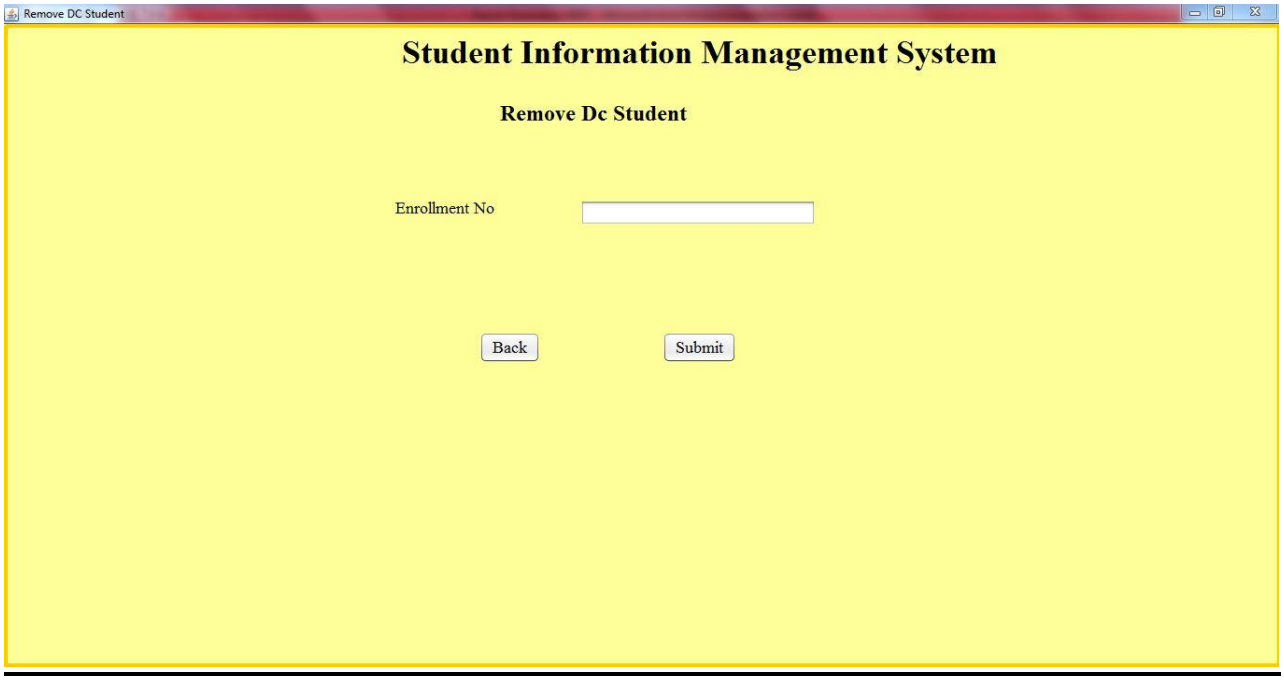


DC Student Module

1) Add DC Student Page

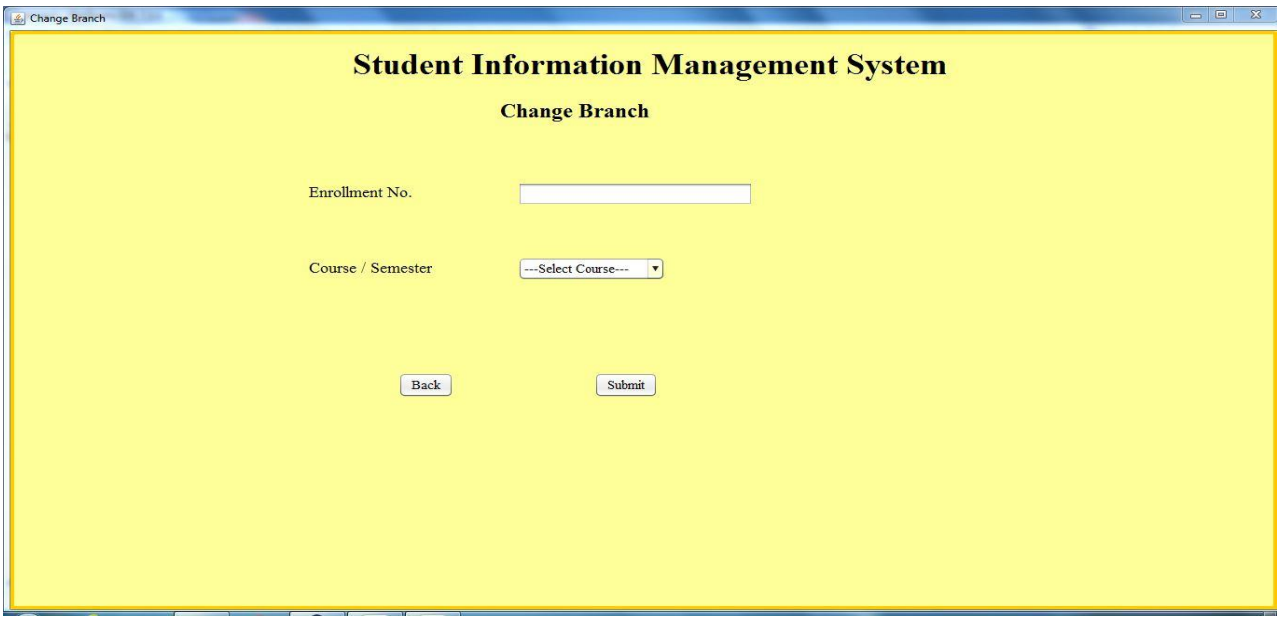


2) Remove DC Student Page

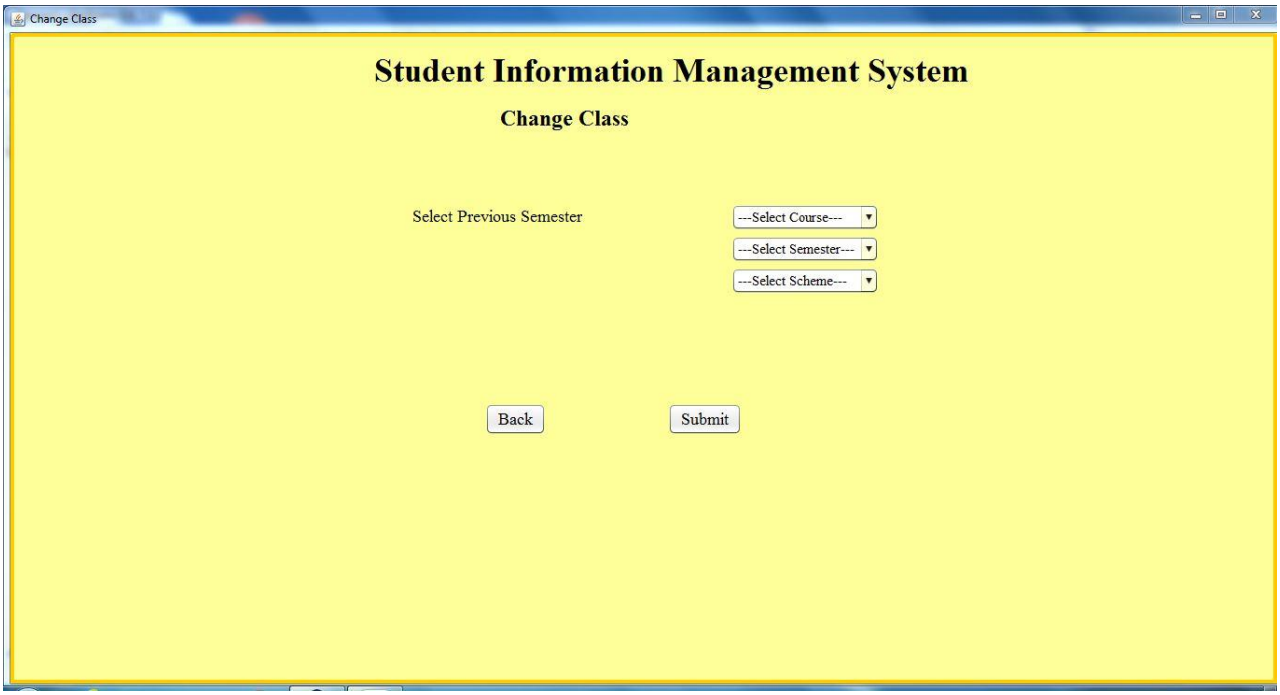


Class Module

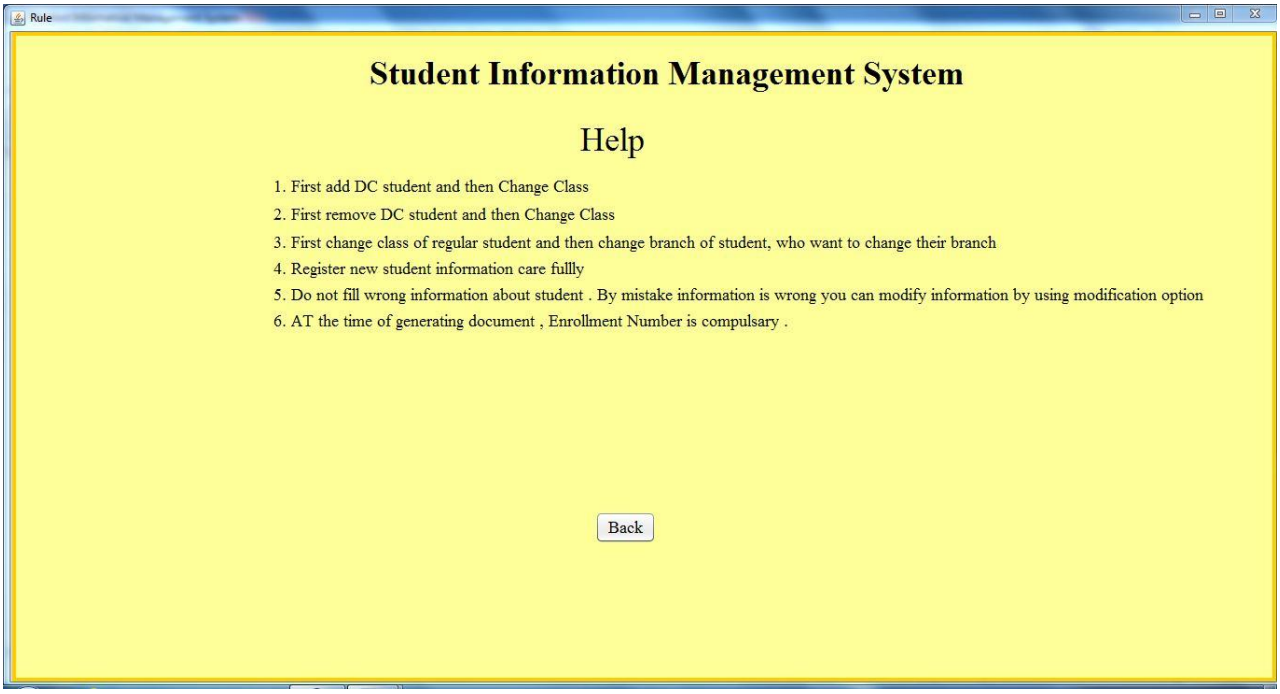
1) Change Branch page



2) Change Class page



Help Module



Conclusion

The project report entitled "SIMS – Student Information Management System" has come to its final stage. The system has been developed with much care that it is free of errors and at the same time it is efficient and less time consuming. The important thing is that the system is robust. We have tried our level best to make the software as dynamic as possible. Also provision is provided for future developments in the system. The entire system is secured. This Software will be approved and implemented soon. The Project is successfully implemented with all the features mentioned in system requirements specification. Deployment of our software will certainly help the college to reduce unnecessary wastage of time,work of the services of student section like TC Generation,etc. and our site is dynamic too which is a great advantage.

