A Project Report on:

Student Information System

For the partial fulfilment of

Bachelor of Computer Application

6th Semester

Prepared By:

Rahul Patalia & Keyur Choksi

Submitted To:



(SESSION 2015-2018)

Shri H.J. Doshi Information Technology Institute

(BCA & PGDCA – Jamnagar, Gujarat)

India – 361001



Information Technology Institute, Jamnagar



Project Ref. No.: BCA 06 2018/

to Certify This that is

Mr./Ms./Mrs. Patalia Rahul A.

is regular student of B. C. A. Semester 6, Year-2018.

The Project on

Student Information System

has been sucessfully completed for the partial fulfillment of required by Saurashtra University, Rajkot. study

for Academic Year 2017-2018.

College Seal

Lab Guide

Lect. Hasit Chandarana Project Guide

Dr. H. B. Sheth Director



Information Technology Institute, Jamnagar



Project Ref. No.: BCA 06 2018/

This is to Certify that

Mr./Ms./Mrs. Choksi Keyur A.

is regular student of B. C. A. Semester 6, Year-2018.

The Project on

Student Information System

has been sucessfully completed for the partial fulfillment of study required by Saurashtra University, Rajkot.

for Academic Year 2017-2018.

College Seal

Lab Guide

Lect. Hasit Chandarana Project Guide

Dr. H. B. Sheth Director

Abstract

Student Information System

Aim of Project:

Computer technology has provided beneficial in many ways, from visible to invisible, spectacular to routine In business too, computer system occupies special place.

Project making is a one subject of BCA. The student gets s chance to have practical knowledge of the Software or Web site Making.

Such Project Making Plays a dominant role in developing practical view points, experience and also make them aware about the role situation of the Desktop Application or Web Application.

This Project is prepared under my knowledge, guidance given by our professors and especially Thanks to concerned person, who has helped us to get knowledge on the Project.

Acknowledgement

We are the student of Computer Science Field here by thanks we our to express H.J.Doshi.I.T.Institute, Jamnagar for giving us the opportunity to do the project on HJD Student Portal.

On the successful completion of our project we would especially like to thanks to all staff members of our college for guiding us throughout the project and for their constant support and help in design and implementation of this project.

We are thankful to Miss Dr. Hansaben Sheth. The Principle of Shree H.J.Doshi.I.T.Institute,Jamnagar all respected trusty members for all the facilities they provided us throughout our academic session and for encouraging our take up this activity. And we would also like thank the faculties and staff members of Shree H.J.Doshi.I.T.Institute Jamnagar.

We are also grateful to our parents for their support and unconditional help, which made our project a real success.

> With Warm Regards:-Rahul Patalia & Keyur Choksi

Index

Sr. No.	Chapters	Page No.
	Abstract	
	Acknowledgement	
1	Introduction	7
	1.1 Project Profile	7
	1.2 Scope of project	8
	1.3 Purpose of Project	9
	1.4 Project Summery	10
	1.5 Technology Review	11
2	System Analysis	14
_	2.1 Study of current System	14
	2.2 Requirements of new System	15
	2.3 Feasibility Study	17
	2.4 System Development Life Cycle	18
3	Project Management	20
	3.1 Project Planning	20
	3.2 Project Developing Approach	22
	3.3 Schedule	24
	3.4 Timeline Chart	25
	3.5 System Requirement	26
4	System Design	27
	4.1 Architecture	27
	4.2 Hardware & Software Specification	28
	4.3 Data Flow Diagram	29
	4.4 E-R Diagram	30
	4.5 Use case Diagram	31
	4.6 Data Dictionary	32
	4.7 Relationships	34
	4.8 Screen Layouts (GUI)	35
	4.9 Reports	42
5	Testing & Implementation	43
	5.1 Testing &Implementation	43
	5.2 Training the Personal	45
	5.3 Documenting the System	45
	5.4 Quality of System	46
	5.5 Limitation & Future Enhancement	47
	5.6 Conclusion	48
6	Bibliography	49
J -		

1 Introduction

1.1 Project Profile

Project Title Student Information System

Application Manage the Student Information

Project Type Web Application

Platform ASP.Net with C#

Database **SQL Server Database**

Other Tools Microsoft Visual Studio 2012,

MsWord, HTML, CSS

Project Duration 2 Months

Prepared By Rahul Patalia & Keyur Choksi :

Submitted to Bhavans Shree H.J.Doshi I.T.Institute

1.2 Scope of Project

This Application is use for the all students of our college.

Registration of all students is done by the admin or faculty of the portal site.

After getting Log in Id from the admin student have to activate his/her account through filling his/her details in the Activation form.

In Activation Form student have to fill his/her details like his/her name semester year name etc.

Students and Faculty also manage his/her profile in the portal site.

All accounts of Students and Faculties are maintained by the portal Admin.

Only Admin can perform changes in the all accounts.

Faculty can see the student name id and his photo only.

1.3 Purpose of Project

Web portals are sites on the World Wide Web that typically provide personalized capabilities to their visitors.

They are designed to use distributed applications; different numbers and types of middleware and hardware to provide services from a number of different sources.

