PLACEMENT PORTAL

DATABASE MANAGEMENT PROJECT

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Introduction

Every year, during the placement season, students are faced with a daunting challenge of making sure they don't miss out on any opportunities and the lack of a proper mechanism to help students with the process, leads to a lot of hurdles, uncertainties and missed opportunities. Therefore this project has identified this key issue and aims to resolve it through a Placement Portal by establishing a link between companies, students and the college.

Abstract

The Placement Portal is an application that allows students to sign up, fill out their resume and regularly update it, and view the details regarding the opportunities that are available to them. They will also be able to view the criteria for selection, salary packages, etc., and filter companies based on the parameters mentioned. Further, this portal will also have a channel for the companies that come to the campus to hire students, where they can list their requirements and the descriptions, and view the students' application details. All of these operations are spearheaded by the Admin who oversees the process and can add companies and optionally remove students and companies.

Unique Idea Integration

Providing Alumni Details

The details of the alumni who have gotten placed via this portal is made available to anyone who visits the application. This will enable visitors to view their details and gain guidance regarding the same,

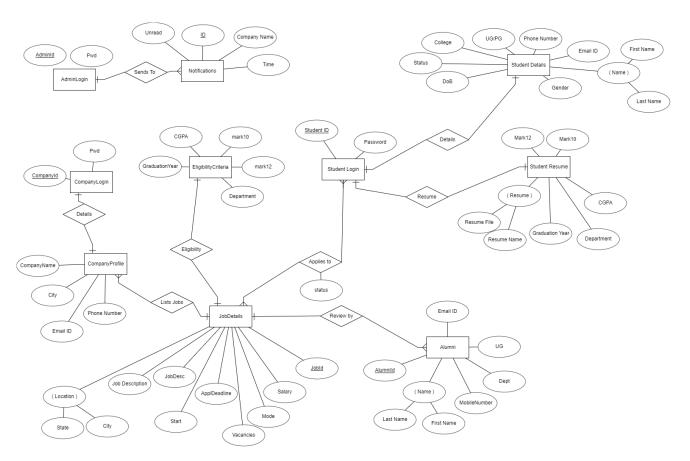
The implementation of this idea is carried out through a trigger that moves the details of the applicant who has been accepted for a job from the students table to the alumni table, while deleting the records of their other applications to ensure that they are placed only in one job.

The Application

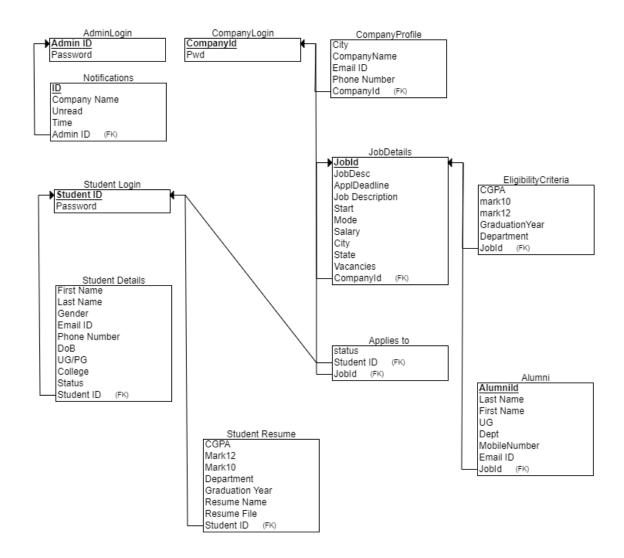
The following are the tools that have been utilised to implement this project

- 1. Front End HTML/CSS/Javascript/jQuery
- 2. Backend PHP, MySQL
- 3. Server XAMPP

ER Diagram



Relational Model



The following database ensures maximum utilisation and minimal redundancy.

DDL Commands

CREATING DATABASE 'placement_portal'

CREATING TABLES

```
EX Command Prompt-mysql -urost-p-h127001
Query OK, 1 row affected (0.01 sec)

mysql> CREATE TABLE AdminLogin
-> (
-> (
-> (
-> AdminId INT NOT NULL,
-> PRIVARY KEY (AdminId)
-> );

ERROR 1040 (30000): No database selected
mysql> CREATE TABLE AdminLogin
-> (
-> (
-> AdminId INT NOT NULL,
-> PRIVARY KEY (AdminId)
-> );

Query OK, 0 rows affected (0.05 sec)

mysql> CREATE TABLE CompanyLogin
-> (
-> Privary KEY (AdminId)
-> );

Query OK, 0 rows affected (0.05 sec)

mysql> CREATE TABLE CompanyLogin
-> (
-> Privary KEY (AdminId)
-> );

Query OK, 0 rows affected (0.02 sec)

mysql> CREATE TABLE CompanyLogin
-> (
-> Privary KEY (AdminId)
-> (
-> PRIVARY KEY (CompanyId)
-> (
-> (
-> CompanyId INT NOT NULL,
-> PRIVMRY KEY (CompanyId)
-> (
-> PRIVMRY KEY (Com
```