Future Work

- These Desktop application can become a website.
- So it can be connected directly to the college website and it would get more dynamic then to all users.
- The new feature of multiple users like admin and student would be added so that the student can directly generate the PDF.
- New updated documents could be added in it so it will be more updated.

References

1) **https://www.wikipedia.com**
2) **https://www.stackoverflow.com**
3) **https://www.c-sharpcorner.com**
4) **https://www.programmersheaven.com**
5) **https://www.tutorialspoint.com**
6) **https://www.youtube.com**
7) **https://www.w3schools.com**

GOVERNMENT POLYTECHINIC MURTIZAPUR
NH6,MURTIZAPUR-AMRAVATI ROAD,
HENDAJ, MURTIZAPUR
DIST.AKOLA (MAHARASHTRA)

==========

No :- **35**

Dt. :- 11/03/2019

CERTIFICATE

This is to certify that **Prathmesh Chandrashekhar Sawaikar** is a bonafied student of this institute during the year **2018-2019** studying in **6th** Semester of Diploma Course in **Computer Engineering**

For **CASTE VALIDITY**

PRINCIPAL
GOVERNMENT POLYTECHINIC
MURTIZAPUR

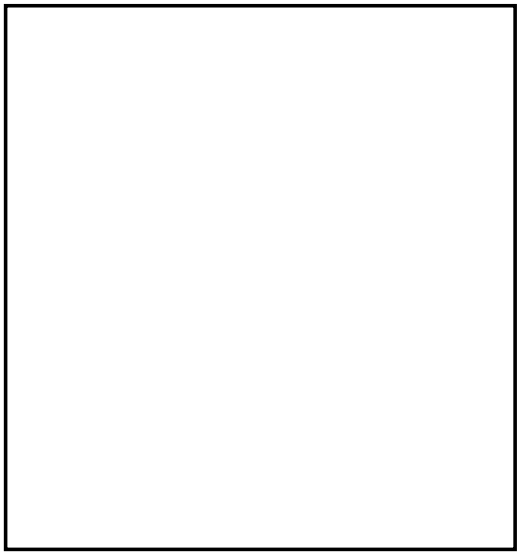
Govt. Poly. Murtizapur

Ticket No. :- **22**

Name:-**Umesh Dadarao Dange**

Semester :- **CO-6G**

Speciman Sigature Librarian



RULES

1. All Books are issued for 7 days.
2. Only one Book can be borrowed on this ticket.
3. The holder of this ticket will be responsible for the books
4. A sum of Rs. 10/- Will be charged for the loss or damage of this ticket.
5. This ticket must be deposited while leaving the semester.

LIBRARIAN

GOVERNMENT POLYTECHNIC, MURTIZAPUR

DIST. AKOLA 444107

LEAVING CERTIFICATE

Number: **88**

No change in any entry in this certificate shall be made except by the authority issuing and any infnngments if this requirement is liable to involve the imposition of a penalty even that of rustication.

1) Registration & Enrolment Number of Candidate : **GPMZR/CO/15-16/1512410181**
2) Name of the Institute : **GOVERNMENT POLYTECHNIC, MURTIZAPUR**
3) Name of Candidate (in full) : **Umesh Dadarao Dange**
4) Race & Caste : **' Chanbhar '**
5) Place of Birth : **Murtizapur**
6) Date of Birth Month & year : **09/02/2000**
   According to Christian era : - - -
   (in words and figures) : **Nine February Two Thousand**
7) Institution last attended : **Z. P. High School Mana**
8) Date of admission : **29/07/2015**
9) Progress : **Satisfactory**
10) Conduct : **Good**
11) Date of leaving this institution : **13/03/2019**
12) Course and year in which : Diploma in **Computer Engineering**
    Studying Since when : - - - -
13) Reason for leaving Poly. institution **Diploma Completed**
    a) Passed Final Year Diploma in **Computer Engineering**
       with **First Class** in **2019** Exam.
    b) As Per the request of candidate / parent
    c) Appeared For - - - - Exam And Failed
14) Remarks : **Good**

Certified that the above information is in accordance with the Polytechnic/Institute Register.

