

MINI PROJECT REPORT



Campus recruitment System

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Laveena .R

ABSTRACT

Industrial Training is a compulsory course that must be taken by students who follow Computing and Information Systems degree program at Sabaragamuwa University of Sri Lanka. The Finding the suitable placements for the students are done manually and Campus Recruitment System helps do these process online. This system is mainly designed to support the students from 3rd year of Department of Computing & Information System, Faculty of Applied Sciences, Sabaragamuwa university of Srilanka. The Campus Recruitment System maintains the details of student information, trace the details of student, and maintain the information about the placement availability. Using this system, user may know all the details which are provided by Campus Recruitment System. Purpose of this report is to present the functionalities and workings of Campus Recruitment System. This is mainly focused on the structure, precautions and guidance to use the system, lessons learned and performance in order to signal improvement in project delivery for the future. This system is used by Student who need placements, Coordinator who is responsible for industrial training program, Company that is willing to recruit and the Admin of the system. Admin is responsible for overall management of students, coordinators and company. First, student must register and login to the system and browse for the job that were posted by the company and request the coordinator to approve then the coordinator check the student's resume and send the resume to the company if the requested student is suitable for that particular position. The system can be easily used to aid the process of internship program. Thus, in general aspect, this system will benefit the students, as well as every party involved in this internship program. The result of this web application is automating all the tasks which were previously done in manual and improving efficiency of the process. Also it increases the accuracy, attractive and security level can be mentioned as future works. This software is easy to maintain and further enhancements can be added without any hassles. Campus Recruitment System is developed using waterfall model and Laravel (V6) is used to implement this system, further SQL server database is used to store the data and information of the system.

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CHAPTER 1: INTRODUCTION

1.1. Project Overview

Industrial training program is a compulsory course for students in Department of Computing and Information Systems (CIS), Sabaragamuwa University of Sri Lanka. It assigns students to the real situation of work. The Campus recruitment System is a website developed for the Department of Computing and Information System to facilitate the ease of application for internship or recruitments in the company. This website acts as a time saving means for both the company and the students (Applicants) in this large public sector undertaking. By using this system students save a lot of time as they can communicate electronically with the instructor.

Using this system, the students can apply with their qualification and need for the internship with the company. The administrator thus can have a pool of technical as well as non-technical but required by the company people. The administrator can anytime add a coordinator who is responsible to approve whether the applicant is a student of Department of Computing and Information Systems, Faculty of Applied Sciences, Sabaragamuwa university of Srilanka. Once the coordinator approved the applicant, the student will be able to apply for the vacancy. The company will send a message/mail to the applicant for his confirmation for recruitment if he got selected to their company. Admin has the ability to add and modify students, coordinators and the companies. The administrator would be a caretaker of the entire system responsible for important tasks of backing up the database and restoring an archived database if needed. Administrator is the only one who can add students and supervisors to the system.

1.2. Major Goals and Objectives

The purpose of this project is to provide an easy-to-use interface for students, coordinator and companies to interact with each other. The major goals of this system are reduce paper work, save time and money and get efficient and effective process. The system offers the authorization function to make sure that students can access his/her records only and all the other information is kept discrete. All user and company information will be stored in a Mysql database and retrieved by PHP using Laravel framework.

Using this system data can be accessed more easily and all the form templates are supplied. Generally, there are several objectives that have been identified in developing this system. These include to replace the manual management system, to keep all the data and records in a systematic and efficient way, easy way to find a placement for the student, reduce the time taken for the process.

1.3. Motivation

During the Year III Semester II, the student has to complete an industrial placement for 6 months. Finding the suitable training program is found by the students or by the inter coordinator from Department of Computing & Information Systems. This process either done in a manual process.

There are some weaknesses and inefficiency discovered in the manual process such as it takes more time to find a proper placement for all the students from the given time period, loss or duplication of data caused by the increasing number of students, inefficient data storage, lack of communication between the student and the internal supervisor.

To overcome the above mentioned problems, the Campus Recruitment System is developed. It will minimize the time, miscommunications and cost that is needed to find a good industrial training place for the students. Further, it can improve the efficiency and the productivity of the processes. The Campus recruitment System can be controlled from wherever if internet connection is available. So the users of the system can monitor easily through the internet. Anyhow the security breaches and other sensitive customer details are being secured.

1.4. Scope of the completed project

This web based system helps to record the users' details efficiently, to find users' details by authorized person and the Campus Recruitment system providing services. It offers security to the system and data integrity. Further, provides dynamic way of user management of adding new user. User log-in and activities are traced through session handlings.

By developing the system, the following features are attained:

- Easy to handle and feasible
- Cost Reduction
- Fast and Convenient
- User friendly interface
- Fast access to database
- Less error
- More Storage Capacity
- Search facility

Campus Recruitment system will store all the details of the users such as the details about the students, details of the industrial training coordinator and the companies that uses the system to recruit the freshers.

Main modules of the system:

- **Admin:** The module for admin enable the admin to add coordinators, add students, add companies, send notifications, view the placements and if they are not correct, he can delete them and he manage and operate all the process.

- **Coordinator:** The coordinator module let the coordinator to approve whether the student who is applied for a particular vacancy belongs to the department and suitable.
- **Company:** The module for company allows the company to add vacancies in their organization and recruit approved and skilful students from the department. Company has to send a message to student and coordinators that who is recruited by them.
- **Student:** The module for students enables students to register and send request to the coordinator for his approval and read announcements posted by the company.

1.5. The approach and assumptions while carrying out the project work

Assume that admin can manage all the activities related to the users such as add, delete, edit and update the details of them, Using a system like this take less time period than using a manual process, using a web based system provide more accuracy and the details can be stored for a long time, Risks related to the web based system are less when compared to manual process.

1.6. Concise summary of major outcomes

Currently our department uses the manual process to find a placements. Also the Department itself can't find placements for each and every students due to the lack of time period for finding the suitable internships. This makes more chance of not getting an internship program for a student which causes the batch miss also.

This online system helps to do tasks effectively and efficiently. This system will also utilize advancement of the technology and this will create facilities that will allow the users to do their activities based on functionalities.

CHAPTER 2: BACKGROUND

2.1. The context

Industrial training program is a compulsory course for students in Department of Computing and Information Systems (CIS), Sabaragamuwa University of Sri Lanka. It's putting students to the real situation of work.

