A PROJECT REPORT

ON

INTERNSHIP COUNSELLING SYSTEM

Submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING

Submitted by

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SCHOOL OF COMPUTER ENGINEERING
KIIT UNIVERSITY
BHUBANESWAR-24
2015-2016

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INTERNSHIP COUNSELLING SYSTEM

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C E R T I F I C A T E

*This is to Certify that the project report entitled "**Internship Counselling System**" is being carried out by Pragya Seraphim (1205080), Poulami Bera (1205085), Adyasha Das (1205110) of KIIT UNIVERSITY in partial fulfillment of the award of the degree of Bachelor of Technology in Computer Science & Engineering at School of Computer Engineering, KIIT UNIVERSITY, Bhubaneswar during academic year 2015-2016 under my supervision. The matter embodied in this project is original and has not been submitted for the award of any other degree.*

Signature of Guide

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ABSTRACT

Internship Counselling System is an educational website used to facilitate authentic information gathering to enable the users identify the best and genuine internship offers available in the professional world. It is comprehensive, easy to use, and has many features which make it suitable for end users. The end users can register online in a user-friendly interface. The contributors need to submit their details and internship experience which goes through a validation process, thus eliminating chances of incoherent data. The required internship related information can be obtained by a simple search mechanism. Apart from viewing the experience of the pre interns, registered users can also download the desired information, upload their queries, give and seek feedbacks, get to the point answers from the contributors (pre interns of respective companies) and enjoy a relaxed internship hunt. This is one stop, single platform solution to all the students for accessing information and queries related to internship and therefore, eliminating the need navigate multiple websites and several internship ventures.

Key words: Internship, counselling, comprehensive, user-friendly , genuine information, pre interns to contribute, register, search , download information, ask queries, give and seek feedback, get to the point answers, relaxed internship hunt, one stop single platform solution.

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1. INTRODUCTION

The IT (Information Technology) revolution has transformed our lives. Every laborious task which was earlier done manually is now executed within seconds with the help of efficient software and algorithms. They have greatly reduced human effort in addition to producing desired results. The Internship Counselling System (ICS) is also a product of this revolution that will greatly reduce the efforts of students in searching for internship opportunities and enable appropriate decision making based on authentic information.

1.1. Purpose:

The purpose of this document is to present a detailed description of the Internship Counselling System. It will explain the purpose and features of the system, the interfaces of the system, what the system will do, the constraints under which it must operate and how the system will react to external stimuli. This document is intended for both the stakeholders and the developers of the system and will be proposed to KIIT UNIVERSITY for its approval.

1.2. Scope of Project:

It is a complex process to get the information about a company and the internship facility offered, with the general approach being a random search through various websites that show up at the top of google search results.
The information provided in majority of the places is the traditional one as propagated by the company and so the internal details remain hidden. Random views and insufficient information make it rather difficult for the students to make their choice. Inaccessibility to clear and detailed information often results in making wrong decision and thus ending up dissatisfied on the part of the students.

Internship Counselling System is designed to provide authentic internship information with comparatively lesser effort.

We can improve the efficiency of the system, thus overcoming the drawbacks of the existing methods and achieve the following:

- ➢ Less human error
- ➢ Strength and strain of manual labor can be reduced
- ➢ High security
- ➢ Authentic information
- ➢ Data redundancy can be avoided to some extent
- ➢ Data consistency
- ➢ Easy to handle
- ➢ Easy data updating
- ➢ Easy record keeping
- ➢ Backup data can be easily generated
- ➢ Environment Friendly

1.3. Role in Development:

This project is a team effort. All the group members discussed about the requirements & then with the available amount of data and other resources, we all have worked towards the completion of common goal.

2. Objective

The objective of this project is to achieve the following:

- We aim at solving the general internship related search problems by creating a website that will showcase the genuine internship offers along with the detailed information on that company's internship program exclusively given by an ex-intern who has already experienced it.

- To help those who are looking for internship in a company by providing the genuine information regarding the facilities, opportunities, benefits, quality in a company or internship.

- To provide one stop, single platform solution to all the students for accessing information and queries related to internship, eliminating the need navigate multiple websites and several internship ventures.

- To lessen the burden of manual work (Asking others about their Experience, Course, fees etc.)

- To act as a bridge between Students and Internship venture by simplifying their queries, reducing the risk of random choices for available internships.

3. PROJECT PLANNING/SRS:

3.1 Questionnaire for Requirement Analysis:

1. What are the problems faced by interns while searching for internship?
2. How do you aim to solve the problem?
3. Who will provide counselling?
4. How do you authenticate the documents given to us?
5. Who are the end-users?
6. What is the flow of the counselling process?
7. What are the details that need to be submitted during registration?
8. What are the extra features that need to be included?
9. Who has the right to edit post or make any updates?
10. What is the hierarchy of different users?
11. What is the privacy of each user type?
12. What should be the constraints for each user?
13. What are the registration requirements?
14. Do we need to keep track of feedback process?
15. What should be the time constraint for responding to a query?
16. Do you want to provide facilities like download a document? If yes, then who can download?
17. Do the users need any special services like conformation on mail/mobile?
18. Do you need the plug-in of social media (Facebook, Google+, LinkedIn, etc.) for registration and log in?
19. What type of system you have and its configuration also?
20. How many backups do you need to keep for future reference, if any?

3.2 System Requirements

To run this application we need different types of software and tools such as:
1. HTML and CSS (for designing the interface of the Application)
2. Servlets and JSP (for developing the Application)
3. Apache Tomcat Server (to host the System)
4. jQuery/JavaScript (to do Client Side Authentication)
5. Mozilla Firefox (and other Web Browsers)
6. TCP/IP Protocol is used to communicate with the server. Here request send by the client using TCP/IP, HTTP protocols to the server and server receive the request and send the response to the client through the TCP/IP, HTTP protocol.
7. Here a centralized data base is used to store or retrieve the information. (My SQL)

3.3 Functional Requirements

R1: Registration

R1.1: Registration as an Admin

Description: A person register into the system as an Admin in order to access the background details of the website and make necessary modifications and updates to it.

Input: Personal details such as Name, Contact no, Email address, Username and Password.

Output: Admin Registration

R1.2: Registration as a Contributor

Description: A person register into the system as a Moderator in order to submit the details of an internship.

Input: Personal details such as Name, Contact no, Email address, year, Branch Username and Password.

Output: Contributor Control Panel

R1.3: Registration as a Student

Description: A person register into the system as a Student to download the details of an internship.

Input: Personal details such as Name, Contact no, Email address, year, Branch Username and Password.

Output: Student Control Panel

R2: Login

Description: Persons who are registered can Login using their respective Username and Passwords after which they can perform their respective task.

R2.1: Login as Admin

Description: An Admin can validate the internship, update the portal or review feedback.

Input: Enter username and password

Output: Admin Control Panel

R2.1.1: Validate Internship

Description: An Admin can validate the internship entry submitted by contributor.

Input: An Internship submission

Output: Validated Internship.

R2.1.2: Update Portal
Description: An Admin can update and modify different tables.
Input: Enter new or modified details.
Output: Details updated or modified.

R2.1.3: Review Feedback
Description: An Admin can review the feedbacks and suggestions made by different users and contributors.

R2.2: Login as Contributor
Description: A Contributor can submit the internship, give feedback.
Input: Enter username and password
Output: Contributor Control Panel

R2.2.1: Submit Internship details
Description: A Contributor can submit internship entry.
Input: Internship Information Form
Output: Thank you Message

R2.2.2: Give Feedback
Description: A Contributor can give feedback about the Counselling system.
Input: Rating and suggestions in Feedback Form
Output: Acknowledgement message

R3: Search Internship
Description: A user can enter the key words related to internship or course to find its details.
Input: Key words related to internships
Output: All the internships matching with the entered key words are displayed.

R4: Download Internship
Description: A user can download the internships. But he must be logged in for that.

R4.1: Login as Student
Description: A Student can download the internship, give feedback.
Input: Enter username and password
Output: Student Control Panel

R4.1.1: Download Internship details
Description: A Student can download internship entry.
Process: Selected Internship will be downloaded.

R4.1.2: Give Feedback
Input: Rating and suggestions in Feedback Form
Output: Acknowledgement message

3.4 Non Functional Requirements

Safety Requirements:

System has to check:

    a) If J2EE content is syntactically well formed.
    b) If Web Forms with input are consistent.
    c) If Login of members is properly working.
    d) If Constraints are there during registration.
    e) Non Empty field in the internship form.

In case of error it should provide users with appropriate help messages.

Security Requirements:

For security of the system the technique known as database replication should be used so that all important data is kept safe. In case of crash, the system should be able to back up and recover data.

Software Quality Attributes:

The system will have a simple and user-friendly graphical interface. Users will be able to understand and use all the features of the website easily. Any action will be performed with just a few click.

3.5 Features

The key feature of the project includes:

Registration: The Contributors and Students can register themselves online by providing proper information.

Login/Logout: To secure from the malicious attacks, the member's login is there which makes it password protected.

Internship Submission: The Contributors has to submit their internship details and wait for it to be validated.

Internship Download: The Students can download a validated internship for which log in is necessary.

Give Feedback: Members can give feedback about any internship or any other query.

