“PLACEMENT PORTAL”

A project report submitted in partial fulfillment of the requirements
For the Award of Degree,

A
Major Project Report
Submitted in partial fulfillment of the

Requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE & ENGINEERING

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April – 2015

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CANDIDATE'S DECLARATION

I hereby certify that the project work entitled "**Placement Portal"** in partial fulfillment of the requirements for the award of the Degree of BACHELOR OF TECHNOLOGY in COMPUTER SCIENCE AND ENGINEERING with specialization in Open Source Software and Open Standards and submitted to the Department of Computer Science & Engineering at Center for Information Technology, University of Petroleum & Energy Studies, Dehradun, is an authentic record of my work carried out during a period from **January '15** to **April '15** under the supervision of **Dr. Vinay Avasthi.**

The matter presented in this project has not been submitted by me for the award of any other degree of this or any other University.

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This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

Date: 17 March 2015

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ABSTRACT

This work presents a web portal designed for managing and training the placement data. The objective of this project is to develop a system that can be used by placement cell of the university. The purpose is to design a system that provides functionalities to perform the activities related to placement services. Although such a project has a very wide scope, this project contains most important part i.e generating resumes at runtime through updated database.

It is based on complete modular architecture. This modularity of the architecture will allow us to replace or add modules in the future as a way to enhance a particular feature of particular situation. This system can be used as an application by the placement cell of the university to manage the student information with regards to training and placement. In the present work some of the modules are implemented such as User, Online Examination, Automatic CV generation, update user details.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1. INTRODUCTION

A web portal is an application that is accessed by users over a network such as the Internet or an intranet. A web portal is most often one specially designed Web page which brings information together from diverse sources in a uniform way. Usually, each information source gets its dedicated area on the page for displaying information (a portlet) often, the user can configure which ones to display. Variants of portals include mashups and intranet "dashboards" for executives and managers. The extent to which content is displayed in a "uniform way" may depend on the intended user and the intended purpose, as well as the diversity of the content.

Very often design emphasis is on a certain "metaphor" for configuring and customizing the presentation of the content and the chosen implementation framework and/or code libraries. In addition, the role of the user in an organization may determine which content can be added to the portal or deleted from the portal configuration. A portal may use a search engine API to permit users to search intranet content as opposed to extranet content by restricting which domains may be searched. Apart from this common search engines feature, web portals may offer other services such as e-mail, news, stock quotes, information from databases and even entertainment content.

Portals provide a way for enterprises and organizations to provide a consistent look and feel with access control and procedures for multiple applications and databases, which otherwise would have been different web entities at various URLs. The features available may be restricted by whether access is by an authorized and authenticated user (employee, member) or an anonymous site visitor. Examples of early public web portals were AOL, Excite, Netvibes, iGoogle, MSN, Naver, Lycos, Indiatimes, Rediff, and Yahoo.

This project is aimed at developing an online portal for the Training and Placement Dept. of the university. The system is an online application that can be accessed throughout the organization and outside as well with proper login provided. This system can be used as an application for the placement cell of the university to manage the student information with regards to placement. Students logging in should be able to upload their information in the

form of a CV. Admin on the other hand should be able to access/search any information put up by students.

Work in the application would be done in the following way:

- The categories of CVs are decided and uploaded in the desired format.
- Data would be stored in the database for the CVs .
- The front-page of the system is created giving a brief description about the system and the login box
- Online Exam would be conducted on the portal itself.
- Students who have been placed would be automatically segregated from the rest.
- Students could also view the past experiences of the students with the Companies.

1.1 HISTORY:

The earlier system is not computerized. All transactions in the system are done manually by maintaining records. It takes much time for a placement officer to collect and approve the details of students. There is poor communication between students and placement officer. Students may not obtain the desired information. It is difficult to coordinate students, companies and interviews. The proposed system is a web based application and maintains a centralized repository of all the necessary information. The system allows students to access details of recruitments. The system allows students to access any preparatory material posted by various departments. Recruiters can access the student details. It is easy for one to access desired information through the well-defined interfaces.

For the purpose of training and placement of the student in colleges, Placement officer have to collect the information and CV's of students and manages them manually and arranges them according to various streams. If any modification is required that is to be also done manually. So, to reduce the job required to manage CV's and the information of various recruiters, a new system is proposed which is processed through computers. Our project has a big scope to do. We can store information of all the students. CV's are categorized according to various streams. Various companies can access the information. Students can maintain their information and can update it. Notifications are sent to students about the companies. Students can access previous information about placement.

1.2 REQUIREMENT ANALYSIS:-

The requirements for the application that we received from the placement department were to build a system such that the information should be gathered from each and every individual in his/her penultimate year of study, and should be stored in the database which would be accessed by Placement officer only. The details which would be entered would be later used to generate CV's of the students in the desired format.

The application would also provide an online environment to conduct MOCK placement papers for students in order to prepare them for the actual tests. The result would be available soon after they are through with the test. Main objective of every user is to get more secure environment where others can't make disturbance in his/her work. So while keeping this mind, many user requirements are gathered and turned those into some specific features which are added into this project.

2. SYSTEM ANALYSIS

2.1 EXISTING WORKING SYSTEM:

In our university, training and placement officers have to manage the CV's and Documents of students for their training and placement manually. Placement coordinators have to collect the information of various companies who want to recruit students and notify the students from time to time about them. Placement coordinators have to arrange CV's of students according to various streams and notify them according to company requirements. If any modifications or updating are required in CV of any student, it has to be searched and to be done it manually.