The system facilitates to verify the procedures that occur during the finding the placements. The system can generate various tables of details such as registered company details, new industrial coordinator registered details and etc. Authorized people can edit and update data in systematic way. The Campus System is an automated version of manual finding internship program. It allows authorized members to access the record of academically registered users.

There will be no need of putting up notice or emailing every student about the vacancies for their internships. The students can keep updated themselves through this system.

By hosting the system in web I hope to provide access to all the users (administrator, industrial coordinator, Students and the company.) to the system through the internet and by providing different privileges for each user respectively, enabling the system to provide information with the user friendly manner.

2.2. Identified problem

The reason of developing this website are some weaknesses and inefficiency discovered in the manual process such as, delay in processing CVs of the students, Inefficient data storage, accuracy of the human work not 100%, delay in finding a suitable internship program by the student as well as by the department manually.

To solve such storage problems, this system helps in maintaining the database of the services. So the admin can easily access any users' information at any time and can be kept safely for long period of time without any damage.

Potential stakeholders of this project are intern coordinator, student, recruiter (company) and the administrator.

2.3. Constraints and Limitations

The main limitation I faced during the project is the length of the project. It is 4 months which is a limited amount of time. And as we had other subjects to follow for this semester I couldn't give 100% for this project.

This system has some limitations such as the student can't directly apply to the internship provided by the company, the student must send his details to the coordinator first to verify whether the student is eligible to apply for that particular vacancy. If the student is eligible, the coordinator will send the student's CV to the company.

Even if the system is protected by passwords, some hackers or people with mischievous behavior from inside or outside the department may affect the system sometimes. Apart from that this type of web based systems or applications, are very common to attacks by viruses from the internet. So due to that also system failures may happen and may cause to perform bad in the system. Sometimes inaccuracy or user errors may be a limitation to use the system properly. Because when entering data to the system, data entry errors can happen such as misspelled users' name, personal details etc. Apart from that to use a web based system it requires internet connection.

Another limitation of this system is problems related with technical difficulties. As this web system is almost connected with software and hardware, due to technical failures the system may go down. And also due to network failures too this system can be broken down or will not work and this will cause sudden data loss too. Any way as solution to above mentioned constraints and limitations proper back up plan of data, high security concern, proper training about the system to admin officers can be granted.

CHAPTER 3: SPECIFICATION, DESIGN AND DEVELOPMENT

3.1. Introduction

System specifications help to define the operational and performance guidelines for a system. It may outline how the system is expected to perform, and what that may include. Key specifications may include interface definitions, document design rules and functional areas.

System design is the process of defining the components, modules, interfaces, and data for a system to satisfy specified requirements. System development is the process of creating or altering systems, along with the processes, practices, models, and methodologies used to develop them.

3.2. Requirement specification

3.2.1. User requirement

This user requirements of the system explain about the services the web based Campus Recruitment System provides and about its constraints. Mainly this Campus Recruitment System will allow the users to use the system online and it will provide so many facilities. This system makes easier to search user details for administrator, add user's details as well as edit, delete and update user details (including students, coordinator and the company), Company can post their vacancies and select from the student pool, Coordinator approves the student identity and reject the invalid requests, Student upload their CVs and apply for the vacancies.

3.2.2. System requirements

3.2.2.1. Functional requirements

The statements or conditions which are defined to satisfy the logical aspects of the software are covered under the functional requirements. These statements explain the different aspects of the application/software to be developed. These functional requirements are elicited during the requirement elicitation process headed by business analysts.

The functional requirements includes:

1. Register
 - Registration is a requirement to use this application. Registered administrator will be provided the all facilities. The registration process must ensure the confidential transfer and storage of all personal information of users.
2. Authentication
 - Log in: The users can log in to the web based Wedding Management System by using his or her user id and password
 - Log out: The users of the system can log out from the system.

- Login Failure: This login failure may happen if the user does not exist in the database

3. Data processing

- Add: administrator can add user (students, coordinator) details.
- Edit: Admin can edit user details, users too can edit their personal details.
- Update: Admin can update the user details and users can edit their details as needed.
- View: Admin can view all user details in a categorized way according to the user type in a table format and users can view their personal details, usage details.

3.2.2.2. Non-functional requirements

The non-functional requirements are defined to explain the different abilities of the software developed. The non-functional requirements are also termed as non-behavioral requirements or quality attributes defined in order to support the quality analysts to approve the software against the different constraints which must be met. They define the overall attributes of the end product.

1. Performance

- Database should be updated within a second
- Search results should be displayed quickly
- System should be robust and fast for any number of users
- Login should be validated
- It can fix quickly within downtime

2. Availability

- The software should be available 24 hours a day and specially during the working hours
- The database backup and recovery plan should be proper in order to avoid any unexpected downtime of application.

3. Security

- System should be used only by allowed users and admin has the only right to log into the system

4. Reliability

- System should be designed in such a way that system should not be affected by system failure or any errors occurred during execution

5. Portability

- It should be platform independent

6. Maintainability

- Backups for database are available
- Follow standards for create interfaces

3.3. System Design

System design is the process of defining the elements of a system such as the architecture, modules and components and the data that goes through that system. It is mean to satisfy specific needs and requirement so business organization through the engineering of a coherent and well running system. The web designing is the widely used in modern online categorized designing. The work has done in a project can be easily reuse than in the other approaches. Also when doing the coding will be easier to write easier to understand will contain fewer errors.

3.3.1. System Development Life Cycle

The system development life cycle is a process that describes the activities performed at each stage of a software development project. It consists of a detailed plan describing how to plan, design, implement and test the system. The objective of the SDLC is producing the high quality software. There are various SDLC methodologies/ models such as waterfall, Agile, incremental etc.

3.3.2. Methodology for the Proposed System

The proposed system is to be developed using Laravel (V6) Framework with PHP Language. The user requirements will be specified according to the goal of the system and various components of the architecture. After requirement gathered, the system is designed. Once the proposed design finished, the implementation occurs by using Waterfall model. This model is chosen because requirements are clearly known. In "The Waterfall" approach, the whole process of software development is divided into separate distinct phases. In Waterfall model, typically, the outcome of one phase acts as the input for the next phase sequentially.