As defined by IBM, an Internet portal is "a single integrated, ubiquitous, and useful access to information (data), applications and people.

" A portal may look like a Web site, but it is much more. The latter, while an important part of any university's communications strategy, is primarily a way to provide static information.

Ultimately, all universities will use portal technology; it is when and how those are difficult questions.

Motivations for deploying a portal can include increased productivity, improved communication, possible revenue generation opportunities, and the prospect of building a stronger relationship within and among our constituents.

One potential benefit is that many of the technical issues that are addressed by a portal implementation, including authentication, authorization, and security, are aligned with the existing objective to improve the technology infrastructure both within and among our campuses.

1.4 Project Summery

This Portal is mainly use for manage the students information.

To run this Website User at least have a Internet Connection and Web browser.

This Portal is don't required the any kind of software to run Because this Portal is a web Application it is only require the internet connection and web browser and .net framework.

Mainly Used this Portal to auto Maintain the student information and students accounts.

This Portal Provide Fully Robust Login Security.

Admin have many Controls in this portal like

- New User's Registration. 1.
- Delete single or multipleUsers. 2.
- User's Summary. 3.
- Maintain Student Information. 4.
- Upload News or Notice. 5.

1.5 Technology Review

Front End Technology (IDE)

ASP .Net with C# 3.5

ASP .Net 3.5 is the latest version of ASP and it represents the most dramatic change yet.

With ASP .Net developers no longer need to paste together a jumble of HTML and scriptcode in order to program the Web.

Instead, you can create full-scope web applications using nothing but code and a design tool such as Visual Studio 2005,2008 or higher if any.

ASP .Net deals with many problems by introduction a completely new model for web pages.

This model is based on a remarkable piece of technology called the .Net Framework.

The .Net Framework is a service or platform for building, deploying and running applications.

The .Net Framework consists of 2 main parts: common language runtime and class libraries.

ASP.Net Application

This is specially used to create Web Based Windows application which may have background code as C#.Net, VB.Net or J#.Net.

Using ASP. Net you can create mainly two types of application which are

- ✓ ASP.Net WebSite
- ✓ ASP.Net Web Service

Information about C#.Net

C# is an elegant and type-safe object-oriented language that enables developers to build a variety of secure and robust applications that run on the .Net Framework.

C# programs run on the .Net Framework,an integral component of windows that includes a virtual execution system called the common language runtime (CLR)and a unified set of class libraries.

Source written in C# is compiled into an intermediate language that conforms to the CLI specification.

When the C# program is executed, the assembly is loaded into the CLR, which might take various actions based on the information in manifest.

Advantages of ASP.Net

- ✓ It is uses the .Net Framework.
- ✓ It is complied not interpreted.
- ✓ It is Multilanguage.
- ✓ It is uses Object Oriented Features.
- ✓ Stores Presentation and Application Logic.
- ✓ It gives Multibrowser facility.

Back End Technology (Database)

SQL Database

SQL, the most popular Open Source SQL database management system, isdevelopment, distributed and supported by Oracle Corporation.

A database is a structured collection of data, It may be anything from a simple shopping list to a picture gallery or the vast amounts of information in a corporate network.

A relational database stores data in separate tables rather than putting all the data in one big storeroom.

The SQL part of SQL stands for "Structured Query Language". SQL is the most common standardized language used to access databases.

The SQL Database Software is a client/server system that consists of a multi-threadedSQL server that supports different back ends.

2 System Analyses

2.1 Study of Current System

For these reasons, the website is not only a place where you can find information and take advantage of services, but it is also a meeting and communication place. In particular, the convivial Web site has the following main aims:

- ✓ to describe the university and its courses,
- √ to offer students useful information to help them organize and plan their studies,
- ✓ to offer up-to-date information about the courses that students are attending or plan to attend,
- ✓ to give students who come from other towns information on the cities where the university is located and help them to organize their staying in the city,
- ✓ to welcome freshmen and help them get to grips with the university and its environment,
- ✓ to help students to get access to libraries, giving information on timetables, locations, etc.,
- ✓ to publish graduate students' CVs online, and to give information to anyone who, for any reason, may need to reach the university and stay in town for a few days.

2.2 Requirement of new System

Why is Portals Important?

A portal provides Internet users with a single, customized entry point to network-based campus.

In the higher-education context, the portals of most interest are horizontal, that is, they are designed to offer access to almost everything that an individual user associated with the campus needs to manage his or her relationship with the University.

These users can include students, faculty, staff, parents, prospective students, alumni, and members of the community at large.

We believe that a portal should be a complementary component of the total campus' Web design, and needs to be viewed as integral element, rather than an add-on or competing technology.

A portal represents a change in the institutional philosophy with regard to the delivery of services, and is a major shift to a customer-centric design of campus-wide IT facilities.

It is clear that almost all universities will implement a portal in the next few years.

Many of the leaders in the field would have already gained key competitive advantages, such as recruiting students, developing relationships with suppliers and other bodies. Those who are still undecided to implement portals will be driven by pressure from students and parents who see the benefits of portals and are choosing universities who offer them.