4. PREPARATORY STUDIES

a. Knowing key features of an Internship
b. Preparing a Questionnaire - to ask to people who wants an internship and who already had an internship
c. Learning to draw various UML Diagrams using Modelling tools
d. Learning J2EE Technology
e. Learning database management – MySQL
f. Preparing questions for an internship form
g. Learning HTML and CSS for front end designing.
h. Learning jQuery for authentication.
i. Learning the working of NetBeans IDE.

We have also used Google form to initially gather internship inputs to be showcased in our portal. This form was posted in social media sites to maximize participation.

The response that were received were used for showcasing after authentication by the admin. As the internship can be undertaken in several academic session, we have categorized them accordingly. This process is a continuous one and is still in operation.

The sample google form that we used to gather information has been showcased in the next page:

INTERNSHIP SURVEY

Kindly provide authentic information about any internships undertaken during academic year.This is to showcase in our online portal "Internship Counselling System".

* Required

NAME *

[   ]

E-MAIL *

[   ]

COLLEGE NAME *

[   ]

BRANCH *

○ CSE
○ IT
○ ETC
○ EEE
○ ENI
○ EE
○ MECH
○ CIVIL
○ OTHERS

INTERNSHIP YEAR

○ 2nd
○ 3rd
○ 4th
○ 5th
○ passout

COURSE NAME

○ B.TECH
○ M.TECH
○ BCA
○ MCA
○ OTHER

COMPANY/INSTITUTE/ORGANISATION NAME *

[   ]

LOCATION *

[   ]

FEE STRUCTURE

[   ]

ADDITIONAL INFO

[   ]

[Submit]

Never submit passwords through Google Forms.

5. Design

5.1 UML Design

5.1.1 Use-Case Diagram

A Use Case Diagram is a representation of a user's interaction with the system. They provide the simplified and graphical representation of what the system must actually do. The following Use-Case diagram represents the functions that can be performed by Admin, Contributors and Students. The Admin can register and login through admin login. Admin validates the internship forms/documents submitted by the contributor, reviews feedback, updates portal. The contributor and student register their details followed by member-login. Both are allowed to give feedback. The internship documents can be submitted by contributor while the student can search for internship and extract information.
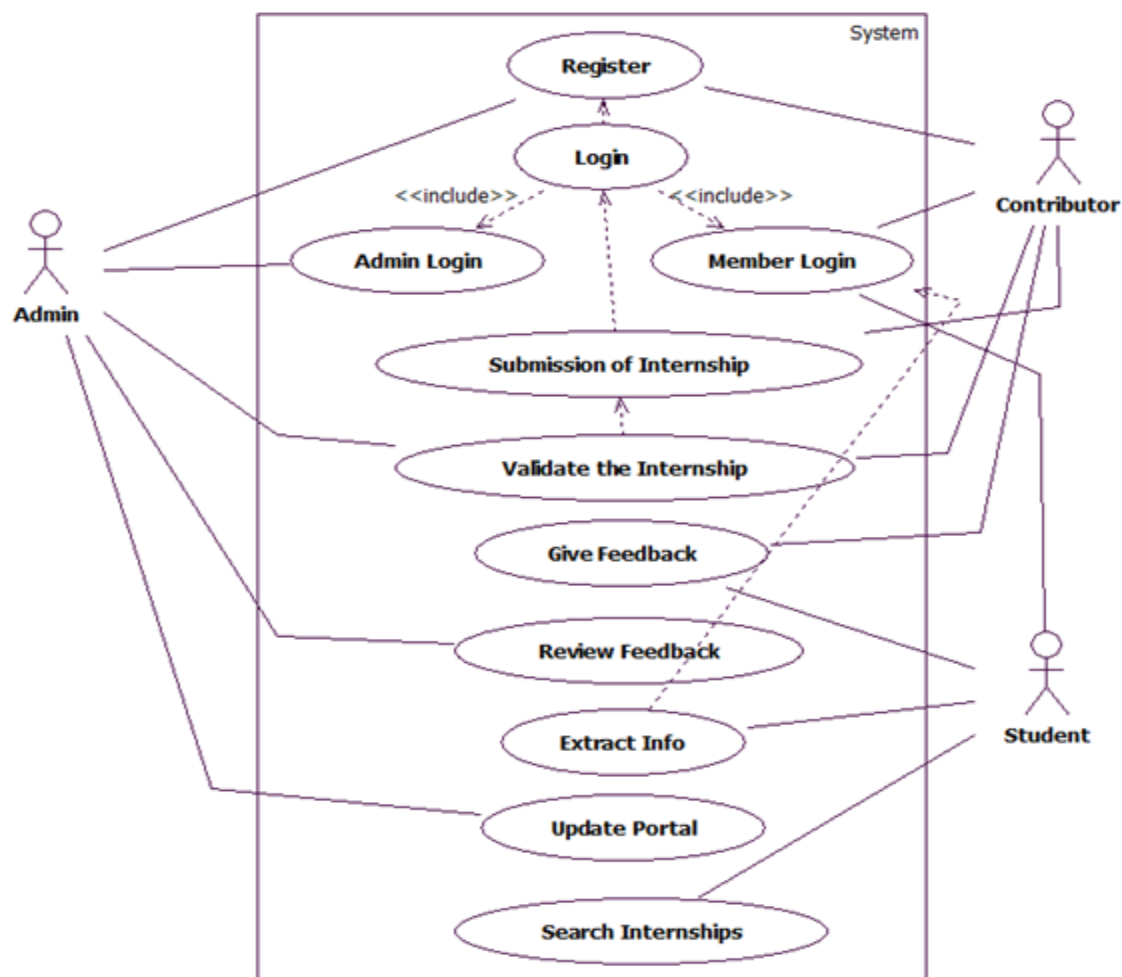
Fig. 1: Use-Case diagram representing the functions Admin, Contributors & Students can perform

5.1.2. Class Diagram

A class diagram in the Unified Modelling Language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations (or methods), and the relationships among objects. In the diagram, classes are represented with boxes which contain three parts:

• The top part contains the name of the class. It is printed in Bold, centered and the first letter capitalized.

• The middle part contains the attributes of the class. They are left aligned and the first letter is in uppercase.

• The bottom part gives the methods or operations the class can take or undertake. They are also left aligned and the first letter is in upper case.
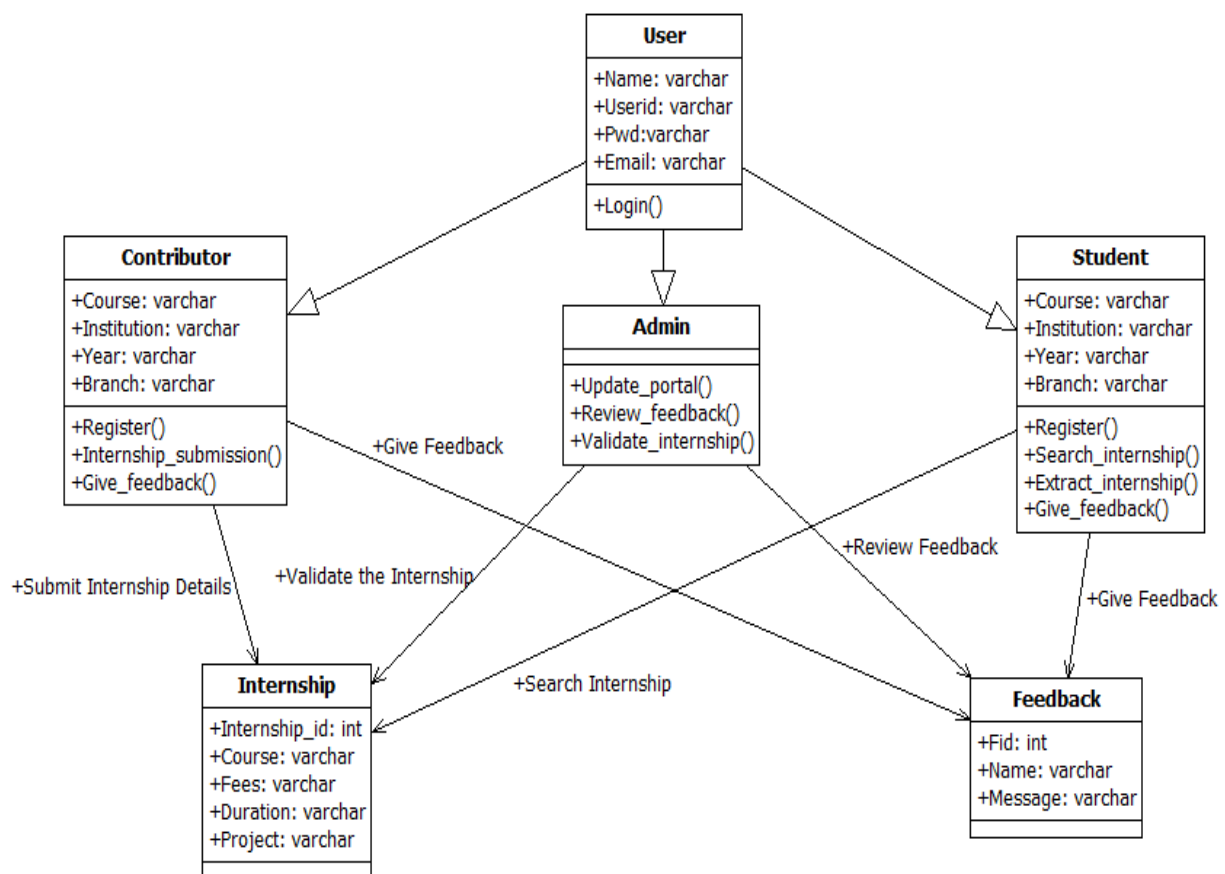
Fig. 2: Class Diagram representing various classes, their attributes, methods and relationships among objects