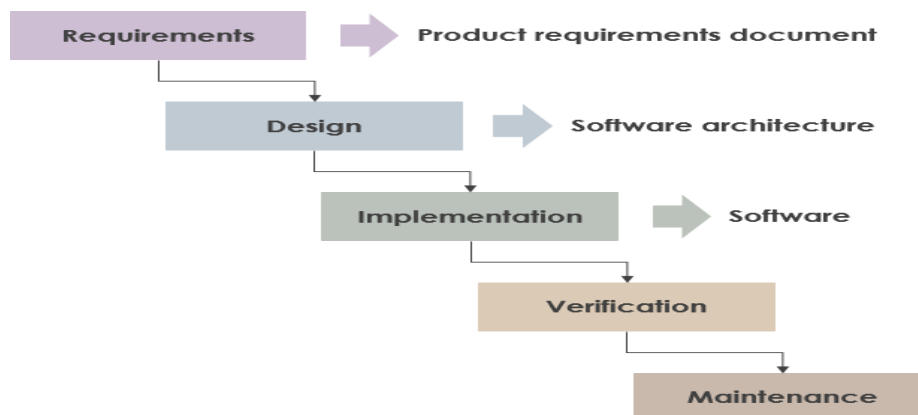


Figure 1: Waterfall Model

3.3.3. High level diagram

The web based Campus recruitment System is focused on manipulates the details and information when it is needed. For focusing on these categories, this system has been referred from early stages. The following diagrams are used for developing system.