Students benefit fromPortal:

- ✓ Web interface to courseware and required information about courses;
- ✓ increased and easier communications with faculty;
- ✓ online access to grades, financial aid information, class schedules, graduation checks;
- ✓ access to the communities of interest within the university, sports, clubs, and community services opportunities; and
- ✓ Increased life-long learning opportunities.

Faculty and staff benefit fromPortal:

- ✓ real-time communications with students;
- √ simplified course management tools;

- ✓ instant access to information for advising students; and
- ✓ easily accessible information for every facet of their job

2.3 Feasibility Study

In the feasibility study we will see about three types of study for our system.

- 1. Economic Feasibility
- 2. Technical feasibility
- 3. Behavioral Feasibility

In feasibility study we will study about in what situations our system is run.

1. Economical Feasibility:

The system being developed is economic with respect to School or Collage's point of view.

It is cost effective in the sense that has eliminated the paper work completely.

The system is also time effective because the calculations are automated which are made at the end of the month or as per the user requirement.

The result obtained contains minimum errors and are highly accurate as the data is required.

2. Technical feasibility:

The technical requirement for the system is economic and it does not use any other additional Hardware and software.

3. Behavioural Feasibility:

The system working is quite easy to use and learn due to its simple but attractive interface. User requires no special training for operating the system.

2.4 System Development Life Cycle

SDLC Overview

SDLC, Software Development Life Cycle is a process used by software industry to design, develop and test high quality software.

The SDLC aims to produce high quality software that meets or exceeds customer expectations, reaches completion within times and cost estimates.

The systems development life cycle (SDLC), or software development life cycle in systems engineering, information systems and software engineering, is a process of creating or altering information systems, and the models and methodologies that people use to develop these systems.

In software engineering the SDLC concept underpins many kinds of software development methodologies.

These methodologies form the framework for planning and controlling the creation of an information system.

Planning

Deployment

Defining

SDLC

Testing

Designing

Building

Fig 2.1 for SDLC Info

3 Project Management

3.1 Project Planning

Definition of Project Planning

Project planning is procedural step in project management where required documentation is created to ensure successful project completion.

Planning

First of all the login Page will be display on the screen when User or Admin run site first time.

In the login page all user can login the portal or site.

After login student can see his/her dashboard.

In dashboard student can manage his/her profile.

Faculty and admin have another page as homepage.

After faculty login faculty can manage his/her profile and search info about any student.

Admin can manage the all account.

New users are only created by admin of the portal.

Admin can create multiple user at a time.

Admin can delete the user and admin can delete user single or multiple at a time.

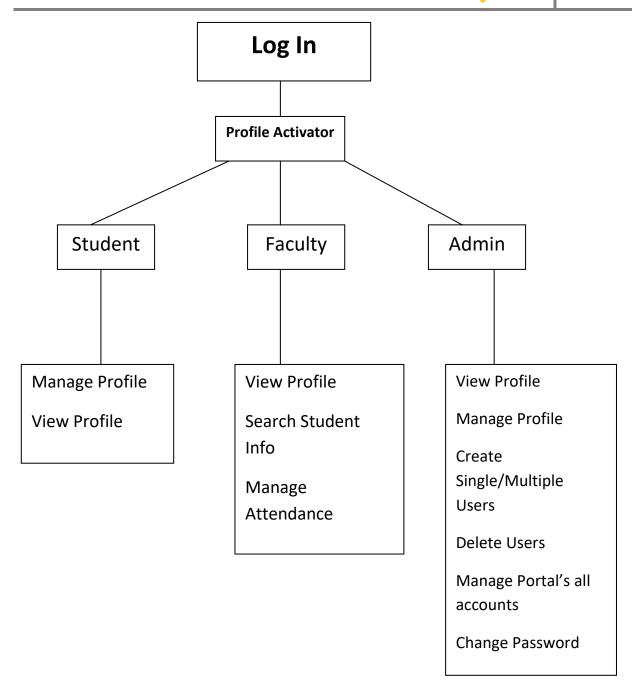


Fig 3.1 of Planning Login

In our project there are three important modules or you can say role for handle the portal one is for student one for faculty and one for admin.

Each module in our portal is play very important roles to run the portal.

But there are also one important module is Profile Activator.

All Users have to activate his/her profile first then he/she can access the portal.

When student login then he/she has its rights on portal like download file, manage his/her profile, see notice board or news.

When faculty login then he/she has its rights on portal like upload files, manage his/her profile, see and upload notice board or news, search students info.

When admin login then he/she have its rights on portal like upload file ,manage his/her profile, upload notice board or news manage all accounts, create single or multiple users at a time, delete single or multiple users at a time.

3.2Project Developing Approach

Our project is developed under the Prototype Model of the SDLC.

The more information about Prototype model is given below;

The basic idea here is that instead of freezing the requirements before a design or coding can proceed, a throwaway prototype is built to understand the requirements.

By using this prototype, the client can get an "actual feel" of the system, since the interactions with prototype can enable the client to better understand the requirements of the desired system. Prototyping is an attractive idea for complicated and large systems for which there is no manual process or existing system to help determining the requirements.