Date : **13/03/2019**
Place : **Murtizapur**

Principal
GOVERNMENT POLYTECHNIC, MURTIZAPUR

GOVERNMENT POLYTECHNIC, MURTIZAPUR

NH-6, Amaravati Road, Murtizapur Dist. Akola

Ph. (07256) 207876, 207877

Photo

Name:-Umesh Dadarao Dange

Enrollment No. :-1512410181

Branch :-Computer Engineering

Date Of Birth :- 09/02/2000 Blood Gr :- A+

Date Of Admission :- 29/07/2015

Principle **H.O.D** **Candidate sign**

RENEWAL

Year	Session	H.O.D
2		
3		

Address :- AT. Post. :- Mana Ta. :- Murtizapur Di.:- Akola
Mobile No.:- 9999999999 Ph.No.9999999999

INSTRUCTIONS :- 1) Student must dispaly I-Card using neck string while in institute campus.2) This I-Card is vaild only for the student named and for the year indicated.3) This I-Card is non transferable and must be produced whenever demanded .4) In case of loss of this I-Card, must intimate immediate to the principal in writting. IF FOUND PLEASE SURRENDER TO THE INSTITUTE.

Provisional Roll Call List

Computer Engineering Department

Sixth Semester Acadmic Year 2018-2019

CO-6G

Roll No.	Enrollment No	Name of Student	Remark
1	1412410065	AJAY RAJU BONDE	
2	1412410254	PRITESH TALOKAR	
3	1512410105	SHREYA SHIKRUSHNA KOKATE	
4	1512410146	JAY RAJESH MANE	
5	1612410060	PRATHMESH CHANDRASHEKHAR SAWAIKAR	
6	1612410131	GAYATRI KISHOR MORE	
7	1612410145	GANESH SANTOSH WANDALE	
8	1612410146	AMOL VIJAY MORE	
9	1612410152	PRATIKSHA VIJAY JALAMKAR	
10	1612410159	KARAN ARUN SAWALE	
11	1612410173	RUTU RAJENDRA WARE	
12	1612410174	SURAJ RAMESH BHAGAT	
13	1612410176	HRUTIK ARUN KHADE	
14	1612410180	DARSHAN DILIP AMBERE	
15	1612410194	GANESH ASHOK CHAUDHARI	
16	1612410202	SAGAR SUBHASH RAUT	
17	1612410214	MUSTAJAB ULLA KHAN NAIEM ULLA KHAN	
18	1612410222	ADINATH BABURAO SHELLALE	
19	1712410157	RAHUL GANESH CHINCHALKAR	
20	1712410158	MAYUR GAJANAN AMBALKAR	
21	1712410163	RUSHABH RAMCHANDRA JOSHI	
22	1712410164	SHUBHAM G.PATIL	
23	1712410165	RAJESH TRYAMBAK HAWALE	
24	1612410143	PRALHAD SUDHAKAR WAKTE	
25	1612410220	NAVED AHEMAD KHAN ABDUR RASHEED KHAN	
26	1612410230	PRITHVIRAJ KISHORSINH CHAUHAN	
27	1512410141	SAURABH SANJAY SANGUNWEDHE	
28	1512410181	UMESH DADARAO DANGE	
29	1612410010	TEJAS PRASHANT SONAWANE	
30	1612410172	KARAN DASHRATH PATIL	