3.3.3.1. Use Case Diagram

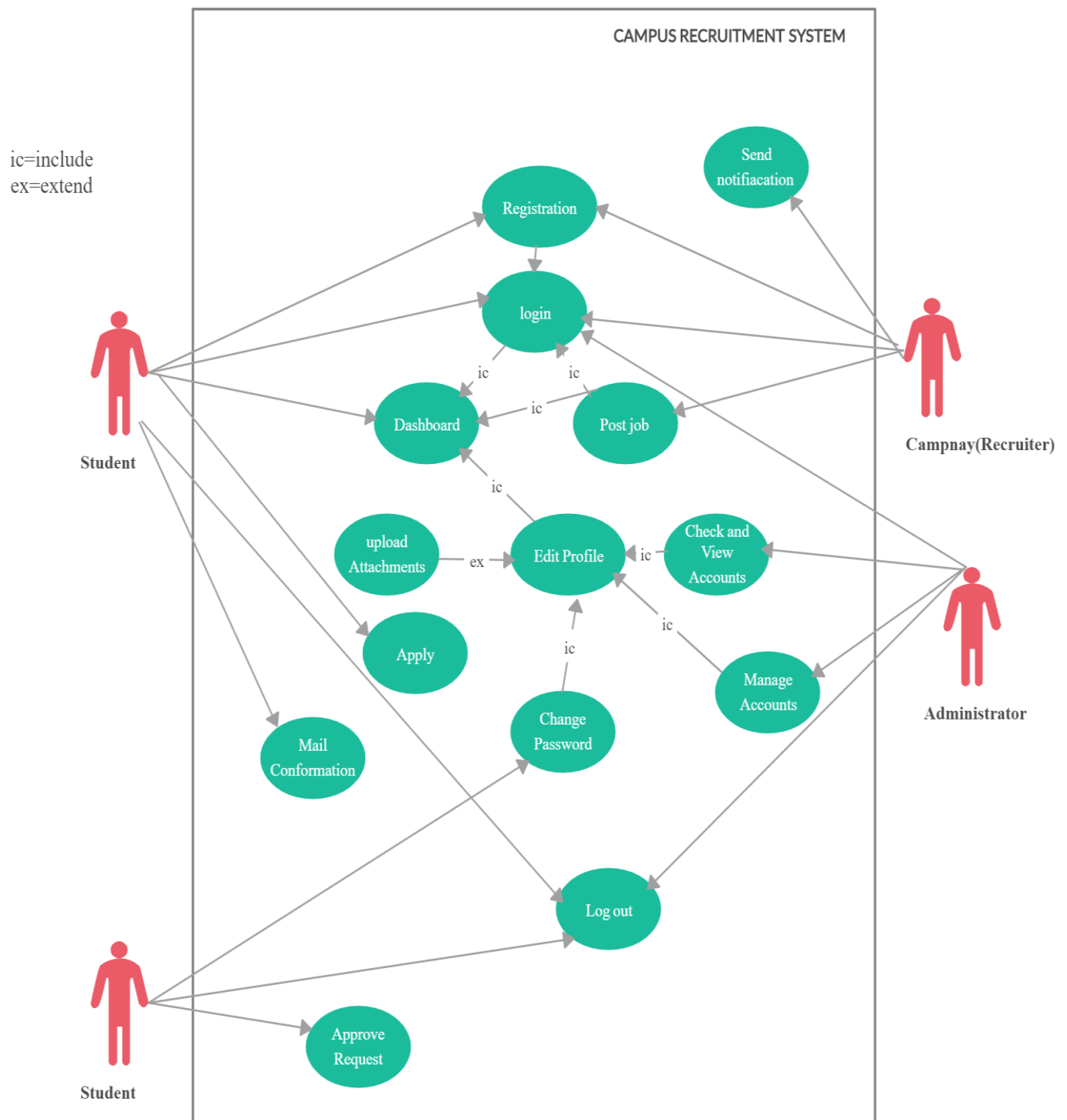


Figure 3.1: Use case Diagram

3.3.3.2. Database Design (ER Diagram)

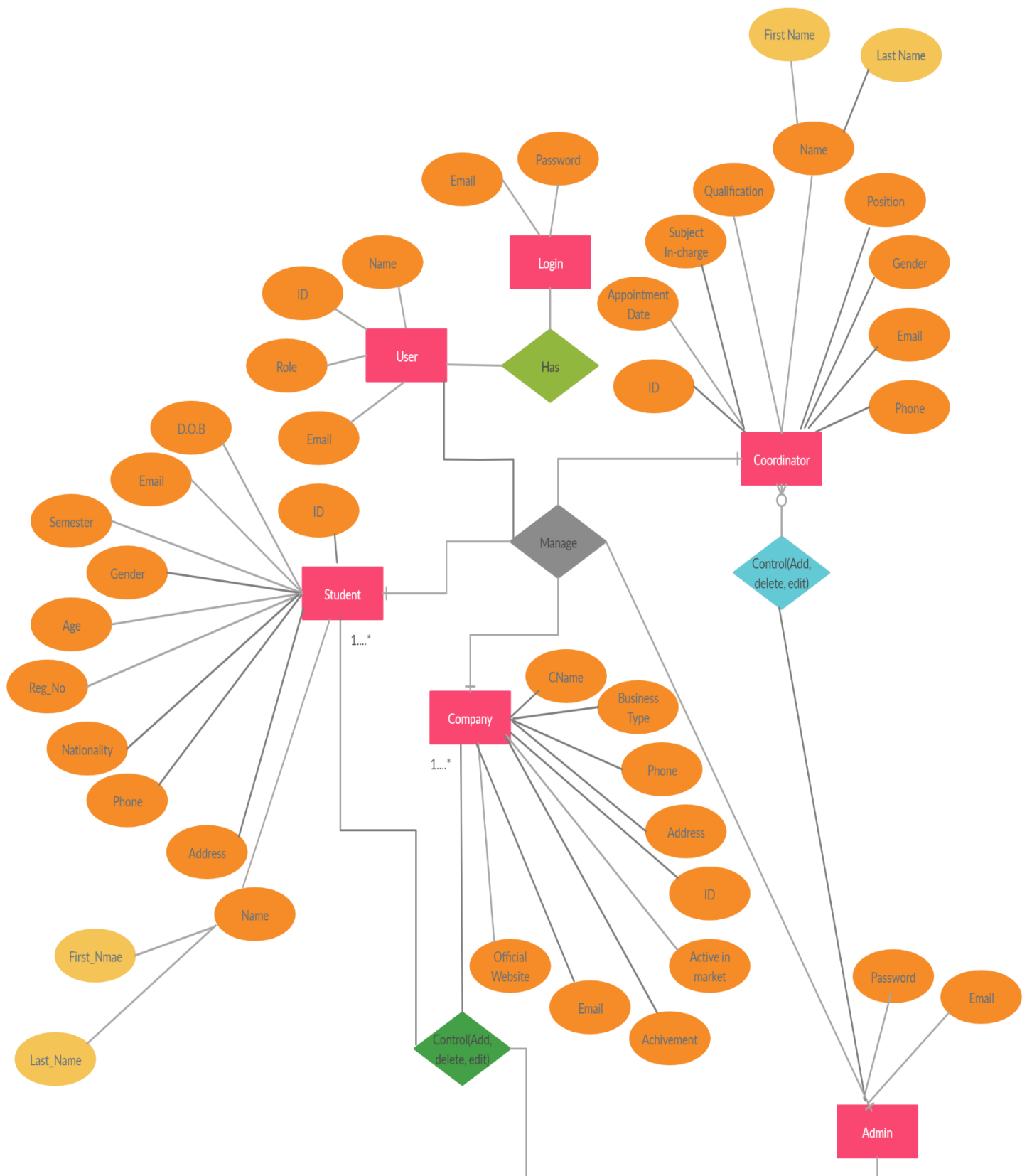


Figure 3.2: ER Diagram

3.3.4. Interface Design

Interface designing acts very important part of the overall software designing process. Because if the interface designing is poor, many user errors and problems can be occurred. Good interface designing should be equal with the user expectation. That is the important as one of criticalness of the user interface designing. When developing a user interface design decisions, we should consider into asses the physical and mental capabilities of the people who uses software. Following are the user interface design principles.

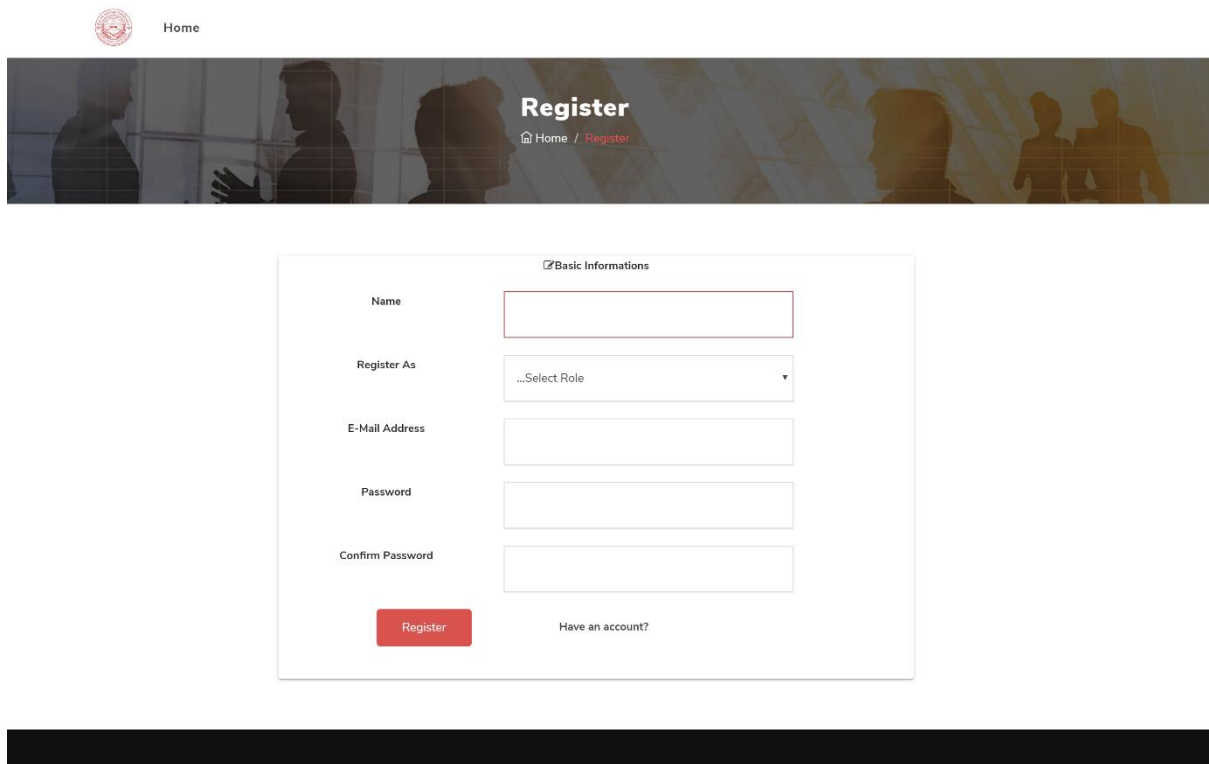
- 1. User Familiarity:** The interface should use terms and notions drawn from the familiarity of the people who use the system.
- 2. Consistency:** The interfaces should be constant in that wherever possible, comparable actions should be activated in the same way.
- 3. Minimal surprise:** Users should not be surprised by the performance of the system
- 4. Recoverability:** The interfaces should include mechanisms to tolerate users to recover from errors
- 5. User guidance:** The interface should deliver meaningful feedback when errors happen and provide help facility
- 6. User Diversity:** The interface should provide appropriate interaction facilities for different type of users.