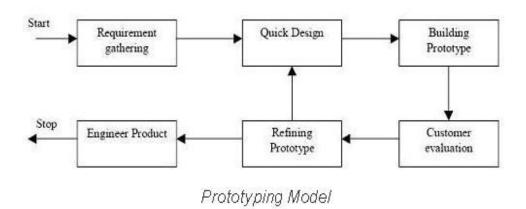


Fig 3.4 of Prototype Model

Advantages of Prototype model:

Users are actively involved in the development Since in this methodology a working model of the system is provided, the users get a better understanding of the system being developed.

Errors can be detected much earlier.

Quicker user feedback is available leading to better solutions.

Disadvantages of Prototype model:

Leads to implementing and then repairing way of building systems.

Practically, this methodology may increase the complexity of the system as scope of the system may expand beyond original plans.

3.3 Schedule

Phase	Task		
1 st Phase	Getting Information about current System		
	And requirements of our project.		
	Discussion with user and Project Partner.		
2 nd Phase	Analyzing the current system and		
	Requirements.		
3 rd Phase	Analyzing the available technologies.		
	Design Database Structure.		
4 th Phase	Designing and Coding as per Instructions.		
	Finding and solving the errors in the complete		
	Forms or web pages.		
5 th Phase	Final error solving, testing and completion.		
6 th Phase	Implementation		
	Project documentation		

Fig 3.5 for Project Scheduling

3.4 Time Line Chart

No	Stages	Month	Month
		1	2
1	Requirement Gathering and Analysis		
2	Project Analysis		
3	Project Design		
4	Coding		
5	Testing		
6	Implementation		

Fig 3.6 for TimeLine Chart

3.5 System Requirement

It Studies the current websites or portals of the colleges system to find out how it works and where improvement should be made?

This study consider both manual and computer methods.

A requirement is a feature that must be included in a new system it may include a way of computing or processing data, producing information, controlling a Student information.

Software Requirement:

Operating System: Windows XP or above versions

Like Windows 7, 8, etc.,

Framework : .net Framework (Compulsory)

Any Web Browser and Internet

Connectivity

Hardware Requirement:

Processor : minimum Pentium or Advanced

Processor

RAM : minimum 512 MB RAM

Hard disk : minimum 80 GB Hard Disk or

Onwards

4 System Design

4.1 Architecture

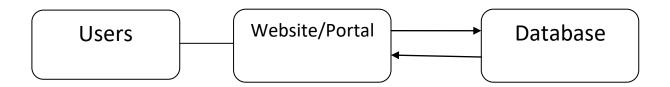


Fig 4.1 of Our site Architecture

In this site Users are interact with Website/Portal and Website/Portal is interact with Database, and Database is Interact data with Website.

All this process is in Website/Portal between Users, Website/Portal and Database.

4.2 Hardware and Software Specification

1. Software Specification:

>Microsoft Visual Studio 2010

Visual Studio is a complete set of development tools for building Asp.NET Web application, XML Web Services, desk top and Mobile application.

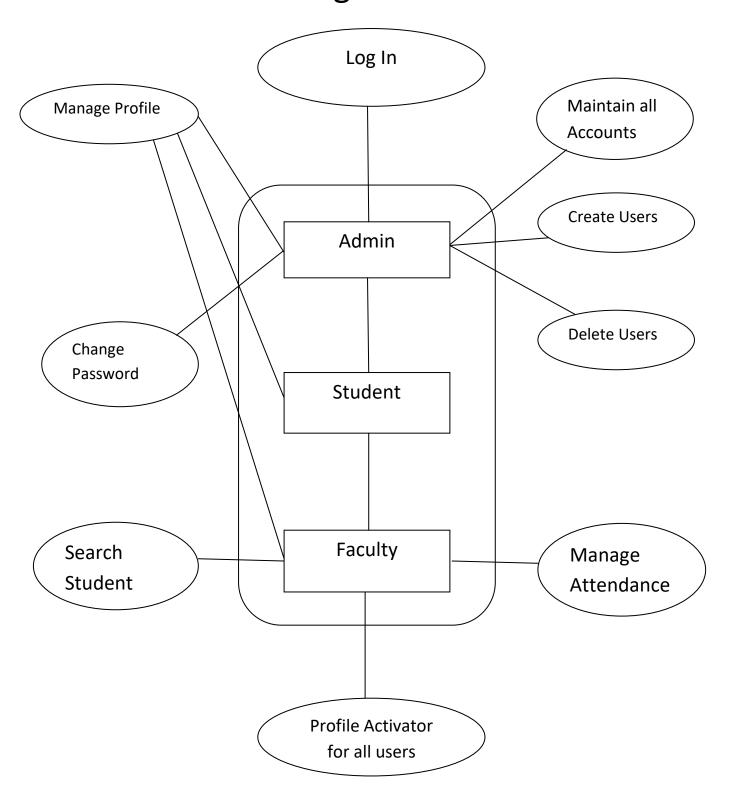
2. Hardware Specification:

>Personal Computer or Internet Connection

A Personal Computer is a general-purpose computer, whose size capabilities and original sale price makes it useful for individuals, and is intended to be operated directly by an end-user with no intervening computer operator.