5.1.3. Sequence-Diagram

A Sequence diagram shows how processes operate with one another and in what order. A sequence diagram shows object interactions arranged in time sequence. It depicts the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario.

a. Sequence Diagram for Registration

This sequence diagram shows the registration of contributor and student. Here, the user (contributor and student) first requests the Registration page and the controller queries the request to the user database where it is checked for duplicity. If it already exists, request to register is denied and an error message is displayed, else the request is approved and confirmation is received by the controller. Then the details are asked and updated in the database. On successful update, database sends confirmation and Controller displays the acknowledgement to the user.
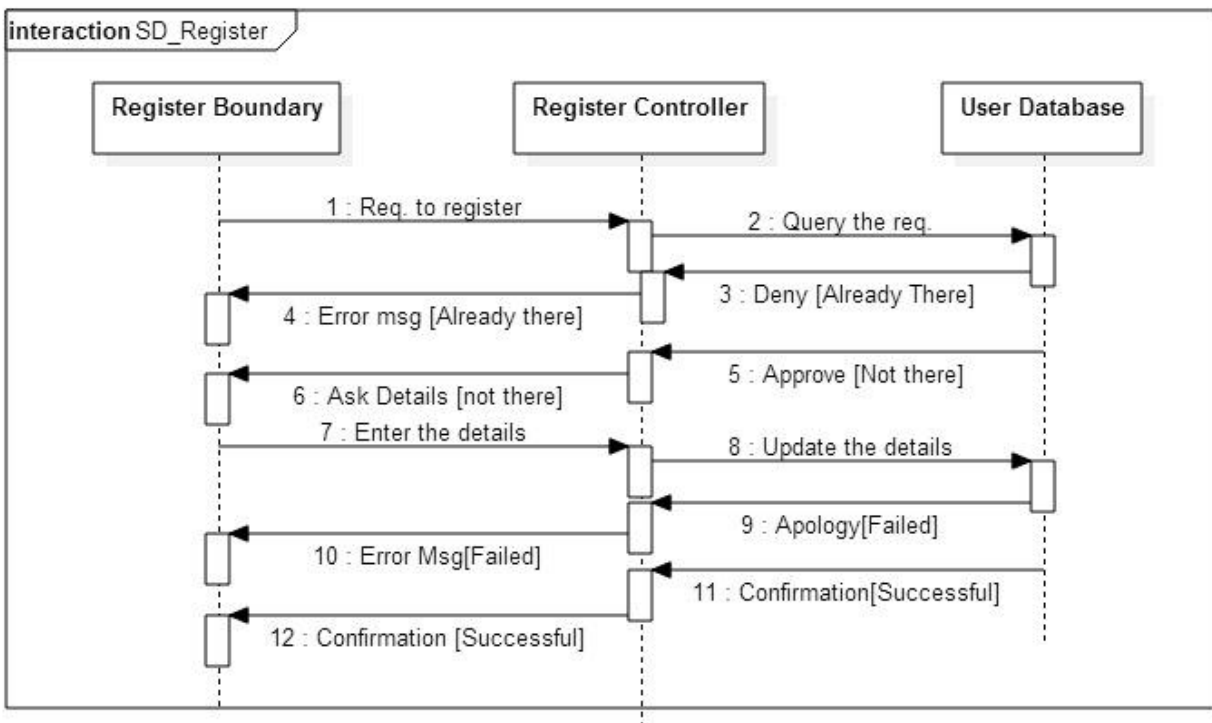
Fig. 3.1: Sequence Diagram for Registration Use-Case

b. Sequence Diagram for Login(Member)

This sequence diagram shows the login mechanism for the admin and members (contributor and student).The user (Admin, Contributor, Student) will enter the login details. The login controller sends a request to the user database to verify the entered details of the user. If the detail stored in database does not match with the entered parameters, deny access and display error message, else the database allows access and the user is logged in.
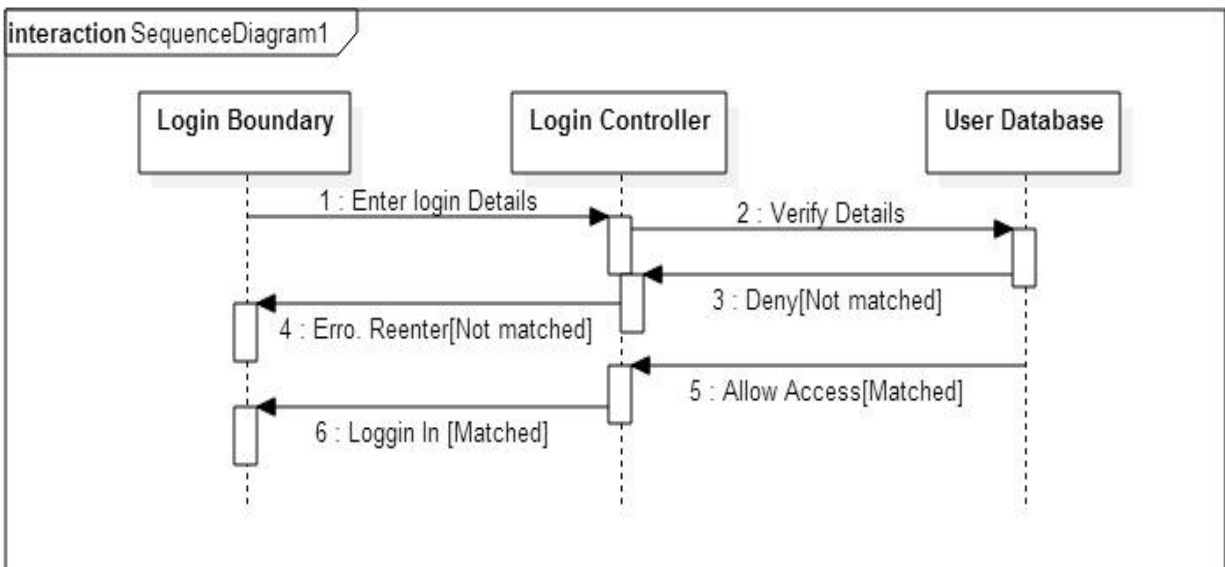
Fig. 3.2: Sequence Diagram for Login

c. Sequence Diagram for Submission of Internship (For Contributor)

This sequence diagram shows the steps undertaken for submission of internship form by the student. The student fills in the internship details which is then sent to the submission controller. The submission controller will direct the Internship database to check for any empty fields. If empty fields are present, the database sends an apology to submission controller and error message is displayed, else the database sends confirmation and form is submitted successfully.
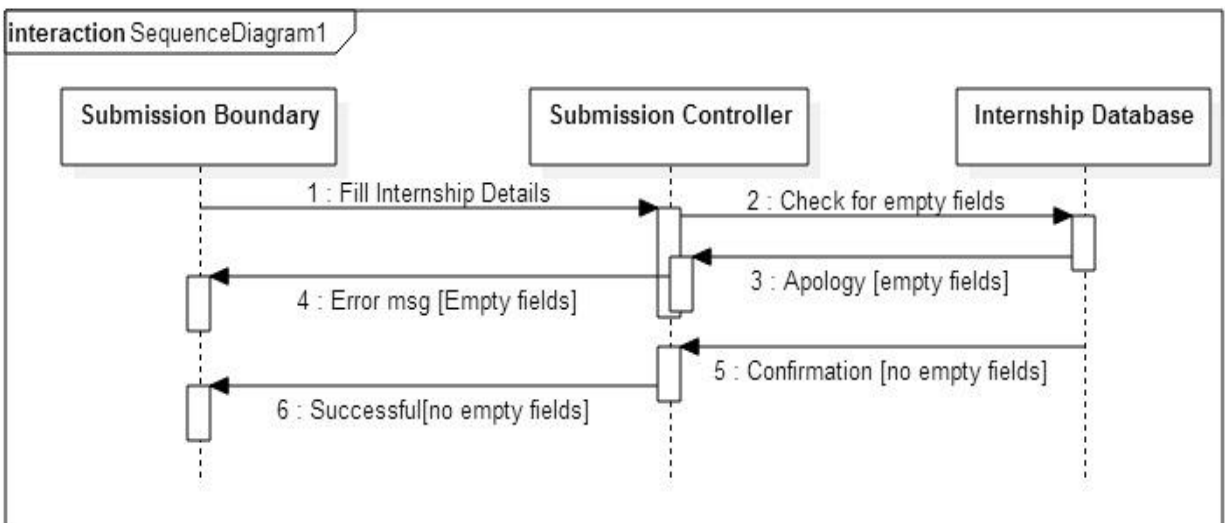
Fig. 3.3: Sequence Diagram for Submission of internship Use-Case

d. Sequence Diagram for validate internship Use-Case (For Admin)

This sequence diagram explains the Validate–Internship use case. Request for internship information is sent to the validate controller which then requests to extract information from the database. For no entries, apology message is passed else the internship database extracts the entries and sends to the internship controller which then displays the internship details.