3.3.4.1 Front page of the system



Figure 3.3: Home Page of the System

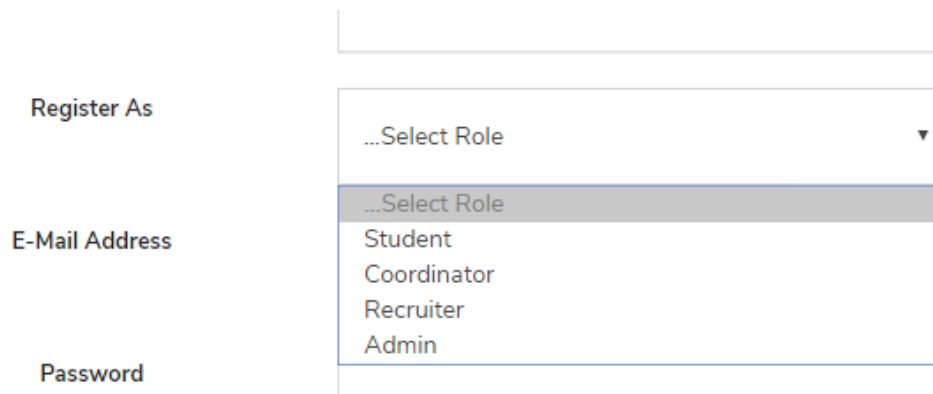
3.3.4.2 Registration and Login Pages



The screenshot shows the registration page of a system. At the top, there is a navigation bar with a logo and a 'Home' link. Below the navigation bar is a banner image with the word 'Register' in large white text. Underneath the banner, there is a breadcrumb trail: 'Home / Register'. The main content area contains a registration form titled 'Basic Informations'. The form has five input fields: 'Name', 'Register As' (a dropdown menu), 'E-Mail Address', 'Password', and 'Confirm Password'. Below the 'Name' field is a red 'Register' button. To the right of the 'Register' button is a link that says 'Have an account?'. The 'Register As' dropdown menu is open, showing a list of roles: 'Student', 'Coordinator', 'Recruiter', and 'Admin'.

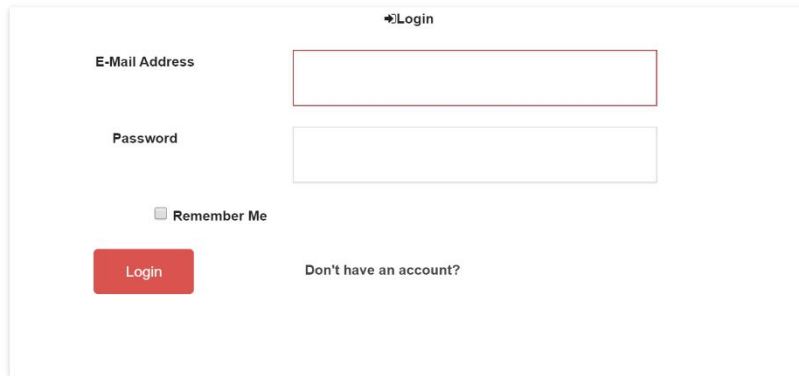
Figure 3.4: Registration Page

Here the registration is done according to the user roles



This is a close-up view of the 'Register As' dropdown menu. The dropdown is open, showing a list of roles: 'Student', 'Coordinator', 'Recruiter', and 'Admin'. The 'Student' role is currently selected and highlighted with a blue background. The dropdown menu is titled '...Select Role'.

Figure 3.5: Register according to user type



3.3.4.3. Admin Pages



If the admin wants to add a new student it can be achieved by clicking on ADD button, then it will redirect to the following page.

Figure 3.8: Add student page of admin panel

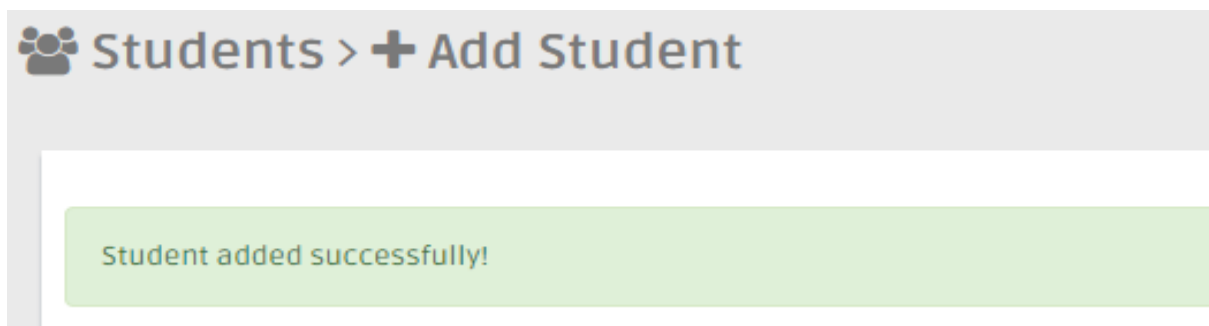


Figure 3.9: Alert to show that the student is added

If the admin wants to delete a record, clicking on delete button will produce the following result.