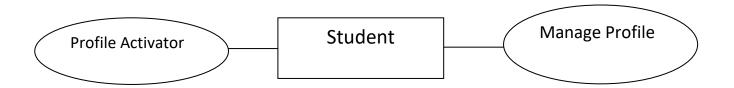
Software Application for most personal computer include, but are not limited to, word processing, spreadsheets, database, Web browsers and E-mail client, digital media playback game admiredpersonal productivity and special-purpose software application.

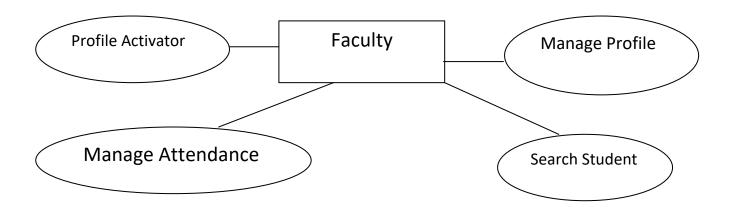
4.3 Data Flow Diagram



4.3 Fig of Data Flow Diagram

4.4 ER (Entity Relationship) – Diagram





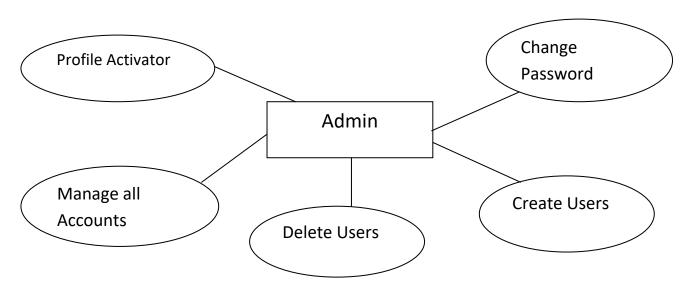


Fig 4.4 of ER Diagram

4.5 Use Case Diagram

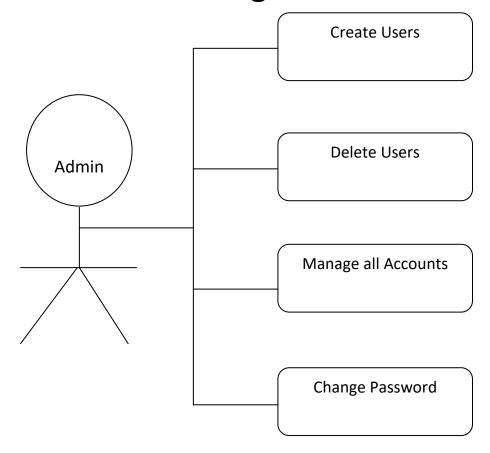


Fig 4.5.1 for Use Case Diagram for Admin

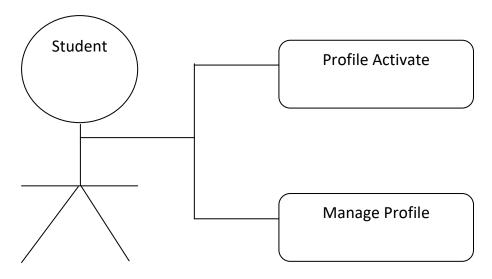


Fig 4.5.2 for Use Case Diagram for Student

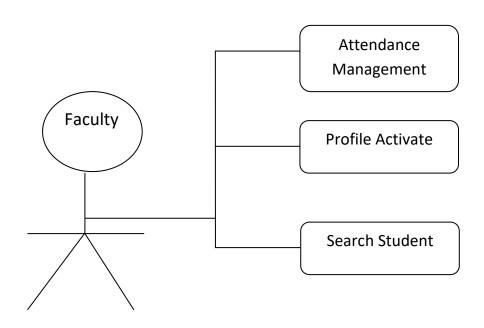


Fig 4.5.3 for Use Case Diagram for Faculty

4.6 Data Dictionary

1. LogIn_Master:-

Field Name	Data Type	Size (bytes)	Description
cld	int	20	For the Candidate id
Uid	Varchar	20	For the User Id
Ups	Varchar	20	For the User Password
Role	Varchar	20	For the Roles like student
			faculty etc,
Grp	Varchar	20	For the groups like
			bca,pgdca,staff
isActive	Int	2	For the user active or not

2. Stud_Attendance:-

Field Name	Data Type	Size (bytes)	Description
Stud_id	Int	20	For the Candidate id
Attend_Date	date	3	For the User date
Attend	bit	1	Attended or Not