Fig. 3.4: Sequence Diagram for validate internship Use-Case

e. Sequence Diagram for Give feedback Use-Case (For Students)

This sequence diagram shows the feedback given by the contributor and the student. A request to give feedback is sent to the give feedback controller which then requests the feedback database for the feedback form. The database sends the feedback form to the controller and the controller to the user (contributor, student). The details filled by user goes to controller .The controller updates in the feedback database. A confirmation message is sent to controller by database and finally an acknowledgement message is displayed to the user.
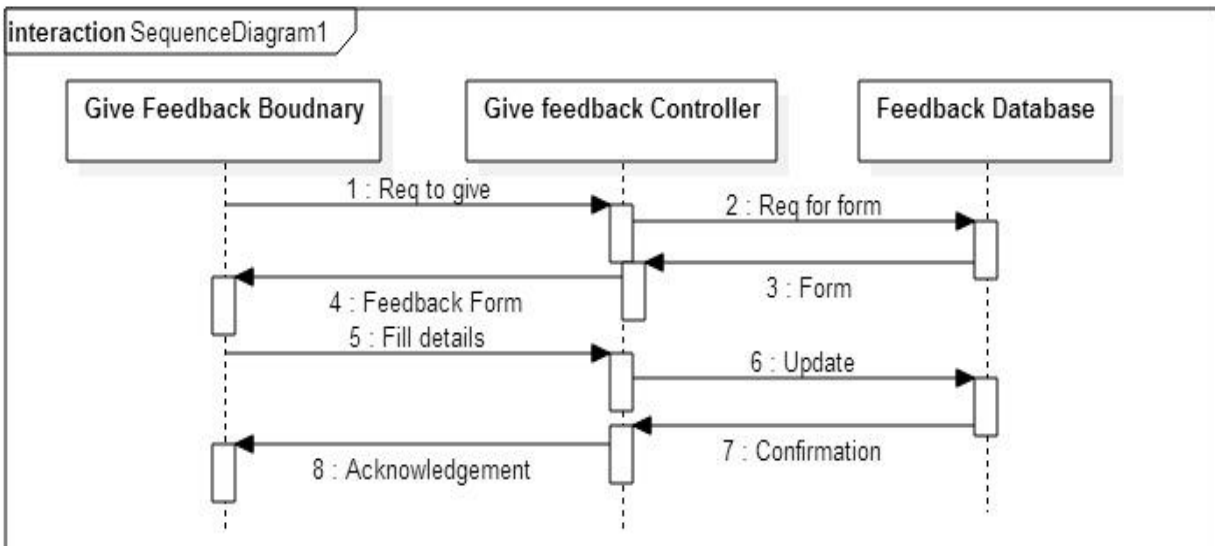
Fig. 3.5: Sequence Diagram for Give feedback Use-Case

f. Sequence Diagram for Review feedback Use-Case (For Admin)

This sequence diagram shows steps for review of feedback by the Admin. The controller receives a request to review feedback and it sends an extract feedback request to the feedback database. The database gives the controller the desired result and the admin is able to review feedback submitted by the contributor, student.
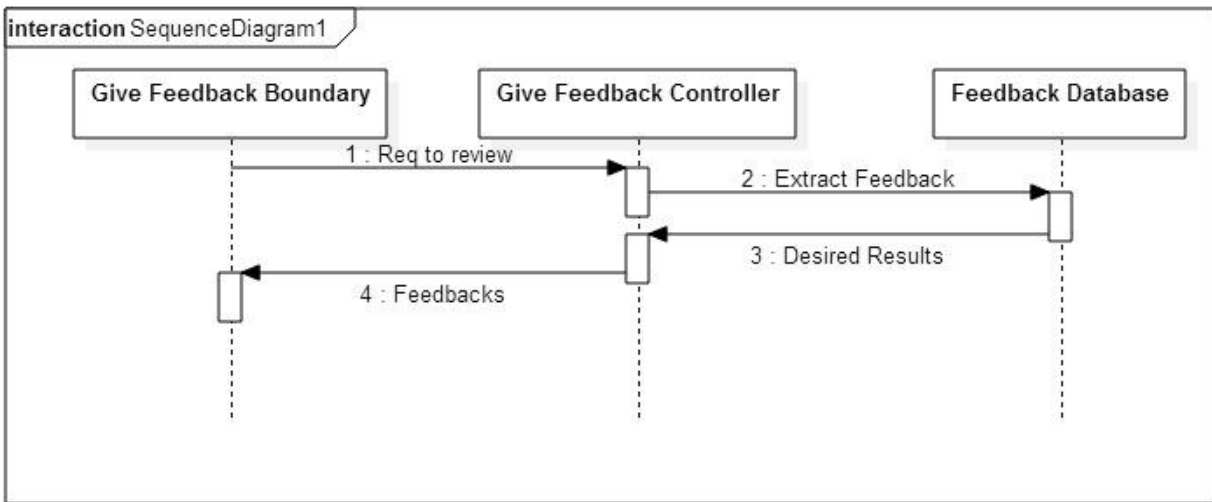
Fig. 3.6: Sequence Diagram for Review feedback

g.   Sequence Diagram for Update Portal Use-Case (For Admin)

This sequence diagram shows the updating of the portal by the Admin. The validated information in sent to the update controller which then requests the internship database for approval. If the approval is denied, an error message is displayed, else the database sends a confirmation to the update controller and the site is updated.

interaction SequenceDiagram1

| Update Boundary | Update Controller | Internship Database |

1 : Validated Info
2 : Req. for approval
3 : Error[Denied]
4 : Error[Denied
5 : Confirmation [Accepted]
6 : Site Updated[accepted]
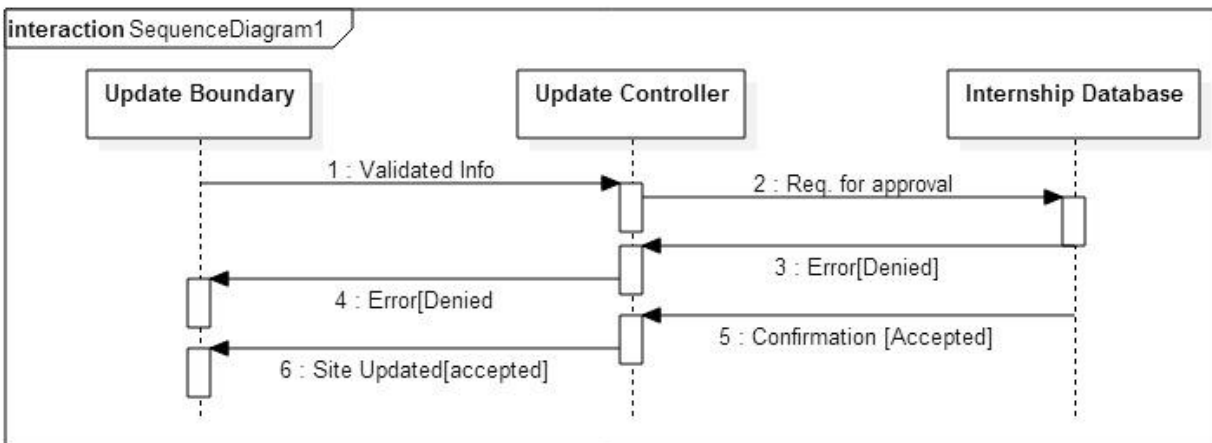
Fig. 3.7: Sequence Diagram for Update Portal Use-Case

h. Sequence Diagram for Search Internship Use-Case (For Students)