2.2 BOTTLENECKS OF PRESENT WORKING SYSTEM:

The Job of the Placement Coordinator is a unique task that involves taking into considerations many features for the same. Existing system has some bottlenecks looked upon by Placement coordinators and students of colleges:-

- Size of collection of CV's may be very large. To handle such a large collection of CV's is a great overhead.

- It is very over heading task to arrange CV's according to various streams, match them with the company's requirement.
- Students can't modify their CV themselves and if there is any updation or modification in CV required, they need to inform it to Placement coordinator and get it updated.
- It is a time consuming activity of managing, updating and informing specific student for specific company requirements.

2.3 MOTIVATION:

For the purpose of training and placement of the student in colleges, SPR's have to collect the information and CV's of students and manage them manually. They also have to gather the academic information of each and every individual of the batch. If any modification is required that is also to be done manually. So, to reduce the job required to manage CV's and the information of various recruiters, a new system is proposed which is processed online

2.4 PROPOSED SOLUTIONS:

To develop a system that would accomplish the following:-

- Reduce the paperwork and storage area.
- Improve the output of operators.
- Improve accuracy in result.
- Allow easy navigation through CV's and company information.
- Manage the man and machine resources efficiently.
- It has user friendly interface having quick authenticated access to documents

The Browser is self-contained:

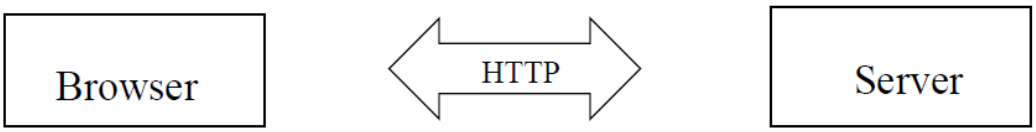

Fig2.1 Communication between browser and server

2.5 GENERAL CONSTRAINTS:

- The size of the CV should not be very large
- The format of the CV would be set by the administrator, such as font size, font style etc.
- The CV needs to be generated as Word document first, and can be later converted to pdf format
- Every individual needs to register with his/her SAP ID on the portal, for placement activities.
- Only personal mail ID's would be accepted for the students, ID's ending with stu.upes domain would reflect an error.
- The test document needs to be uploaded in the format available with the placement cell, corresponding to it there should be appropriate answer choices for students to mark.

2.6 ASSUMPTIONS & DEPENDENCIES:

- Some pages may be displayed wrong.
- Google chrome web browser is to be used all the time while accessing the portal.
- Some web master along the way programmed in some browser-specific codes.
- Passwords are not to be shared with others.
- Students are entering the correct information in the application form.

3. SPECIFIC REQUIREMENTS

3.1 USER CHARACTERISTICS:

- Education level: At least educated enough so that he/she would be able to understand the language of the browser (English). To operate efficiently with the functioning of the browser.
- Technical expertise: Should be comfortable using general purpose applications on a computer.

3.2 PERFORMANCE REQUIREMENTS:

Static numerical requirements are:

- HTTP should be supported.
- HTML should be supported.
- Any number of users can be supported.

Dynamic numerical requirements includes : the number of transactions and tasks and the amount of data to be processed within certain time periods for both normal and peak workload conditions depend upon the internet connection and speed of the user.

3.3 DESIGN CONSTRAINTS:

- Communication: Before any technical work can commence, it is critically important to communicate and collaborate with the customer .The intent is to understand stakeholders' objectives for the project and to gather requirements that help define software features and functions.
- Planning: It defines the software engineering work by describing the technical task to be conducted, the risk that are likely, the resources that will be required, the work products to be produced and a work schedule.
- Modeling: A model and a design is made that will achieve those requirements.
- Construction: This activity combines code generation (either manual or automated) and the testing is required to uncover errors in the code.
- Deployment: The software (as a complete entity or as a partially completed incremented) is delivered to the customer who evaluates the delivered product and provides feedback based on the evaluation.

3.4 EXTERNAL INTERFACE REQUIREMENTS:

Hardware Interfaces-

- A system needs minimum of 64MB RAM.
- A LAN card for the internet.
- Modem
- 2.16Ghz Pentium processor
- 233MB Hard Disk Drive

Software interfaces-

- Any Windows – based operating system (Windows XP/Vista/7/8/8.1)
- Microsoft Visual Studio
- Microsoft Access

3.5 MEMORY CONSTRAINT:

At least 64MB RAM and 233MB hard disk will be required for running the browser.

4. MODEL/ARCHITECTURE

4.1 ENVIRONMENT:

To provide flexibility to the users, the interfaces have been developed that are accessible through a browser. The GUI'S at the top level have been categorized as:-

- Administrative user interface
- .The user interface

The 'administrative user interface' concentrates on the consistent information that is practically, part of the organizational activities and which needs proper authentication for the data collection. These interfaces help the administrators with all the transactional states like Data insertion, Data deletion and Data updation along with the extensive data search capabilities.

The ‘user interface’ helps the end users of the system in transactions through the existing data and required services. The operational user interface also helps the ordinary users in managing their own information in a customized manner as per the included flexibilities

4.2 FUNCTIONALITIES:

The system consists of various modules as admin module, student module online exam module. Each module has an same login page that contain user id and password field, by entering value in that field the user should login to the system.