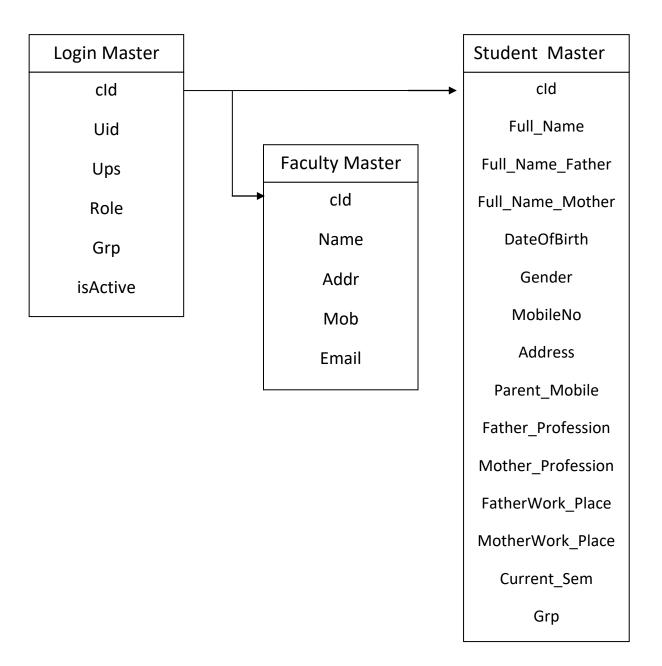
3. Student_Master:-

Field Name	Data Type	Size (bytes)	Description
cld	int	20	For the Candidate id
Full_Name	Varchar	50	For the User name
Full_Name_Father	Varchar	50	For the User Father
			Name
Full_Name_Mother	Varchar	50	For the user Mother
			Name
DateOfBirth	date	3	For the user DOB
Gender	Varchar	5	For the user gender
MobileNo	Varchar	15	For the user Mobile
Address	Varchar	100	For the user Address
Parent_Mobile	Varchar	15	For the user parents
			mobile
Father_Profession	Varchar	15	For the user father's pro
Mother_Profession	Varchar	15	For the user mother's
			pro
FatherWork_Place	Varchar	100	For the father's
			workplace
MotherWork_Place	Varchar	100	For the father's
			workplace
Current_Sem	Varchar	15	For the user Current Sem
Grp	Varchar	7	For the user Group

4. Faculty _Master:-

Field Name	Data Type	Size (bytes)	Description
cld	Int	20	For the Candidate id
Name	Varchar	30	For the User name
Addr	Varchar	50	For the User address
Mob	Varchar	20	For the user mob.no
Email	Varchar	40	For the user email
Photo_Id	Varchar	20	For the user photo