This sequence diagram explains the search process done by the students who are looking for an internship detail. The search internship request goes to the search controller. The controller then requests the internship database to extract the desired information. If the desired info is not found, then database sends an apology to the controller and the student gets an apology message, else the database extracts and returns the desired information to the controller and the student gets the information.
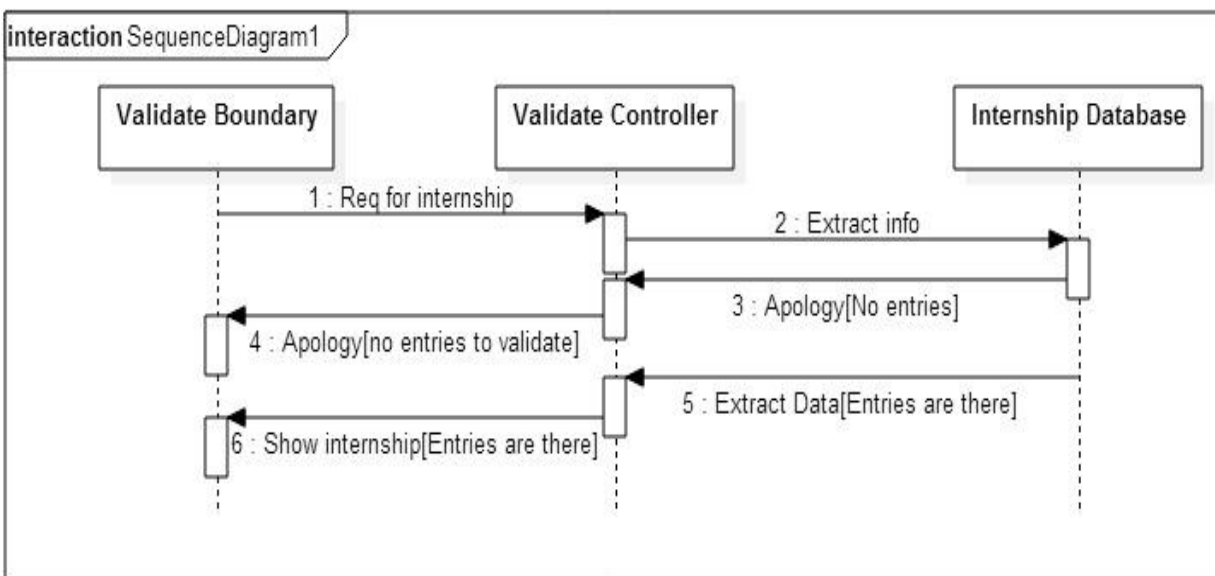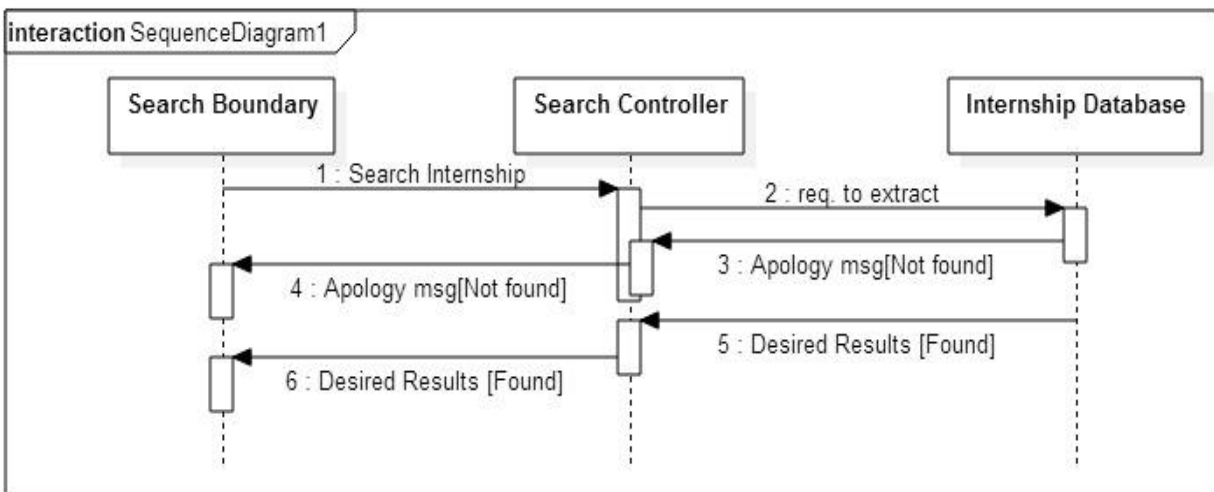

Fig. 3.8: Sequence Diagram for Search internship Use-Case

i. Sequence Diagram for Extract-info Use-Case (For students)

This sequence diagram shows the process by which the registered student can extract information by downloading it. The search internship request is sent to the extract controller. The controller then sends a request to view to the internship database. The database sends desired result to controller which displays it to the user (student). If the students wants to download the information, he/she sends a request to the controller for downloading, the controller requests the database to extract. The database sends desired result to controller and the student finally downloads/extracts the desired internship details.
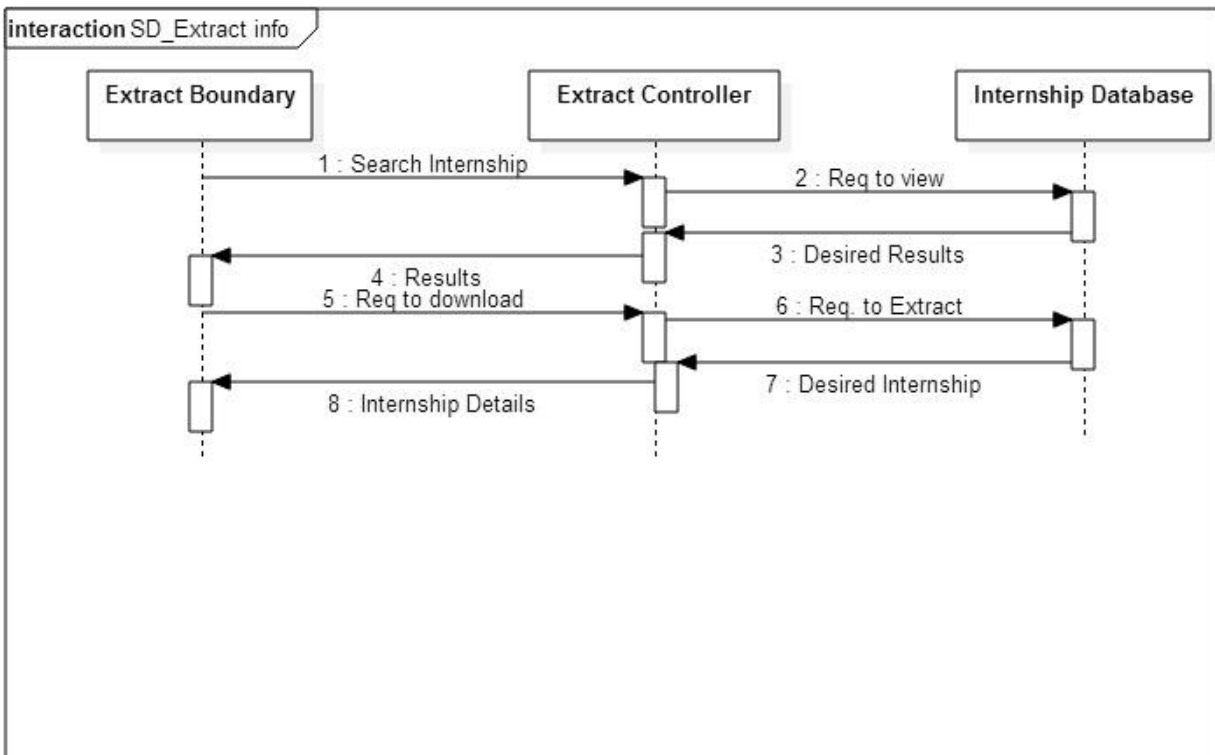
Fig. 3.9: Sequence Diagram for Extract-info Use-Case

5.1.4 Activity Diagram

In this system, users (Student), Contributor first register themselves to login in to the portal. All actions except browsing require login .In general, anyone can browse or search for internship. If the desired search result is found, student/contributor will be directed to login (provided they have already registered), else first register then login (for the unregistered users). If the above mentioned criteria is not fulfilled, the user will be directed to initial phase where he/she can only browse. On successful login, student can download the internship information and give feedback; contributor can fill the internship details/give feedback. The review of the feedback form by the Admin will be done at a phase after the feedback form has been submitted.
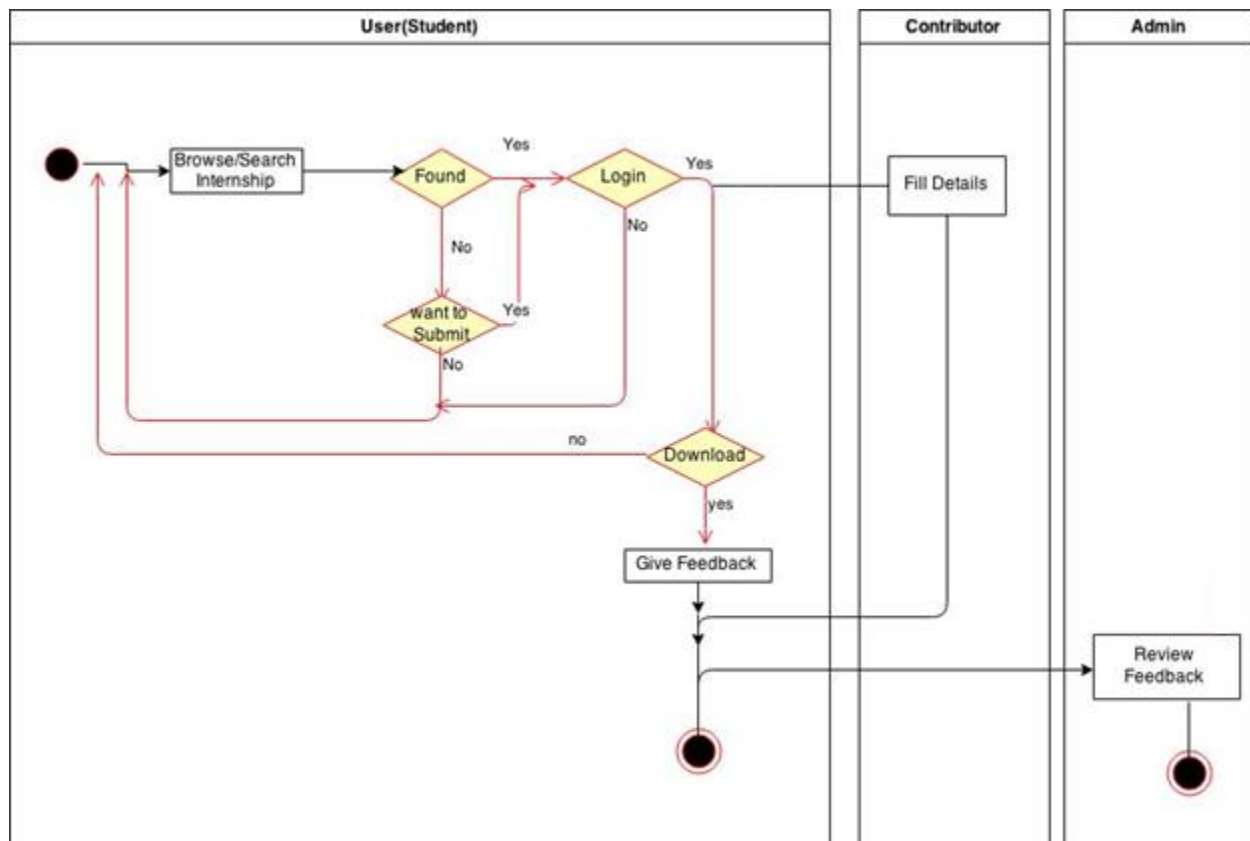
Fig. 4: Activity diagram including the Control flow of activities in the system