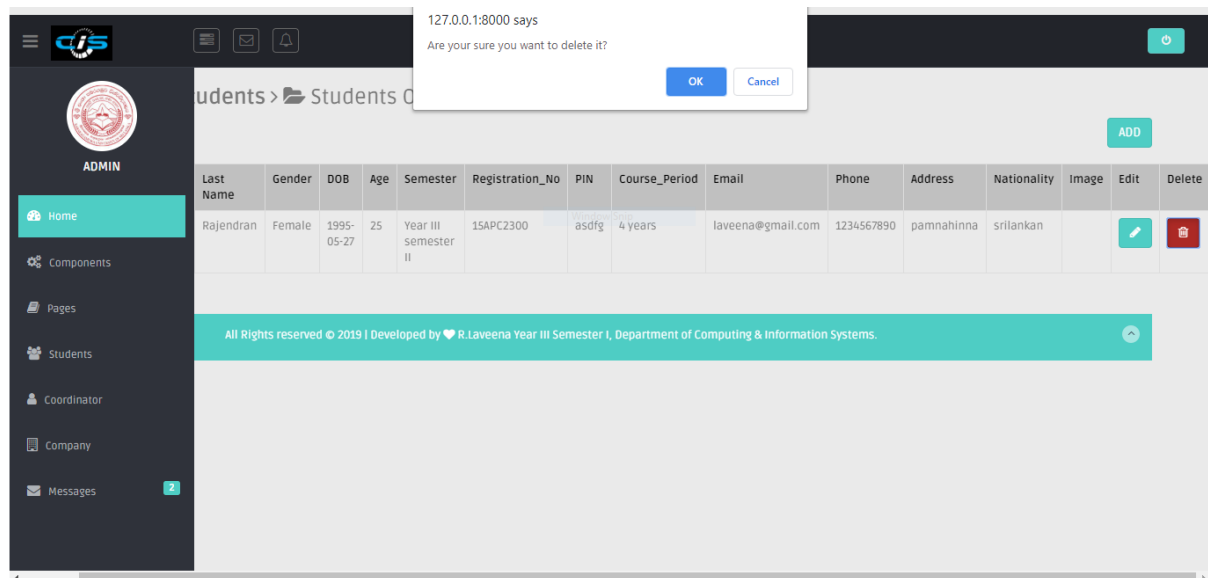


Figure 3.10: Confirmation to delete the record

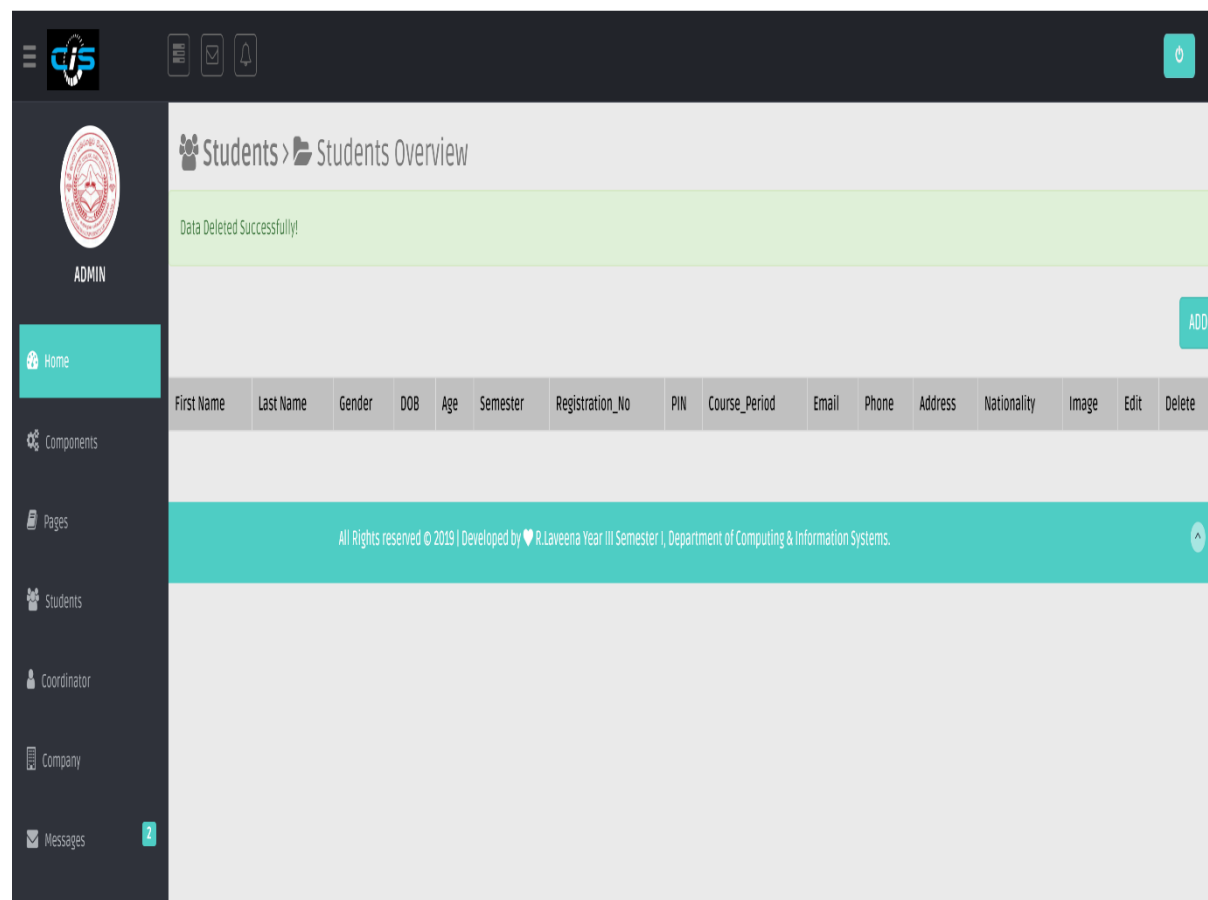


Figure 3.11: Alert to show the data is deleted and also the admin can add student

If the admin wants to update the existing student data, it can be achieved by clicking on edit button it will produce the following result.

The screenshot displays the 'Edit Record' interface of an admin panel. On the left is a dark sidebar with a logo and navigation links: Home, Components, Pages, Students, Coordinator, Company, and Messages. The main area is titled 'Edit Record' and contains a form with the following fields and values:

Field	Value
First Name	Laveena
Last Name	Rajendran
Gender	Female
D.O.B	27/05/1995
Age	25
Semester	Year III semester II
Registration_No	15APC2300
PIN	asdfg
Course_Period	4 years
E-Mail Address	laveena@gmail.com
Phone	1234567890
Address	pamnahinna
Nationality	srilankan

An 'update' button is located at the bottom right of the form. The footer of the page states: 'All Rights reserved © 2019 | Developed by ♥ R.Laveena Year III Semester I, Department of Computing & Information Systems.'

Figure 3.12: Student edit page of admin panel

3.3.5. Algorithms

The Laravel Hash facade provides secure Bcrypt and Argon2 hashing for storing user passwords. As we are using the built-in LoginController and RegisterController classes that are included with the Laravel application, they will use Bcrypt for registration and authentication by default.

Bcrypt is a great choice for hashing passwords because its "work factor" is adjustable, which means that the time it takes to generate a hash can be increased as hardware power increases.

The default hashing driver for your application is configured in the config/hashing.php configuration file.

CHAPTER 4: IMPLEMENTATION

Implementation refers to the final process of moving the solution from development status to production status.