4.7 Data Relationship



4.8 Snapshots

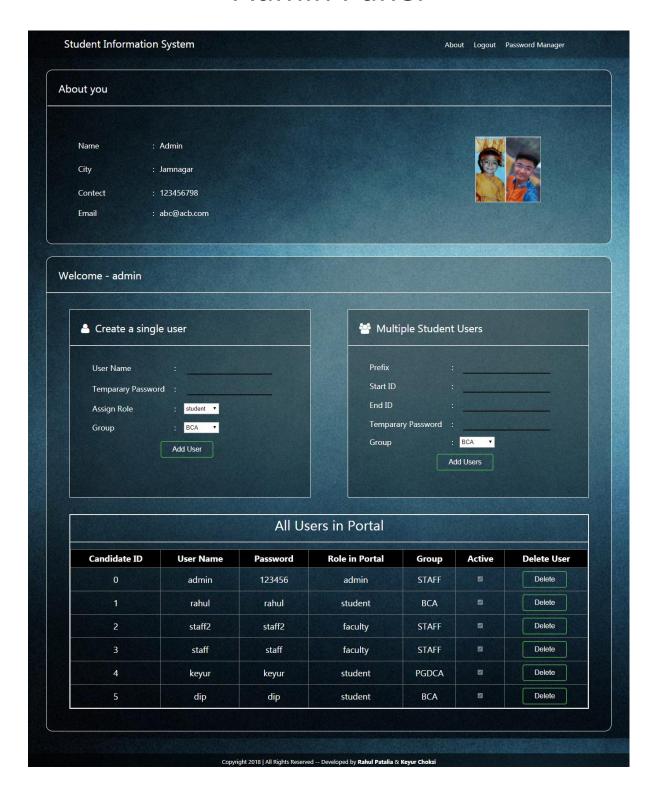
Log In



About Developers



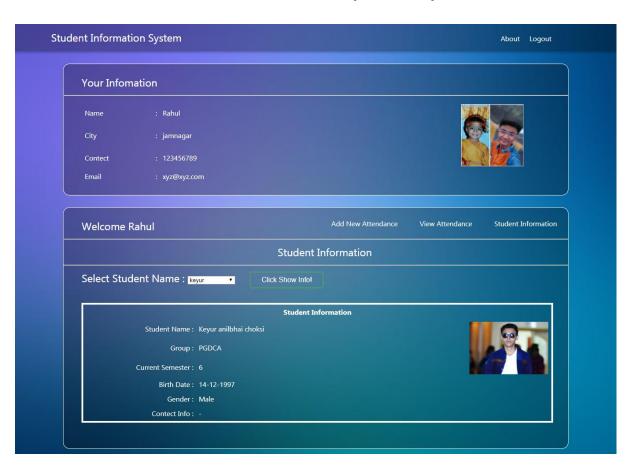
Admin Panel



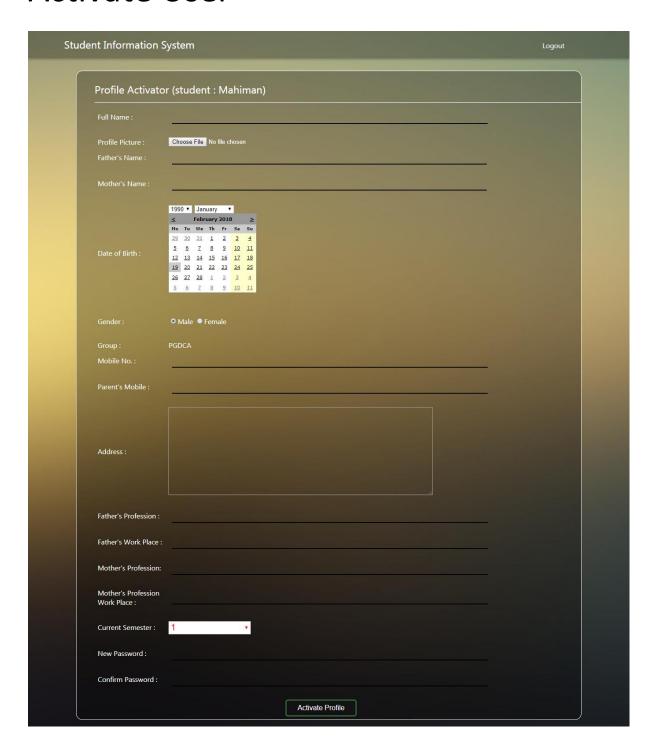
Password Manager



Students Information (Staff)



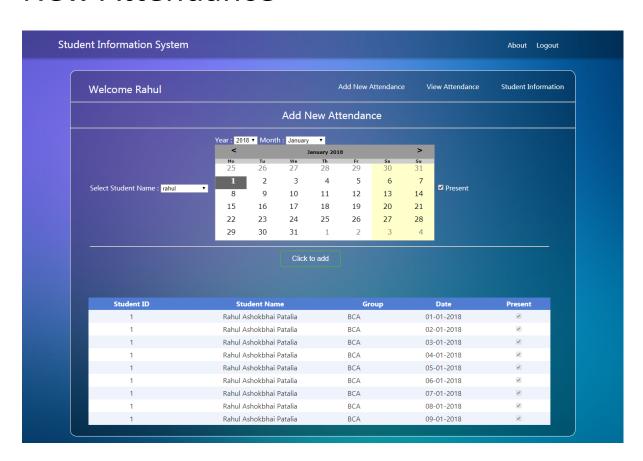
Activate User



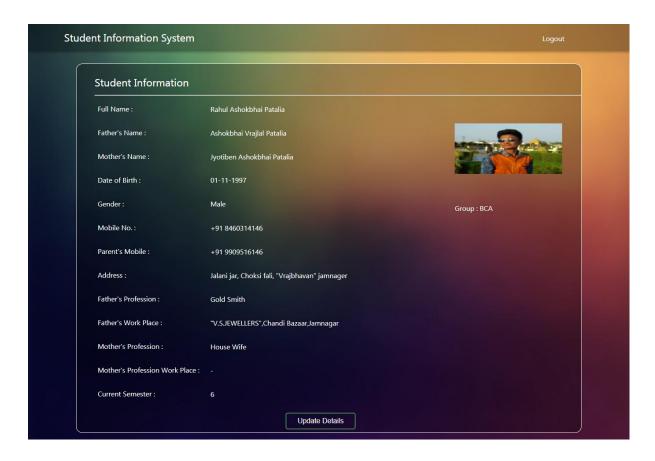
Attendance Management



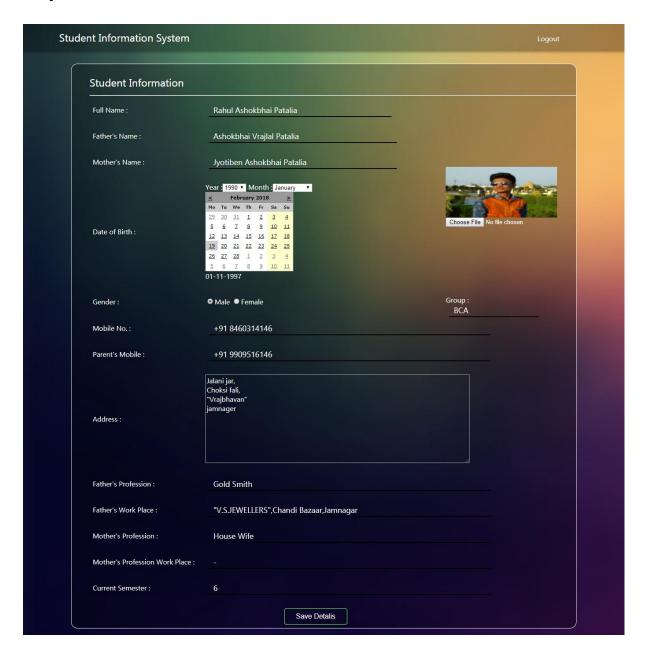
New Attendance



Student Information



Update Student Information



4.9 Reports

ASP.NET Data Grid

Put data tables at your users' fingertips with the high performance, scalable ASP.NET AJAX data grid.