5.2. DATABASE DESIGN

5.2.1 ER DIAGRAM

An Entity–Relationship diagram (ER diagram) is a data model for describing the data or information aspects of a business domain or its process requirements, in an abstract way that lends itself to ultimately being implemented in a database such as a relational database. The main components of ER models are entities and the relationships that can exist among them, and databases. An entity may be defined as a thing capable of an independent existence that can be uniquely identified. An entity set is a collection of similar types of entities. Entities are represented by means of their properties, called attributes. The association among entities is called relationship. Relationship of similar type is called relationship set.
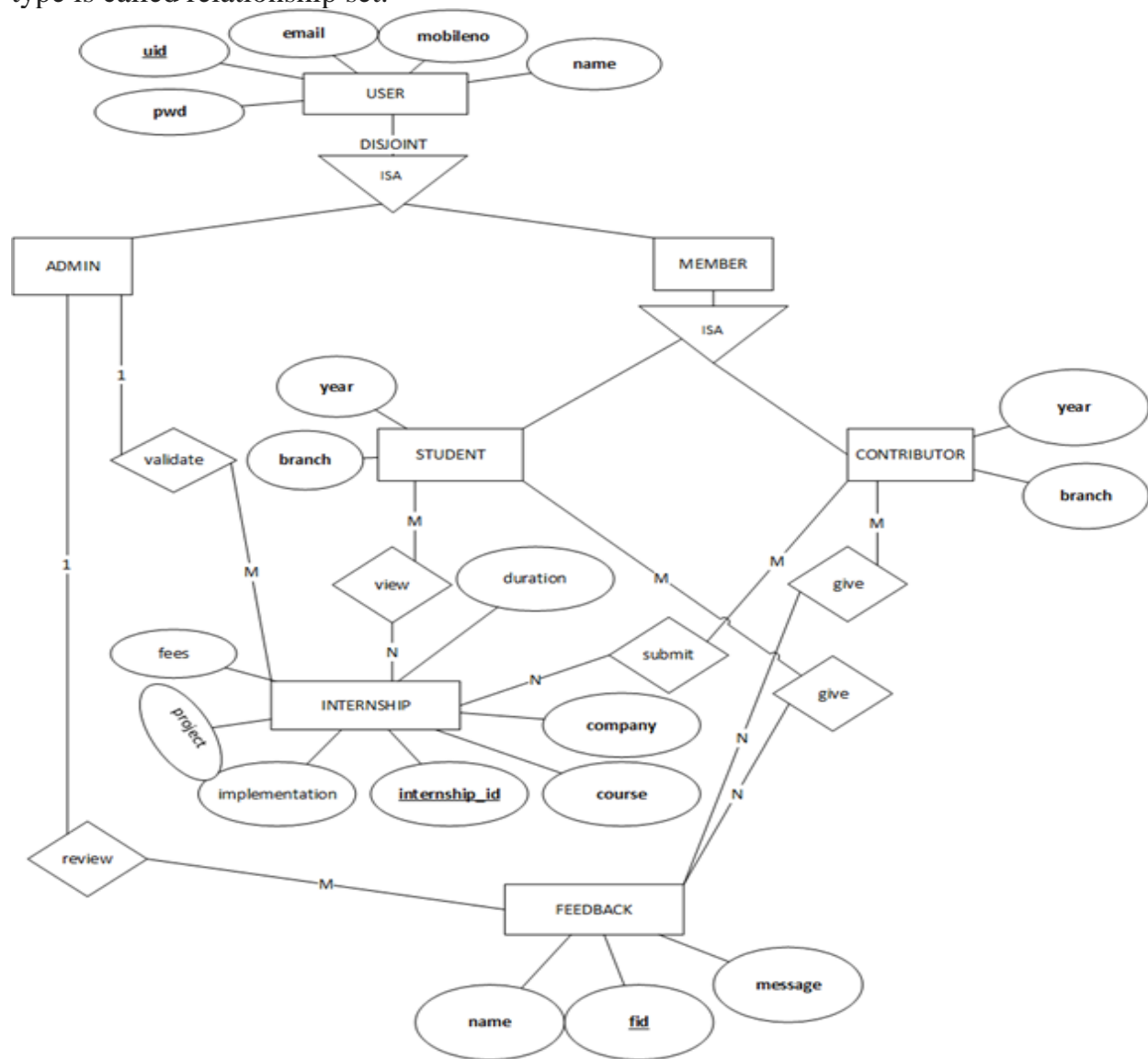
Fig 5. ER Diagram of Internship Counselling System

5.2.2 TABLES

TABLE 1: FEEDBACK

```
mysql> desc feedback;
+---------+--------------+------+-----+---------+-------+
| Field   | Type         | Null | Key | Default | Extra |
+---------+--------------+------+-----+---------+-------+
| name    | varchar(20)  | YES  |     | NULL    |       |
| email   | varchar(50)  | YES  |     | NULL    |       |
| subj    | varchar(30)  | YES  |     | NULL    |       |
| message | varchar(100) | YES  |     | NULL    |       |
+---------+--------------+------+-----+---------+-------+
```

FEEDBACK table is used to store the feedback given by the student and contributor in response to the query asked.

TABLE 2: QUERY

```
mysql> desc query;
+---------+--------------+------+-----+---------+-------+
| Field   | Type         | Null | Key | Default | Extra |
+---------+--------------+------+-----+---------+-------+
| email   | varchar(50)  | YES  |     | NULL    |       |
| name    | varchar(20)  | YES  |     | NULL    |       |
| branch  | varchar(20)  | YES  |     | NULL    |       |
| year    | varchar(10)  | YES  |     | NULL    |       |
| course  | varchar(20)  | YES  |     | NULL    |       |
| college | varchar(50)  | YES  |     | NULL    |       |
| cname   | varchar(50)  | YES  |     | NULL    |       |
| city    | varchar(20)  | YES  |     | NULL    |       |
| state   | varchar(10)  | YES  |     | NULL    |       |
| query   | varchar(150) | YES  |     | NULL    |       |
+---------+--------------+------+-----+---------+-------+
```

QUERY table is used store the query posted by user.

TABLE 3: REGISTER

```
mysql> desc register;
+-------------+-------------+------+-----+---------+----------------+
| Field       | Type        | Null | Key | Default | Extra          |
+-------------+-------------+------+-----+---------+----------------+
| sno         | int(255)    | NO   | PRI | NULL    | auto_increment |
| userid      | varchar(15) | YES  |     | NULL    |                |
| pwd         | varchar(15) | YES  |     | NULL    |                |
| name        | varchar(20) | YES  |     | NULL    |                |
| institution | varchar(20) | YES  |     | NULL    |                |
| addr        | varchar(50) | YES  |     | NULL    |                |
| course      | varchar(20) | YES  |     | NULL    |                |
| state       | varchar(20) | YES  |     | NULL    |                |
| email       | varchar(50) | YES  |     | NULL    |                |
| sq          | varchar(30) | YES  |     | NULL    |                |
| ans         | varchar(50) | YES  |     | NULL    |                |
+-------------+-------------+------+-----+---------+----------------+
```

The initial step i.e. registration details of the users is stored in the REGISTER table. This table is also used during Login, change & forgot password functions.