4.1. Software and Hardware Requirements

- 1. HTML5:** Hyper Text Markup Language, commonly referred to as HTML, is the standard markup language used to create web pages. Along with CSS, and JavaScript, HTML is a cornerstone technology, used by most websites to create visually engaging web pages, user interfaces for web applications, and user interfaces for many mobile applications.
- 2. Cascading Style Sheet (CSS):** CSS is the language for describing the presentation of Web pages, including colors, layout, and fonts. It allows one to adapt the presentation to different types of devices, such as large screens, small screens, or printers. CSS is independent of HTML and can be used with any XML-based markup language.
- 3. JavaScript:** JavaScript is a cross-platform, object-oriented scripting language. It is a small and lightweight language. Inside a host environment (for example, a web browser), JavaScript can be connected to the objects of its environment to provide programmatic control over them.
- 4. Hypertext Preprocessor (PHP):** Self-referentially short for php; Hypertext preprocessor, an open source, server-side, HTML embedded scripting language used to create dynamic Web pages. In an HTML document, PHP script (similar syntax to that of Perl or C) is enclosed within special PHP tags. Because PHP is embedded within tags, the author can jump between HTML and PHP (similar to ASP and Cold Fusion) instead of having to rely on heavy amounts of code to output HTML.
- 5. MySQL:** 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. To add, access, and process data stored in a computer database, you need a database management system such as MySQL Server. Since computers are very good at handling large amounts of data, database management systems play a central role in computing, as standalone utilities, or as parts of other applications.
- 6. Apache:** The Apache HTTP Server Project is a collaborative software development effort aimed at creating a robust, commercial-grade, feature-rich and freely available source code implementation of an HTTP (Web) server. The project is jointly managed by a group of volunteers located around the world, using the Internet and the Web to communicate, plan, and develop the server and its related documentation.
- 7. XAMPP:** XAMPP Server is a Windows web development environment. It allows you to create web applications with Apache, PHP and the MySQL database. It

also comes with PHPMyAdmin to easily manage your databases. Xampp Server installs automatically (installer), and its usage is very intuitive. You will be able to tune your server without even touching the setting files

Following are the basic hardware requirements that are needed for the Campus Recruitment System.

- Operating system
- Computer - 512MB+ RAM, monitor with minimum resolution of 1024*768
- Keyboard and mouse,
- Network interface card.

As Campus Recruitment System is a web based system/application internet connection should be established. And also for the front end development Laravel Framework with PHP language, CSS html and Javascript is needed as web development languages and for backend development MYSQL is a must. Apart from that as a text editor visual studio code is used and Bootstrap is used as the software framework.

4.2. Implementing algorithm and data structure

Security is a main goal of such system. To ensure the security, system should contain so many security features such as, use the user login to restrict the unwanted access, password authentication, ensure user authorization, and restrict browser redirect after logout from the system.

In this Campus Recruitment System, each access was protected from unauthorized access by using a login system. Administrators have to enter their own pre-defined user names and passwords in-order to access to the relevant pages and to workout with it. And here the system has been developed with full validations. So the wrong or false information from the user is being restricted.

4.3. Over ambitious project aims

- Making the process easier and reducing the manual works related to finding the industrial placements.
- Give the services to the students, coordinators
- Accuracy of Details

CHAPTER 5: RESULTS AND EVALUATION

5.1. Introduction

Testing is a vital part of software development, and it is important to start it as early as possible, and to make testing a part of the process of deciding requirements. To get the most useful perspective on your development project, it is worthwhile devoting some thought to the entire lifecycle including how feedback from users will influence the future of the application. The tools and techniques we've discussed in this book should help your team to be more responsive to changes without extra cost, despite the necessarily wide variety of different development processes. Nevertheless, new tools and process improvements should be adopted gradually, assessing the results after each step.

5.2. Verification and Validation

Software testing is a process of verification and validation. The web testing is tested during the code development. Verification is the process to make sure the product satisfies the conditions and terms imposed at the start of the development phase. In other words, to make sure the product does the way we want it to.

Validation is the process to make sure the product satisfies the specified requirements at the end of the development phase. In other words, to make sure the product is developed as per customer requirements

5.2.1. Functional Testing

Test for all the links in web pages, database connection, forms used in the web pages for submitting or getting information from user.

1. Check all the links:

- Test the outgoing links from all the pages from specific domain under test. Such as index page.
- Test all internal links. Such as buttons in pages.
- Test to check if there are any orphan pages.
- Lastly in link checking, check for broken links in all above-mentioned links.

2. Test the forms in all pages:

- First check all the validations on each field.
- Check for the default values of fields.
- Wrong inputs to the fields in the forms.
- Options to create forms if any, form delete, view or modify the forms.

These are the algorithms used during add, delete, update and view the students details.

```
<?php

namespace App\Http\Controllers;

use Illuminate\Http\Request;
use App\Students;
class addController extends Controller
{
    /**
     * Display a listing of the resource.
     *
     * @return \Illuminate\Http\Response
     */
    public function index()
    {
        $st=Students::all()->toArray();
        return view('administrator.studentOverview',compact('st'));
    }
}
```

Figure 5.1: Function to view the student's details

```
public function store(Request $request)
{
    //return $request;
    $data=$request->all();
    $lastid=Students::create($data)->id;
    return redirect()->back()->with('success','Student added successfully!');
}
```

Figure 5.2: Function to store/add details of the students

```
public function destroy($id)
{
    Students::where('id',$id)->delete();
    return redirect()->back()->with('success','Data Deleted Successfully!');
}
```

Figure 5.3: Function to delete the existing student's details

```

public function update(Request $request, $id)
{
    $this->validate($request, [
        'fname' => 'required',
        'lname' => 'required',
        'gender' => 'required',
        'DOB' => 'required',
        'age' => 'required',
        'Semester' => 'required',
        'Registration_No' => 'required',
        'PIN' => 'required',
        'Course_Period' => 'required',
        'phone' => 'required',
        'address' => 'required',
        'nationality' => 'required'
    ]);
    $student=Students::find($id);
    $student->fname = $request->get('fname');
    $student->lname = $request->get('lname');
    $student->gender = $request->get('gender');
    $student->DOB = $request->get('DOB');
    $student->age = $request->get('age');
    $student->Semester = $request->get('Semester');
    $student->Registration_No = $request->get('Registration_No');
    $student->PIN = $request->get('PIN');
    $student->Course_Period = $request->get('Course_Period');
    $student->phone = $request->get('phone');
    $student->address = $request->get('address');
    $student->nationality = $request->get('nationality');
    $student->save();
    $details= Students::all();
    return view('administrator.studentOverview')->with('st',$details); }

```

Figure 5.4: Function to edit the existing student details

3. Cookies Testing:

- Testing cookies (sessions) are deleted either when cache is cleared or when they reach their expiry.
- Delete cookies (sessions) and test that login credentials are asked for when you next visit the site.