Rapidly display and edit flat, tabular information with rich features to sort, move, filter and template your data.

High Speed Data Entry Enter data within the cell, using templates with custom editors that match the column's data type.

A data grid is an architecture or set of services that gives individuals or groups of users the ability to access, modify and transfer extremely large amounts of geographically distributed data for research purposes.

The data in a data grid can be located at a single site or multiple sites where each site can be its own administrative domain governed by a set of security restrictions as to who may access the data.

This allows for adding new rows and deleting rows within the grid. In addition, validations can be done realtime within the grid cell as the user is entering data within the grid.

5Testing & Implementation

5.1Testing & Implementation

Testing is vital for the success of any system. The purpose of system testing is to identify & correct errors in candidate's system. System testing makes a logical assumption that if all the part of the system is correct, the goal will be successful achieved.

Inadequate testing leads to prone errors even after months of successful system implementation.

Program Testing:

All the programs in the System have been checked & all the syntaxes as well as the logical errors had been removed. All the inputs have been tested with dummy data. The adequate care is taken for the outputs that meet the user requirements.

Interface Testing:

All the User Interfaces Screens in the System are designed in such a way that makes data entry & data retrieval very easy & exciting and it is also designed in such a way that it keeps the user's interest in it with comforts. Help for the interfaces has also has been provided.

Validation Checks:

All the checks for the validation have been done. Each& every data is checked for validation and is processed by the system.

The system is protected against unauthorized or faulty data. The validations are also been confirmed with the user.

Procedure & validation testing:

Dummy data was prepared and compiled in the normal manual way. The same was entered in the computerized system and compared with the manual data to ascertain the accuracy.

Simultaneously invalid data were also entered to ascertain the efficiency of computerized system and as per testing these results were getting as result.

Output consideration:

All the reports were produced & documented as per the general requirements of business organizations. The reports are in the required as per the usual requirements.

The formats, depending on the need of organization, can vary as compared to designed formats.

5.2 Training the Personal

Training means organized activity aimed at operating information and/or instructions to improve the recipient's performance or to help him or her attain a required level of knowledge or skill.

This is a Student Portal. This Portal's way is very difficult. But Without training user or admit is not properly used this portal. so user and admin both are take training to use this portal.

This portal is working on users and admin's command, means this system is follows user's or admin's command so user or admin take training to use this portal.

This portal is made on biggest requirement so first training is matter for user or admin to use this system.

5.3 Documenting the System

Documenting means substantiating the occurrence of an event by making written or photographic records.

This is a Student Portal so me and my partner is make documenting for Student Portal.

All introductions are included in this system's documentation, introduction means project profile, project purpose and scope, project summary etc.

After include System Analysis, it means analysis of the current and future roles of proposed system in anoraganization,

The system analyst examines the flow of documents, information, and material to design a system that best meets the cost, performance, and scheduling objectives.

After include Project Management, it means the process and activity of planning, organizing, motivating, and controlling resources, procedures and protocol to achieve specific goals in scientific or daily problems. After include System designing, it means the process of defining the architecture, components, modules, interfaces and data for a system to satisfy specified requirements.

5.4 Quality of System

Quality means a distinctive attribute or characteristic of something.

This is a Student Portal, in this Student Portal given maximum best quality.

The quality of this Student Portal is to maintain the information about different Users.

The Main quality of this Student Portal is to Maintain Students and faculties information.

Other main quality of this Student Portal is the student can downloads the files from the portal.

This new Student Portal is vary updated. Maximum facilities give in this system. This system is very easy to use and control.

5.5 Limitation & Future Enhancement

Limitation means a legally specified period beyond which an action may be defeated or a property right does not continue.

Enhancement means Change that increases the value of an item.

In future in this system using oracle database means large number of records can be managed without facing any problems.

Same as this application is not full of every facility, because of limited knowledge and time limits. In future I'll develop this application by the bound connectivity. And this application is became vary user friendly, So users can easily operate this application. In future this application is became is very-friendly.

5.6 Conclusion

In this short document I have tried to cover most of the areas of concern in writing a project report.

Naturally, this is not the last word on the subject. If you have time, you should have a look at one or more of the books recommended in the references and bibliography.

I have tried to encourage you to put some effort into the project report and laid down some guidelines for the layout and format.

These are gradually becoming the 'standard' for final year reports within the department and will be amended and improved in the light of experience.

If you have any suggestions as to how this document could be made more helpful, your comments will be appreciated.

I am looking forward to receiving some good reports this year.

6 Bibliography

Books

- 1. The complete Reference Visual Basic.NET
- 2. Beginning VB.NET (Wrox Publication)
- 3. System Analysis and Design Alias M. Awad
- 4. Software Engineering Roger Pressman

Websites

- 1. www.google.com
- 2. www.microsoft.com
- 3. www.w3schools.com
- 4. www.dotnetspider.com
- 5. www.stackoverflow.com
- 6. www.codeproject.com
 - 7. www.w3layout.com