TABLE 4: SUBMIT INTERN DETAIL
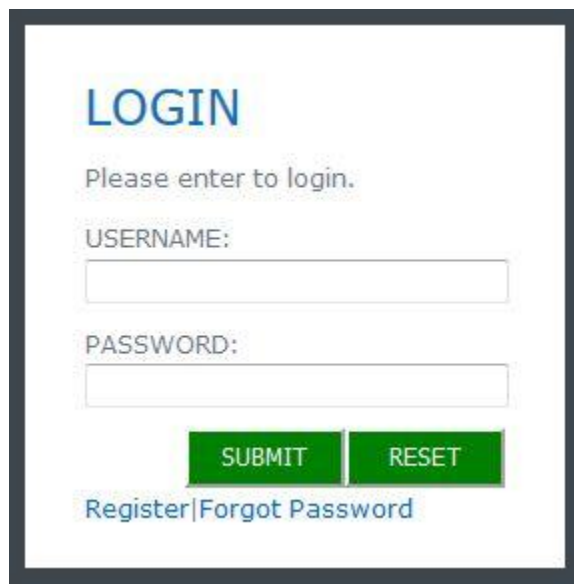
```
mysql> desc submit;
+----------------+-------------+------+-----+---------+----------------+
| Field          | Type        | Null | Key | Default | Extra          |
+----------------+-------------+------+-----+---------+----------------+
| sno            | int(255)    | NO   | PRI | NULL    | auto_increment |
| email          | varchar(50) | YES  |     | NULL    |                |
| college        | varchar(20) | YES  |     | NULL    |                |
| branch         | varchar(50) | YES  |     | NULL    |                |
| year           | varchar(50) | YES  |     | NULL    |                |
| internshipperiod | varchar(50) | YES |     | NULL    |                |
| company        | varchar(50) | YES  |     | NULL    |                |
| location       | varchar(50) | YES  |     | NULL    |                |
| feestructure   | varchar(50) | YES  |     | NULL    |                |
| additionalinfo | varchar(50) | YES  |     | NULL    |                |
+----------------+-------------+------+-----+---------+----------------+
```

The information about internship undertaken submitted by the contributor is stored in SUBMIT INTERN DETAIL TABLE after being authenticated by the admin. The download, search facilities access this table to show the result.

5.3. GUI DESIGN

5.3.1 Login Page

Given below is the user interface of LOGIN page. The pre requirement for using this facility is that the user must have already successfully registered. This page uses the REGISTER table to check the username and password entered. For correct entry, the login becomes successful and the user is logged in to user home.

5.3.2 User Profile Page

Every registered user has a Profile page where his/her information is stored. The user can also update the fields in this page as and when needed.

5.3.3 Query Page

Query page is the interaction medium between the two user groups namely contributor and student. The student can fill up their query via this form which will be then directed to the respective contributor followed by quick response.

5.3.4 Internship details Page

The contributor will submit his/her internship details using the internship details page. Along with the given fields, contributor has to attach his/her certificate of internship in pdf format that will be used during the authentication process.

Internship Details

Email	:	
College	:	
Branch	:	
Year	:	
Internship Period	:	To
Company	:	
Location	:	
Fee Structure	:	
Additional Info	:	
Attachment	:	Browse... No file selected.

Submit Form   Reset Form

Most sought after areas
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Networking concepts with Security

J2EE - Struts with Hibernate Framework

PHP with wordpress

Linux Administration with

" *You Don't Have To Be Great To Start,But You Have To Start To Be Great*
— *Zig Zagler*

Internship Opportunities
- -

for an internship at a start up then you should try here. (http://www.letsintern.com/)

Internworld.in: InternWorld is the largest internships website in India which has a number of internships, freelance, part-time as well as full-time job

5.4. TEST CASE DESIGN:

To increase the efficiency of our project, we have done several unit testing. The test case design of the procedure followed by us is as given:

We have majorly focused on Test procedure, pre-condition, expected action and reference module for each test case design.

Test Cases for login in internship counselling system:

Sl. no.	Test case name & id	Test Procedure	Pre-condition	Expected Action	Reference Module
1.	Check the fields available	Open a browser and type the URL	Internet is working and registered	The login page should contain the following text fields: Username & Password	Login Module
2.	Check for buttons	View the buttons in the login page	Internet is working and registered	The login should contain the Login button	Login Page
3.	Login	All things are kept blank and click on login	Internet is working and registered	username & password should be entered	Login Module
4.	Login	Entered username and password is kept blank	Internet is working And registered	Enter correct username & password	Login Module
5.	Login	Entered password and username is kept blank	Internet is working and registered	Enter correct username & password	Login Module
6.	Login	Entered wrong username and password	Internet is working and registered	Enter correct username & password	Login Module

7.	Login	Entered username and wrong password	Internet is working and registered	Enter correct username & password	Login Module
8.	Login	Entered wrong username and wrong password	Internet is working and registered	Enter correct combination of username & password	Login Module
9.	Login	Entered correct username and password	Internet is working and registered	Logged In	Respective Pages

Test Cases for submit internship detail in internship counseling system:

Sl. no.	Test case name & id	Test Procedure	Pre-condition	Expected output	Reference Module
1.	Internship form Submission	Open the browser and click and get the home page of user	Internet is working & Logged in as Contributor	Internship form was submitted	Internship submission Module
2.	Internship Form Submission	All things are kept blank and click on submit	Internet is working & Logged in as Contributor	Some fields are mandatory.	Internship submission module
3.	Internship Form Submission	Enter all the mandatory fields only.	Internet is working & Logged in as Contributor	Some fields are mandatory	Internship submission module
4.	Internship Form Submission	Enter the email id of the user & other fields are kept blank.	Internet is working & Logged in as Contributor	Some fields are mandatory.	Internship submission module
5.	Internship Form Submission	Enter the email id of the user, college name,	None (File should be in .pdf)	Some fields are mandatory.	Internship submission module

Sl. no.	Test case name & id	Test Procedure	Pre-condition	Expected output	Reference Module
		branch, year & other fields are kept blank			

Test Cases for register in internship counseling system:

Sl. no.	Test case name & id	Test Procedure	Pre-condition	Expected output	Reference Module
1.	Registering on portal	Open a browser and click on sign up button	Internet is working	Sign up page	Registration module
2.	Registration Portal	All things are kept blank and sign up.	Internet is working.	All fields are mandatory	Registration module
3.	Registration portal	Entered name and rest fields are empty	No numerical and only '.', ' ' are allowed	All fields are mandatory	Registration module
4.	Registration portal	Entered name & email id and rest fields are empty	For Name field only '.', ' ' are allowed, For Email Id field all character are including alphanumeric	All fields are mandatory	Registration module
5.	Registration portal	Entered name, email & contact no	For Name field only '.', ' ' are allowed, For Email Id field all character are including alphanumeric, For Contact No. only numerical number is required	All fields are mandatory	Registration Module
6.	Registration portal	Entered name, email , contact no and	For Name field only '.', ' ' are allowed, For Email Id field all character are including	All fields are mandatory	Registration Module

6 CODE SNIPPET

6.1: Database Connection

Given below is the code of database connectivity of our project. It shows the coding done to enable data connection which is required to perform our database operations.

```java
package dao;
import java.sql.*;


public class daoservice
{
    public static Connection con;
    public static String iCQuery;
    static
            {
        try
        {
            Class.forName("com.mysql.jdbc.Driver");
            String url="jdbc:mysql://127.0.0.1:3306/ip";
            con=DriverManager.getConnection(url,"root","system");
        }
        catch(Exception e)
        {
            System.out.println("Connection error:"+e.getMessage());
        }
            }
```

```java
    public static int updateData(String dmlquery)throws Exception
{
    try
    {
    Statement st=con.createStatement();
    int ur=st.executeUpdate(dmlquery);
    return ur;
    }

    catch(Exception e)
    {
        System.out.println("DML error:"+e.getMessage());
        return 0;
    }
}
        public static ResultSet selectData(String projQuery)
        {
            try
            {
                Statement st=con.createStatement();
                ResultSet rs=st.executeQuery(projQuery);
                return rs;
```

```java
public static PreparedStatement getPreparedStatement(String ic)
{
    try
    {
        PreparedStatement pst=con.prepareStatement(iCQuery);
        return pst;

    }
    catch(Exception e)
    {
        System.out.println("prepared statement error"+e.getMessage());
        return null;
    }
}

}
```

6.2 Register

Given below is the code for register page. Here, for every proper entry, the data gets stored in Register table on submission whereas if any validation is not met, an error message pops up and the user is required to re-register.

```java
String ins;
ins="insert into register(userid,pwd,name,institution,addr,course,state,email,sq,ans) "
        + "values('"+u+"','"+p+"','"+n+"','"+i+"','"+a+"','"+c+"','"+s+"','"+e+"','"+q+"','"+ans+"');";

int ur;
ur=daoservice.updateData(ins);

if (ur>0)
{
out.print("<script>");
out.print("alert('DATA INSERTED!!!!')");
out.print("</script>");
}

else

{
out.print("<script>");
out.print("alert('DATA NOT INSERTED!!!!')");
out.print("</script>");
}
```

6.3 Query

Given below is the code of Query page. It shows how the query message is fetched and stored into query table for the smooth process of getting and responding to the queries.

```html
<!Doctype html>
<%@taglib prefix="s" uri="http://java.sun.com/jsp/jstl/sql"%>
<s:setDataSource driver="${initParam.db_driver}"
                url="${initParam.db_url}"
                user="${initParam.db_user}"
                password="${initParam.db_password}"
/>
<html>
    <body>
        <s:update>
            insert into query(email,name,branch,year,course,college,city,state,query)
            values('${param.email}','${param.name}','${param.branch}','${param.year}',
            '${param.coursename}','${param.college}','${param.city}','${param.state}','${param.query}');
        </s:update>
            <h2>thank you for your query. We will get back to you soon...</h2>
    </body>
</html>
```