4.2.1 ADMIN MODULE:

- Add Students and Faculty Details: Create a form for administrator to add new student/Faculty. And insert new entry on Login table. This form has 1drop down list for selection of student or faculty.
- Delete/Edit the details: Create a form where all students/faculty are display on the combo and the admin cans select any student and can delete any of the student/faculty from the Login table.
- Upload Notice: Create a page with 1 text field for title of the notice and text area for the content of the notice. The page should also contain a combo to choose for whom the notice is for.
- Delete/Edit the details: Create a form where all notice title is to be displayed on the combo and the admin can select any notice and can delete/edit any of the notice.

4.2.2 STUDENT MODULE:

- Create a profile (Registration): Fill the form where the user can create an enter the details of academics and extracurricular activities the profile is in editable mode. Resume Builder Create a page which will generate a resume based on the data entered by the student in the profile.

- Notice board: A page which will have a combo box from which the student can choose which notice he wishes to see either by the admin or by the faculty. The notice board would display the list of companies and there expected date.

- Edit Details: The user could edit his/her details if there is any correction which needs to be done or there may be something which the user needs to update. The details can be updated by using this option.

There are various options which are available for both users and admin. They are listed below:-

- The CV Generator application helps in generating the CV automatically from the entered information which was gathered initially from the user, through an application form, which was required to be filled during the registration process. The CV would be in the desired format decided by the administrator and would be saved in the Word format initially.

- The Test Generator application, that helps the users to create, store, assign and perform tests through online. This application can also help the users to evaluate the tests performed by the students, store the marks and generate the mark reports. It contains the facilities to input the data, by interacting with the user friendly input screens in this system and requesting for the reports also provided. It provides an error free generation report.

5. PROBLEM STATEMENT

The procedure for collecting information of the data from students is done manually by the SPR's (Student Placement Representative) of the respective branch. They act as the intermediate between the placement cell and the students. As a result, there is poor communication between students and placement officer. Students may not obtain the desired information. It is difficult to coordinate students, companies and interviews. The proposed system is a web based application and maintains a centralized repository of all the necessary information. The system allows students to access details of recruitments. The system allows students to access any preparatory material posted by various departments. Recruiters can access the student details. It is easy for one to access desired information through the well-defined interfaces.