5.2.2. Usability Testing

Usability testing has now become a vital part of any web based project. It can be carried out by testers like you or a small focus group similar to the target audience of the web application.

- Menus, buttons or links to respective pages on the site is easily visible and consistent on all webpages
- The Content is legible with no spelling or grammatical errors.

5.2.3. Interface Testing

Three areas are to be tested here - Application, Web and Database Server

- 1. Application:** Test requests are sent correctly to the Database and output at the client side is displayed correctly.
- 2. Web Server:** Test Web server is handling all application requests without any service denial.
- 3. Database Server:** Tested whether queries sent to the database give expected results.

5.2.4. Database Testing

Database is one critical component of web application and stress must be laid to test it thoroughly.

1. Errors shown while executing queries are tested.
2. Data Integrity is maintained while creating, updating or deleting data in database.
3. Check response time of queries and fine tune them if necessary.
4. Data retrieved from database is shown accurately in the system are tested.

CHAPTER 6: FUTURE WORK

Prior to development of Campus Recruitment System, the process has been handled manually by the industrial training coordinator. Initial testing of this system will include small number of students as users. The system is expected to be able to reduce a lot of manual processes. More evaluation regarding the functionality of the system will be done to ensure it meets user expectation.

All information regarding the applications and host of organizations are safely kept in the database and can be retrieved by administrator for future references of other students. Besides, industrial supervisors are able to assess the students by using online system. Another additional feature to be considered is providing option for the user to give feedback regarding the system to enhance the quality of the usability. Forum feature is also considered to be added to allow students to communicate with each other and to encourage two way communications between students and coordinator.

The management of industrial training process are limited to our department only that is Department of Computing & Information Systems. For future enhancement, maybe the system can be expended or open to other departments that offer industrial placements. Hence, the same system can be used and benefited by multiple students and lectures not only for the Department of Computing and Information Systems. System can be further integrated on the mobile application which will make the process easier.

CHAPTER 7: CONCLUSIONS

The development of the Campus Recruitment System offers a lot of advantages and meets the users' needs. Some of the significant advantages are

- All data are stored and kept in a database to ensure a systematic and efficient way.
- The system is well controlled specially for sensitive data, such as passwords.
- All passwords will be encrypted before it is stored in the database to prevent unauthorized users from seeing the password.
- Communication between students and industrial training coordinator and the communication between the coordinator and the company can be done more efficiently and faster through this system.
- Reduction of manual work to find the suitable placements for the students.

This project gave me a valuable programming experience to my life. I learnt how to use programming theories in practically. Further when I delivered the project in a time constraint, I learnt how to handle the pressure situation in a project it was a good experience for my life. Following are some of lessons I learnt.

- While doing this project some database normalization issues were arisen. Since solving these issues, it helped me to improve my database knowledge.
- Since I learned about Laravel Framework, SQL, and JavaScript codes, it helped me to improve my programming language. Especially in PHP language.
- It helped me to improve my interpersonal skills and how to communicate with different persons.
- Also I have learnt the process carried out during finding the industrial placements for 3rd year student from Department of Computing & Information Systems.
- During the evaluation phase I learnt how to testing and creating test cases for the system.
- During the development period I learnt how to manage the time and how to handle the errors shown up while working.

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GLOSSARY

Apache	Secure web server developed by Apache Software foundation.
CSS	Stands for Cascading Style Sheets. Use to apply styles for Markup languages such as HTML, XML.
HTML	Stands for Hyper Text Markup Language. Use to build Web pages.
Interface	Interconnect web system with the user.
JavaScript	Use to dynamic web applications. Developed by Netscape.
MySQL	One of most popular Database management system can handle big amount of data related to different types.
PHP	Stand for PHP Hypertext Pre-processor. Object oriented supported server side scripting language.
Xampp	Cross platform, Apache, MariaDB, PHP and Perl.
JQuery	It is a JavaScript library. It was designed to simplify the client side scripting of HTML.
SQL	Stands for Structured Query Language. Help to retrieve data base details.

APPENDICES

Appendix A: System documentation

This documentation consists of a set of steps to show, how to install this Student Management System. These steps explain about the hardware and software environment which needs to be installed. When installing the system, this documentation can be followed by the interested parties.

Hardware requirements

Hardware	Minimum Requirements
Processor	3.0 GHz Intel Processor
Memory	512 MB Memory Capacity
Hard Disk	40GB Capacity
Display	1024*768 Resolution Monitor
Internet	ADSL Connection (Minimum Speed 512Kbps)/ wireless

Table A1: Hardware Requirements

Software requirements

Software	Minimum Requirements
Operating System	Windows XP, Windows 7, Windows 8, Windows 10
Xampp	Xampp Server Version 7.3.0 or Separate Installation of Apache 2.4.9 / MySQL 5.6.17
Web Browser	Any browser (Firefox. Chrome etc.)
Code editor	Visual Studio Code

Table A2: Software Requirements

STEPS TO BE FOLLOWED

1. Installing WAMP
 - Download and install WAMP for Windows from <http://www.wampserver.com/en/>
 - Give installation path to C:\wamp of the computer.
2. Installing Web Browsers.
 - Install any browser that user familiar with.
3. Files Extraction
 - Open the CD and copy the “CRS” folder and paste it to the directory path “C:\wamp\www”
4. Database Installation
 - Open the web browser and type the URL
 - <http://localhost/phpmyadmin/> and enter Username and Password (if you set username and password).
 - Create empty database by providing name as “campus_recruitment_system” and navigate to the “Import” tab and click “choose file” button.
 - Then browse the CD and select the “campus_recruitment_system.sql” file by opening database folder.
 - Then Press “GO” button located in the bottom of the page.
5. Launching System
 - Open WAMP server
 - Go to the “C:\wamp\” and open the control panel and verify whether Apache, PHP, MySQL is running.
 - Open the installed web browser and type the URL localhost:8000 and press “Enter” button to access the system.
 - Please refer Appendix-2 User Documentation to get the idea about how to operate the system.