6.4 Submit Internship

This is the code for submit internship. It shows how the internship information on successful submission is inserted into the Submit Internship table.

```html
<!Doctype html>
<%@taglib prefix="s" uri="http://java.sun.com/jsp/jstl/sql"%>
<s:setDataSource driver="${initParam.db_driver}"
                 url="${initParam.db_url}"
                 user="${initParam.db_user}"
                 password="${initParam.db_password}"
/>
<html>
    <body>
        <s:update>
            insert into submit(email,college,branch,year,internshipperiod,company,location,feestructure,additionalinfo)
            values('${param.email}','${param.college}','${param.branch}','${param.year}','${param.intern}',
            '${param.company}','${param.location}','${param.fee}','${param.info}');
        </s:update>
            <h2>thank you for providing the internship details</h2>
    </body>
</html>
```

6.5 Feedback

The code for feedback shows the way of inserting into the Feedback table the feedback received via the feedback form. This information is used by admin to make changes for improving the current facilities available.

```html
<!Doctype html>
<%@taglib prefix="s" uri="http://java.sun.com/jsp/jstl/sql"%>
<s:setDataSource driver="${initParam.db_driver}"
                 url="${initParam.db_url}"
                 user="${initParam.db_user}"
                 password="${initParam.db_password}"
/>
<html>
    <body>
        <s:update>
            insert into feedback(name,email,subj,message) values('${param.name}',
            '${param.email}','${param.subject}','${param.msg}');
        </s:update>
            <h2>thank you for providing your valuable feedback</h2>
    </body>
</html>
```

6.6 Login

Given below is the code for Login. The Register table is used to verify the username and password typed. If a match in the Register table is found, the user is successfully logged in else an error message is displayed.

```java
protected void processRequest(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException{
    response.setContentType("text/html;charset=UTF-8");
    PrintWriter out = response.getWriter();
     String u=request.getParameter("username");
     String p=request.getParameter("pass");

        String q;
    q = "select * from register where userid="+"'"+u+"'"+"and pwd="+"'"+p+"'";
        ResultSet rs=daoservice.selectData(q);
    try {
        if(rs.next())
        {
            //VALID
            // String r=rs.getString(3);
            // if(r.equals("admin"))

            //{//ADMIN
                String r=rs.getString(4);
             out.print("<font color=green size=5>");
             out.print("<a href=home.html>");
            out.print("login successful....<br> WELCOME"+"   "+r);
```

```java
        String y=r;
        out.print("</font>");
        out.print("</a>");
         /* out.print("valid");
          out.print("<font color=green size=5");
          out.print("login successful...<br>"+"WELCOME to Control Panel ADMIN");
          out.print("</font>");*/
          }
          else
          {
             //USER
            // response.sendRedirect("userhome.html");
             out.print("login unsuccessful......<br>"+"TRY again");
          }

    /*  else
      {
         out.print("<font color=red size=5>");
          out.print("<font color=red size=5>");
         out.print("invalid userid or password....TRY AGAIN");
         out.print("</font>");
      }*/
    }
```

7. TEST CASE:

In this section we have tabulated the different test cases that we carried out after the design and coding phase.

We have taken into account: test procedure, pre-condition, expected action, reference module, actual output and a remark section (pass/fail) to showcase our observation.

The Test Cases in tabulated format is as follows:

Test Cases for login in internship counselling system:

Sl. no.	Test case name & id	Test Procedure	Pre-condition	Expected Action	Reference Module	Actual Output	Remarks
1.	Check the fields available	Open a browser and type the URL	Internet is working and registered	The login page should contain the following text fields: Username & Password	Login Module	The user successfully logged in and directed to user home	PASS
2.	Check for buttons	View the buttons in the login page	Internet is working and registered	The login should contain the Login button	Login Page	The button is available and user successfully logged in	PASS
3.	Login	All things are kept blank and click on login	Internet is working and registered	username & password should be entered	Login Module	Error message (please enter to login)	FAIL
4.	Login	Entered username and password is kept blank	Internet is working And registered	Enter correct username & password	Login Module	Error message (Login unsuccessful. Try again)	FAIL

5.	Login	Entered password and username is kept blank	Internet is working and registered	Enter correct username & password	Login Module	Error message (Please enter to login)	FAIL
6.	Login	Entered wrong username and password	Internet is working and registered	Enter correct username & password	Login Module	Error message (Login unsuccessful. Try again)	FAIL
7.	Login	Entered username and wrong password	Internet is working and registered	Enter correct username & password	Login Module	Error message (Login unsuccessful. Try again)	FAIL
8.	Login	Entered wrong username and wrong password	Internet is working and registered	Enter correct combination of username & password	Login Module	Error message (Login unsuccessful. Try again)	FAIL
9.	Login	Entered correct username and password	Internet is working and registered	Logged In	Respective Pages	Directed to user home. Logged in	PASS

Test Cases for submit internship detail in internship counseling system:

Sl. no.	Test case name & id	Test Procedure	Pre-condition	Expected output	Reference Module	Actual Output	Remar ks
1.	Internship form Submissi on	Open the browser and click and get the home page of user	Internet is working & Logged in as Contributor	Internship form was submitted	Internship submission Module	Successfully submitted the form	PASS

2.	Internship Form Submission	All things are kept blank and click on submit	Internet is working & Logged in as Contributor	Some fields are mandatory.	Internship submission module	Error message (Please fill up the fields)	FAIL
3.	Internship Form Submission	Enter all the mandatory fields only.	Internet is working & Logged in as Contributor	Some fields are mandatory	Internship submission module	Successfully submitted the form.	PASS
4.	Internship Form Submission	Enter the email id of the user & other fields are kept blank.	Internet is working & Logged in as Contributor	Some fields are mandatory.	Internship submission module	Internship details submitted successfully.	PASS
5.	Internship Form Submission	Enter the email id of the user, college name, branch, year & other fields are kept blank	None (File should be in .pdf)	Some fields are mandatory.	Internship submission module	Internship details could not be submitted.	FAIL

Test Cases for register in internship counseling system:

Sl. no.	Test case name & id	Test Procedure	Pre-condition	Expected output	Reference Module	Actual Output	Remarks
1.	Registering on portal	Open a browser and click on sign up button	Internet is working	Sign up page	Registration module	User home page	PASS
2.	Registration Portal	All things are kept blank and sign up.	Internet is working.	All fields are mandatory	Registration module	User home page	FAIL

3.	Registrati on portal	Entered name and rest fields are empty	No numerical and only '.', ' ' are allowed	All fields are mandatory	Registration module	Sign up successful , account created	FAIL
4.	Registrati on portal	Entered name & email id and rest fields are empty	For Name field only '.', ' ' are allowed, For Email Id field all character are including alphanumeri c	All fields are mandatory	Registration module	Sign up successful , account created	PASS
5.	Registrati on portal	Entered name, email & contact no	For Name field only '.', ' ' are allowed, For Email Id field all character are including alphanumeri c, For Contact No. only numerical number is required	All fields are mandatory	Registration Module	Internship details submitted successful ly.	PASS
6.	Registrati on portal	Entered name, email , contact no and	For Name field only '.', ' ' are allowed, For Email Id field all character are including	All fields are mandatory	Registration Module	Internship details submitted successful ly	FAIL

8. FUTURE WORK

The Project entitled "Internship Counselling System" so far allows one to register all the users online, submission of internship details by contributors (ex-interns of respective organizations), search and download of required information by student, submission and response to feedback by users. It also allows admin to authenticate and manage the information. This facility enables the internship seekers to go through a smooth process and make decision based on authentic information thus saving their time and effort.

As an extension of this project, we plan to:

1. **Enable message service:** in relation with this system that shall enable sending messages via mail/mobile to the users for different purposes. For example, Contributors shall receive messages regarding the status of their internship information and whether their submission has been accepted or rejected. Students shall receive notification about based on their requirements as mentioned in profile, all users shall receive message of their successful registration, and user will receive the notification for reply to their submitted feedback. This shall eliminate the need to login every now and then to check if there has been some new progress.

2. **Create mobile application:** as almost everyone today is an owner of a smart phone and people would usually prefer to check their smart phone apps rather than going through the traditional method of logging in through a website.

9. CONCLUSION

The "Internship Counselling System" provides a convenient and productive solution for the search and application of internship opportunities. The project is designed in a user-friendly manner so that it can be accessed easily. Necessary functions have been added to ensure authentication of the information provided. The application provides flexibility in the system according to the changing environment with the facility to update data from time to time. Special care has been taken to ensure controlling of redundancy in storing the same data multiple times and also validation checks for the data entered. Methods adopted in the system are such that it provides for prompt and specific retrieval of data. Prime importance is given to security of the data entered by the users of the application.

The "Internship Counselling System" aims to facilitate all members involved in the counselling process in their varied tasks by providing an easy, online and comfortable approach thus preventing inaccurate information traps and saving effort and time.

10. REFERENCES

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