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6. DESIGN

6.1 USE CASE DIAGRAM:

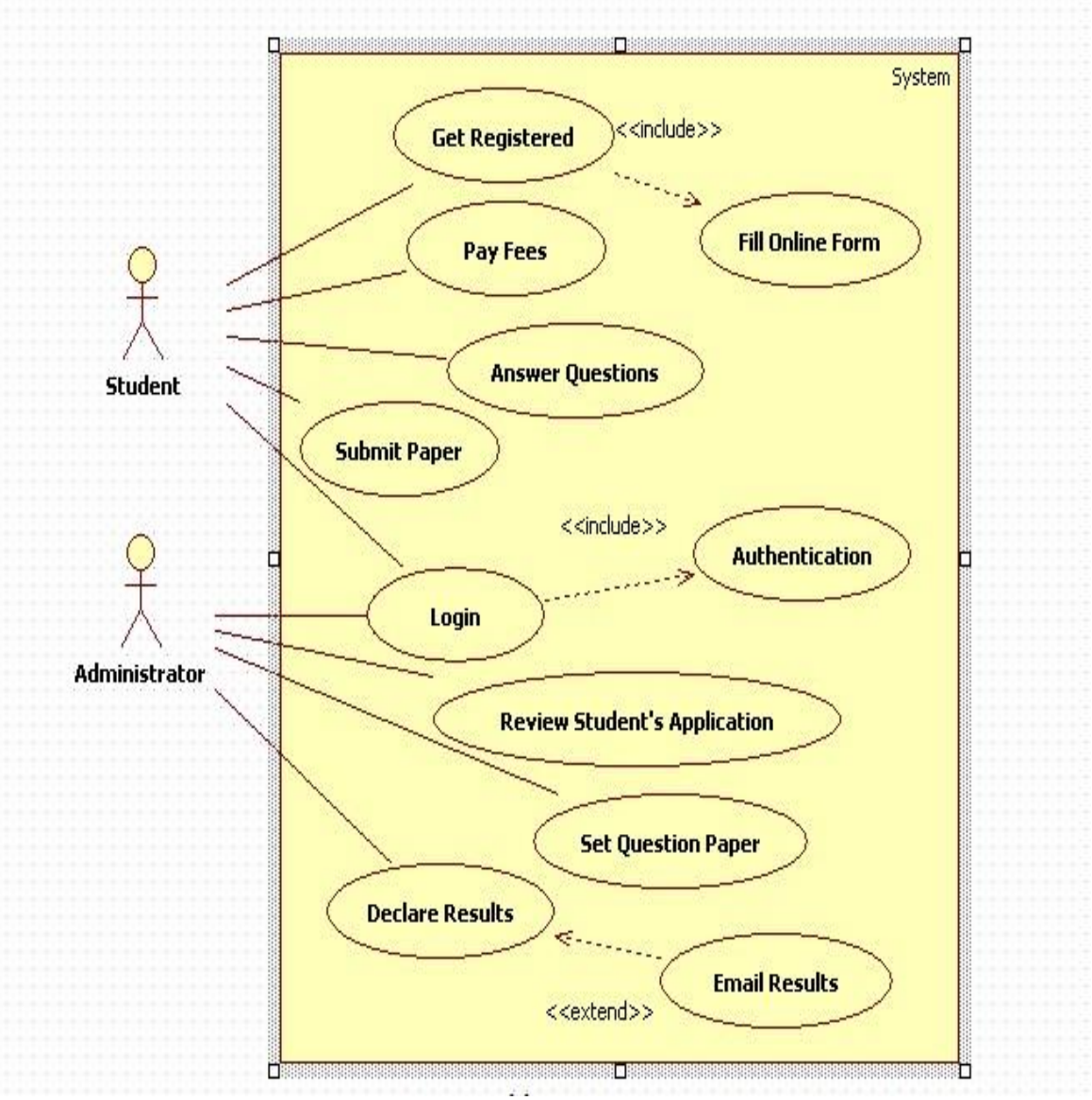

Fig6.1 Use Case Diagram

6.2 DFD DIAGRAM:

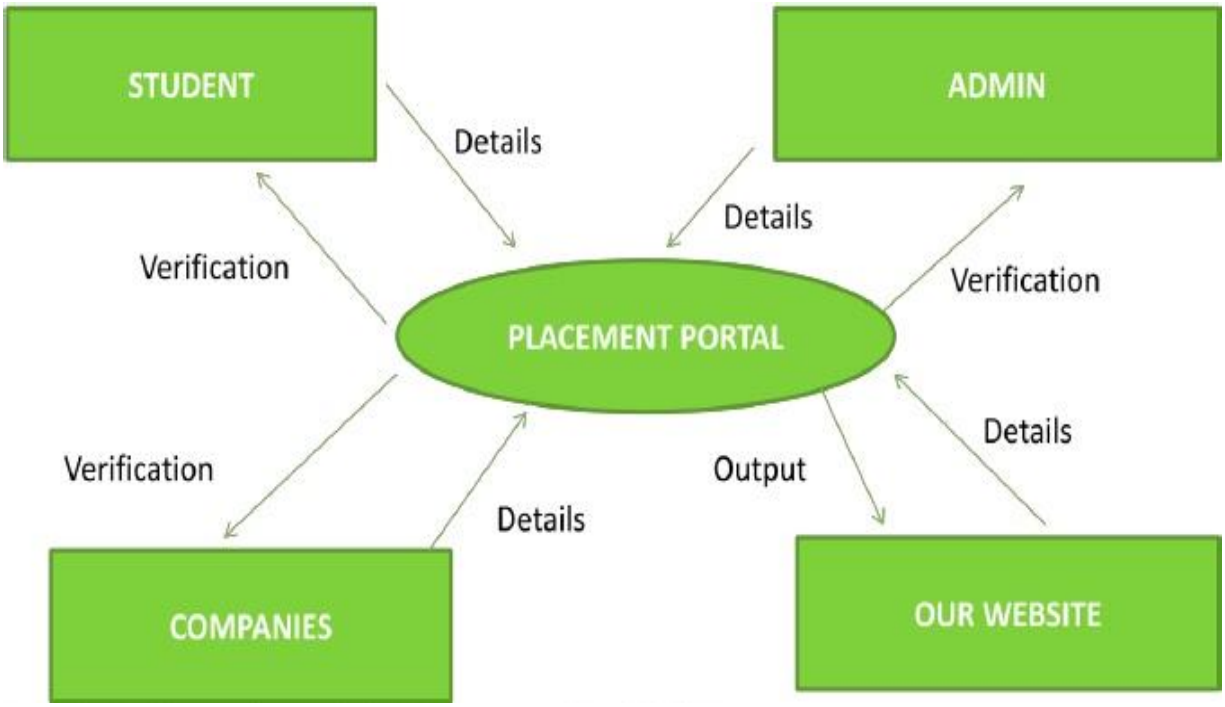

Fig 6.2.1 DFD Level-0 Diagram

DFD LEVEL-1:

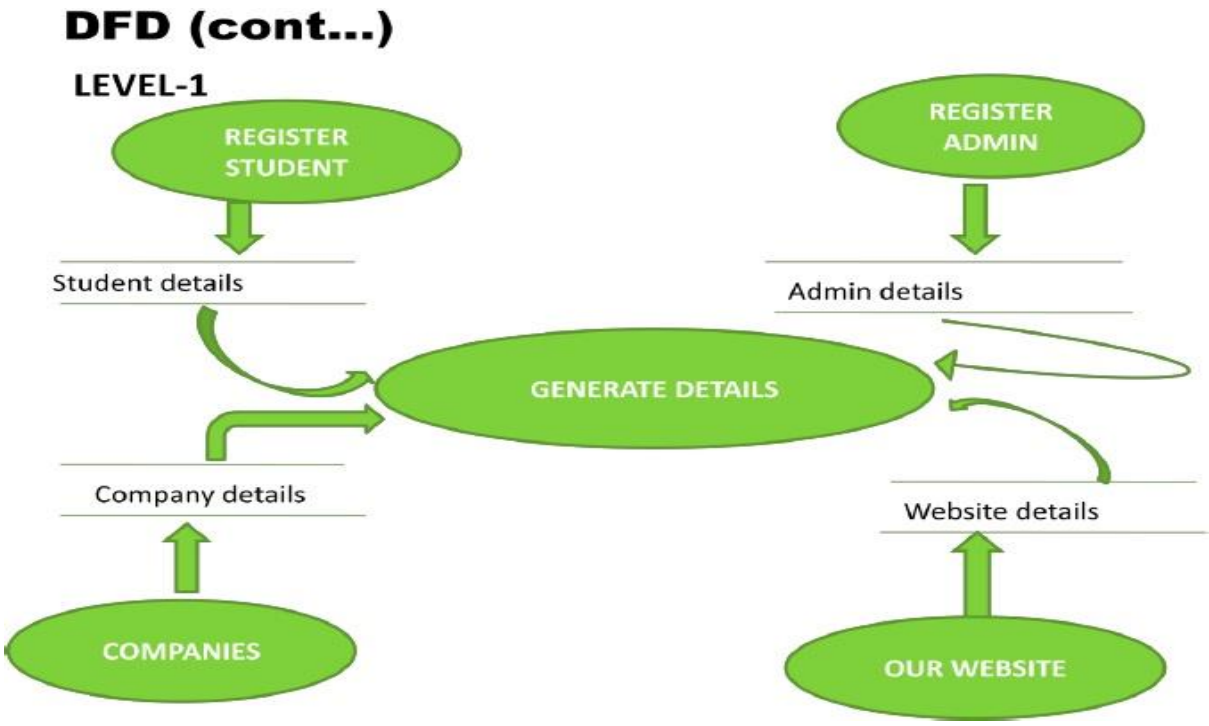

Fig 6.2.2 DFD Level-1 Diagram

7. IMPLEMENTATION

Online Placement Portal is implemented using Web Application module in Asp.net.

7.1 LANGUAGES USED:

- Asp.net
- SQL

7.2 SOFTWARES USED:

- Microsoft Visual Studio 2013 Community Edition.
- Microsoft Access Database.
- Notepad++ v6.6.7.

8. DATABASE STRUCTURE

8.1 ACADEMIC_BACKGROUND TABLE:

The table for storing the Academic data of the students.

Column Name	DataType	Size	Allow Null	Constraints	Remarks
Sap_ID	Integer	9	No	Primary Key	
Year_c	Integer	4	No		
Qualification	Varchar	20	No		
Board	Varchar	20	No		
College	Varchar	20	No		
percentage	Integer	4	No		
S_no	Integer	2	No		

8.2 ADMIN_TABLE:

The table for storing the details of the administrator.

Column Name	DataType	Size	Allow Null	Constraints	Remarks
Email	Varchar	20	No	Primary Key	
Password	Varchar	20	No		

8.3 ACHIEVEMENTS_TABLE:

The table for storing the achievements of the students.

Column Name	DataType	Size	Allow Null	Constraints	Remarks
Sap_ID	Integer	9	No	Primary Key	
Achievements	Varchar	40	No		

8.4 COMPUTER_SKILLS TABLE:

The table for storing the computer skills of the students such as the Operating Systems they have worked on, the softwares they know, the Programming Languages the students have knowledge of.

Column Name	DataType	Size	Allow Null	Constraints	Remarks
Sap_ID	Integer	9	No	Primary Key	
OS	Varchar	40	No		
Languages	Varchar	40	No		
Softwares	Varchar	40	No		
Databases	Varchar	40	No		

8.5 PERSONAL _DETAILS TABLE:

The table for storing the Personal Details of the students.

Column Name	DataType	Size	Allow Null	Constraints	Remarks
Sap_ID	Integer	9	No	Primary Key	
D_O_B	Date	10	No		
Father_Name	Varchar	20	No		
Mother_Name	Varchar	20	No		
Category	Varchar	15	No		
Gender	Varchar	6	No		
Nationality	Varchar	10	No		
Home_town	Varchar	20	No		
Perm_Add	Varchar	20	No		
Phone_no	Integer	10	No		
Lang_known	Varchar	20	No		
Mobility	Varchar	20	No		
Email_id	Varchar	20	No		

8.6 TRAININGS_PROJECT TABLE:

The table for storing the Projects, Summer Training or Other Trainings related data of the students.

Column Name	DataType	Size	Allow Null	Constraints	Remarks
Project_id	Integer	10	No	Primary Key	
Sap_ID	Integer	9	No		
Company_Name	Varchar	20	No		
Project_title	Varchar	20	No		
Description	Varchar	100	No		
Duration	Varchar	20	No		

9. OUTPUT SCREEN

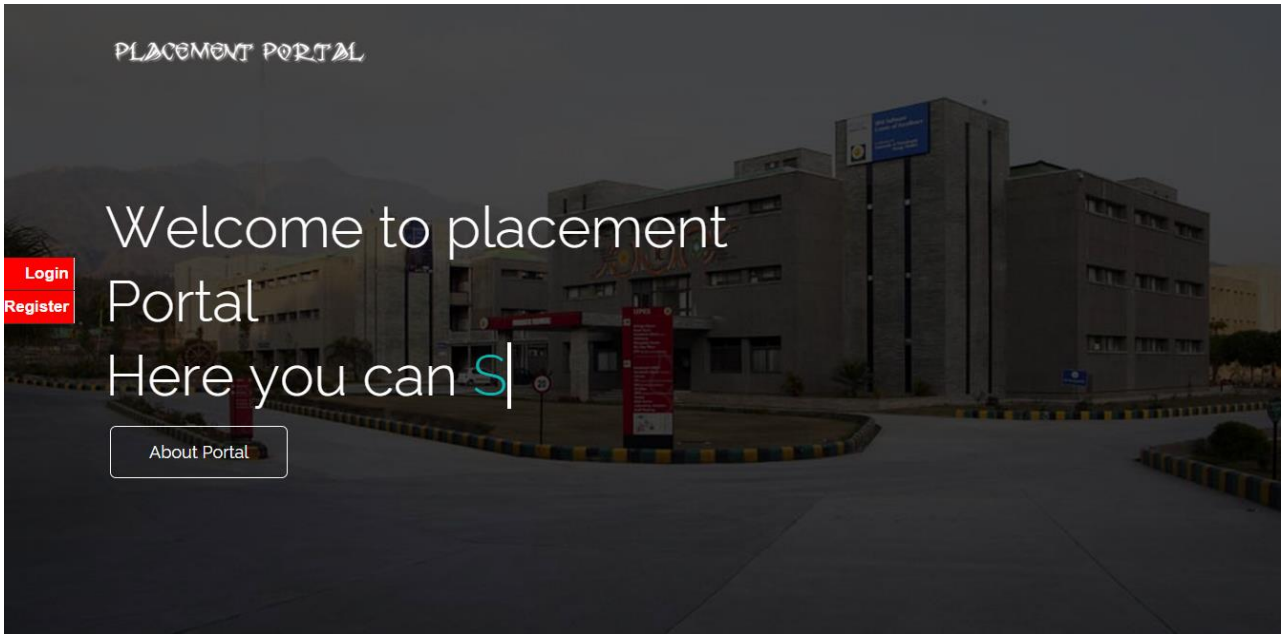

Fig 9.1 HomePage

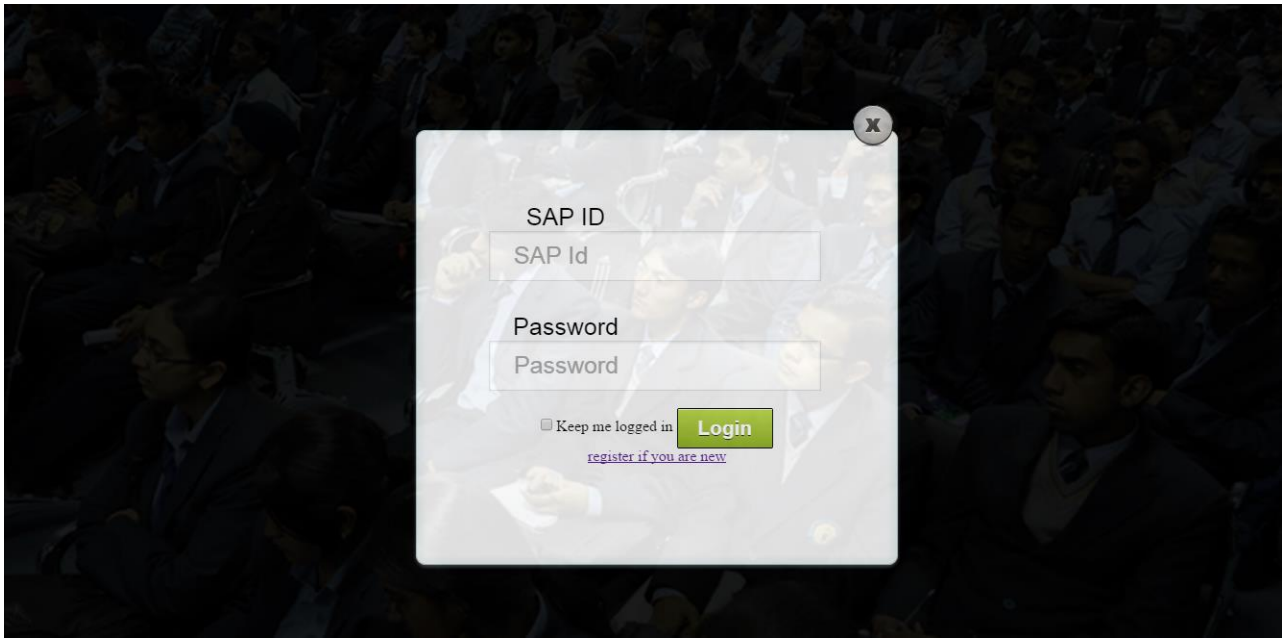

Fig 9.2 Login Page

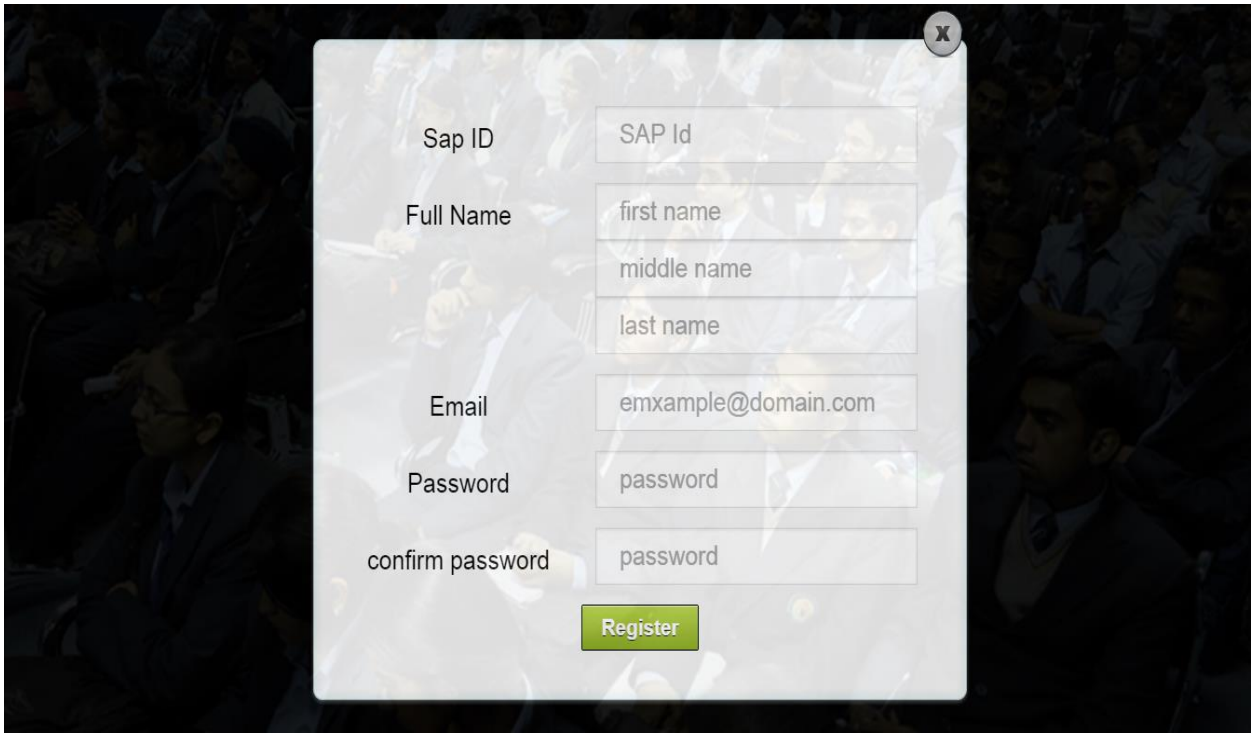

Fig 9.3 (a) Registration Form

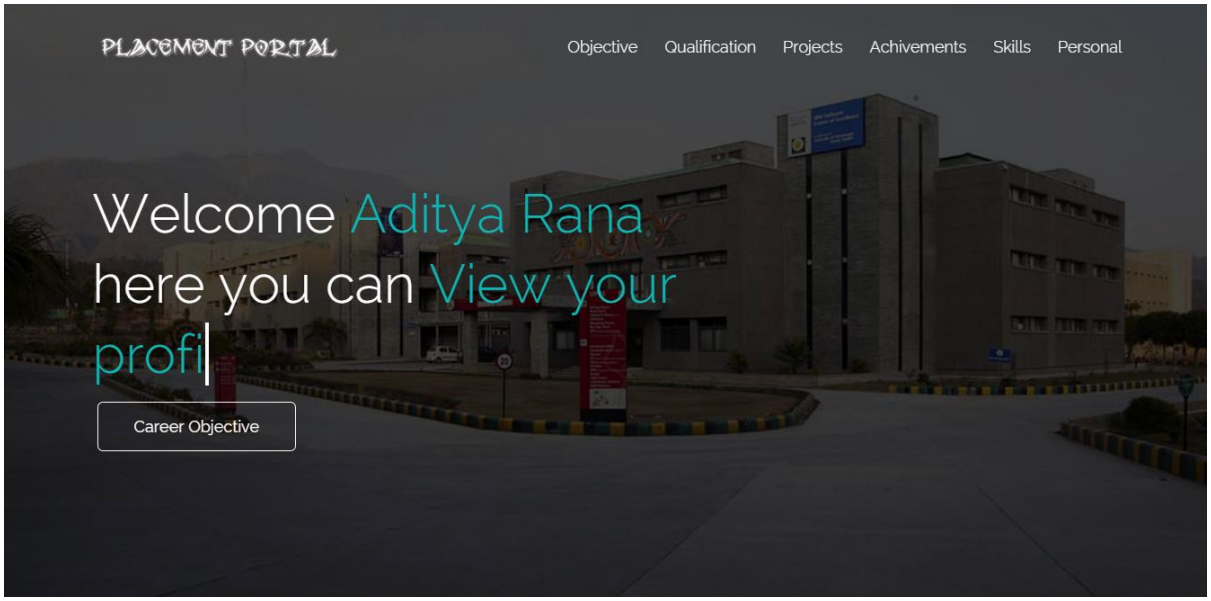

Fig 9.4 User's (Student) Home Page

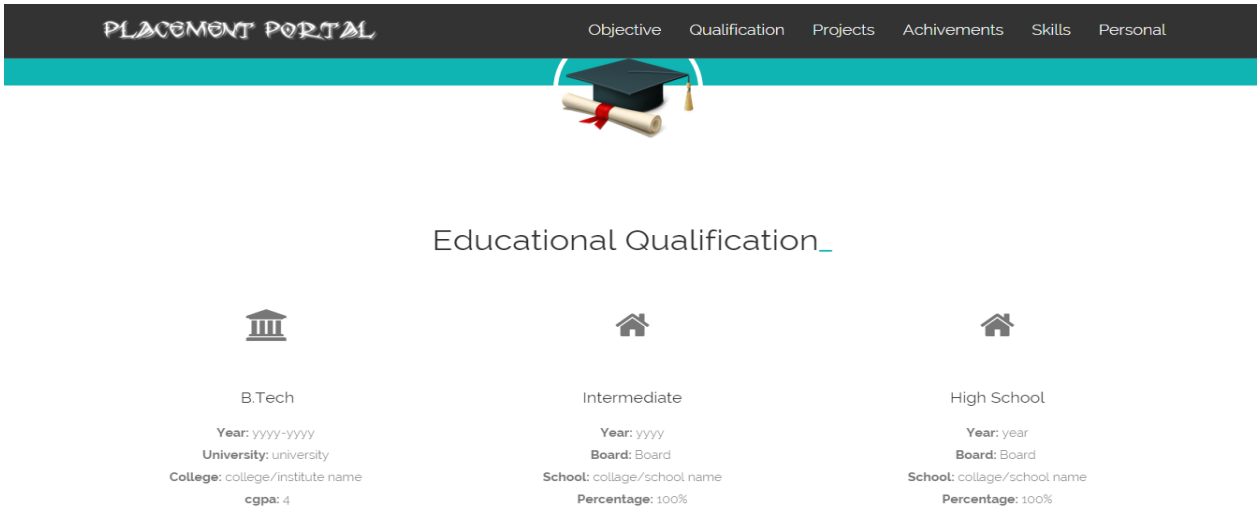

Fig 9.5 educational qualification

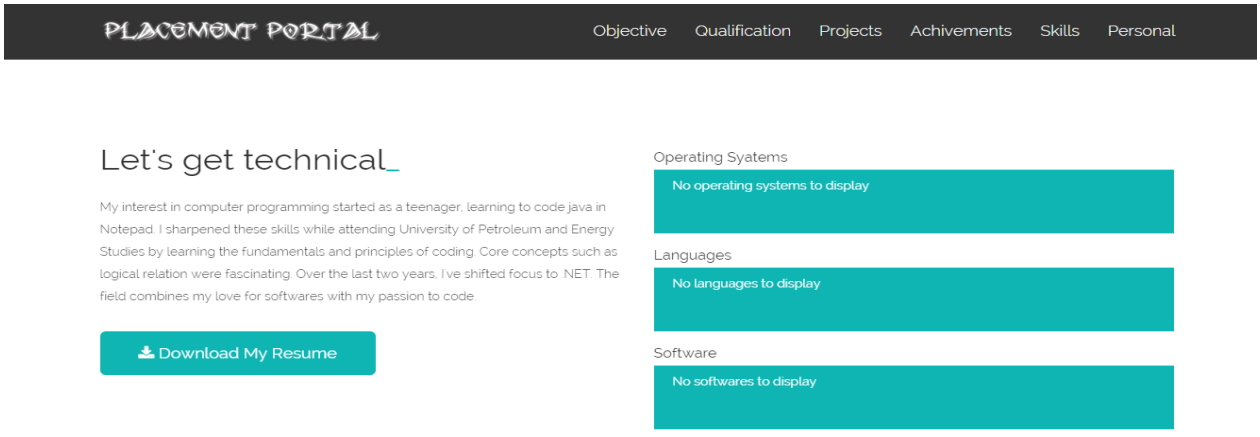

Fig 9.6 computer skills

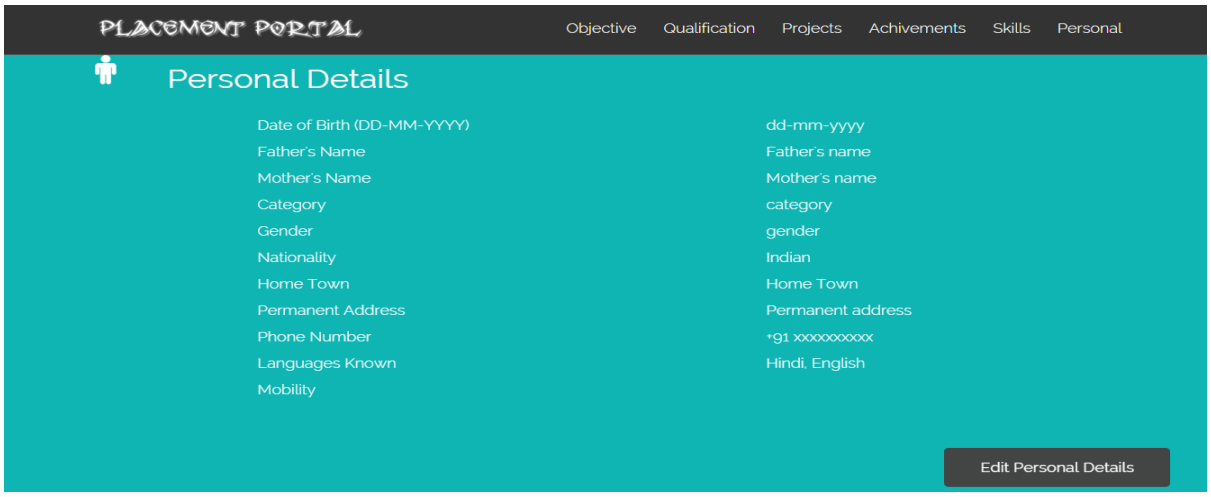

Fig 9.7 personal details

9. FUTURE SCOPE

Though my project is itself matured enough but still betterment is always an open door. In this case also I can add some features to this software to make this software more reliable. These are as follows:-

- During the development of the project my prime object was to keep the hardware & software requirement as minimum as possible so that it supports maximum user base.
- The searching procedure should be very strong like admin can search student as fast as possible.
- Modify the project with better approach with more graphics.
- The back-up procedure can be incorporated to make sure of the database integrity.
- Recruiter can visit any time through this application and communicate with placement in charge.

10. CONCLUSION

From a proper analysis of positive points and constraints on the component, it can be safely concluded that the product is a highly efficient GUI based component. This component can be easily plugged in many other systems. Also the component is user friendly. Generally the Placement officer of the College has to face a lot of problems in management of the Students information. This all information has to be managed manually. So, there is a need to develop a system that can solve the mentioned problem. This software comes with just that solution.

11. REFERENCES

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