adminlogin, companylogin and companyprofile

jobdetails, eligibilitycriteria and alumni

studentlogin, studentdetails and studentresume

```
mysql> CREATE TABLE `jobappl` (
    -> `Status` char(1) NOT NULL,
    -> `studentid` int(11) DEFAULT NULL,
    -> `JobId` varchar(10) DEFAULT NULL
    -> ) ENGINE=InnoDB DEFAULT CHARSET=utf8;
Query OK, 0 rows affected, 2 warnings (0.08 sec)

mysql> CREATE TABLE `notifications` (
    -> `id` int(10) UNSIGNED NOT NULL,
    -> `companyName` varchar(100) NOT NULL,
    -> `unread` tinyint(1) NOT NULL DEFAULT 1,
    -> `time` datetime DEFAULT current_timestamp(),
    -> `AdminId` varchar(10) NOT NULL DEFAULT 'admin'
    -> ) ENGINE=InnoDB DEFAULT CHARSET=utf8;
Query OK, 0 rows affected, 3 warnings (0.19 sec)

mysql>
```

jobapply and notifications

ALTERING TABLES

Modifying AdminId from int to varchar

```
mysql> alter table studentresume add (Department varchar(255));
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> alter table studentresume add (GradYear int(4));
Query OK, 0 rows affected, 1 warning (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 1
```

Adding column Department to the studentresume table

```
+----+
| Null | Key | Default | Extra |
                         | Type
 Field
                                                                                     NULL
NULL
NULL
NULL
NULL
                              varchar(255)
varchar(255)
                                                          8 8 8 8 8 8 8
 DoB
EmailId
MobileNu
UG
                             date
varchar(255)
decimal(10,0)
varchar(255)
                                                                          NULL PRI NULL
ysql> alter table studentdetails drop Department;
uery OK, 0 rows affected (0.09 sec)
ecords: 0 Duplicates: 0 Warnings: 0
ysql> alter table studentdetails add College varchar(255);
uery ΟΚ, θ rows affected (θ.05 sec)
ecords: θ Duplicates: θ Warnings: θ
ysql> desc studentdetails;
                         | Type
 Field
                                                         | Null | Key | Default | Extra |
                            varchar(255) | NO
varchar(255) | NO
date | NO
varchar(255) | NO
decimal(10,0) | NO
varchar(255) | NO
int | NO
varchar(255) | YES
                                                                                     NULL
NULL
NULL
NULL
NULL
DoB
EmailId
MobileNumbe
 StudentId
                                                                          PRI
                                                                                     NULL
 College
  rows in set (0.01 sec)
ysql>
```

Dropping Department and adding College to the table studentdetails

DML Commands

INSERT/UPDATE/SELECT/DELETE

INSERTIONS

Inserting admin username/password via command line interface

The rest of the insertions are done through the User Interface in the application.

```
$stmt = Database::$conn->prepare("INSERT INTO jobdetails
        (CompanyId, JobId, JobDesc, ApplDeadline, Start, Mode, Salary, City, State, Vacancies)
           VALUES (?,?,?,?,?,?,?,?)");
       $stmt->bind_param("ssssssssss",$cid,$jid,$desc,$ad,$start,$mode,$salary,$city, $state,$vac);
        $res= $stmt->execute();
        if(!$res)
            echo("Error: ".$stmt->error);
        else
            echo "<script>alert('Job upload success')</script>";
$stmt = Database::$conn->prepare("INSERT INTO eligibilitycriteria")
        (JobId, cgpa, mark12, mark10, department, gradyear)
       $stmt->bind_param("ssssss",$jid,$gpa,$mark12,$mark10,$chk,$gradyear);
        $res= $stmt->execute();
        if(!$res)
            echo("Error: ".$stmt->error);
            echo "<script>alert('Criteria upload success')</script>";
            echo "<script>location.replace('../dashboardpage/mainindex.php');</script>";
```

sample screenshot of how the insert commands are executed in PHP

UPDATIONS

Updations are performed through PHP and Stored Procedures

Sample screenshot showing updation through PHP

SELECTIONS

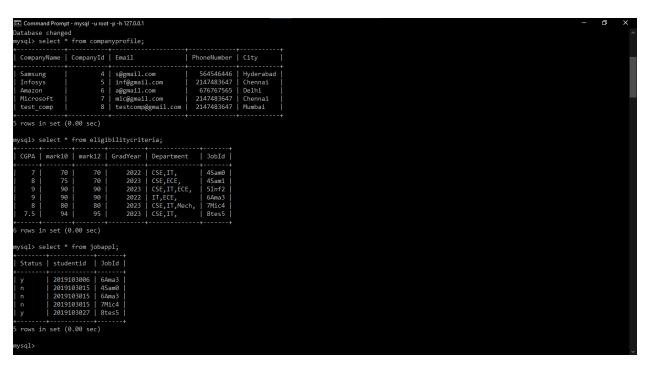
Select queries are executed via PHP to display details from the database.

```
    $\text{?php}
    $\sql = "SELECT * FROM jobappl inner join jobdetails on jobappl.JobId = jobdetails.JobId
    where jobdetails.CompanyId ='" . $\section{\text{SESSION['username']} . "' and jobappl.Status='y'";
    $\text{result} = mysqli_query(Database::$\text{conn,}$\text{sql});
    $\text{rowCount} = mysqli_num_rows($\text{result});
    echo($\text{rowCount});
}
```

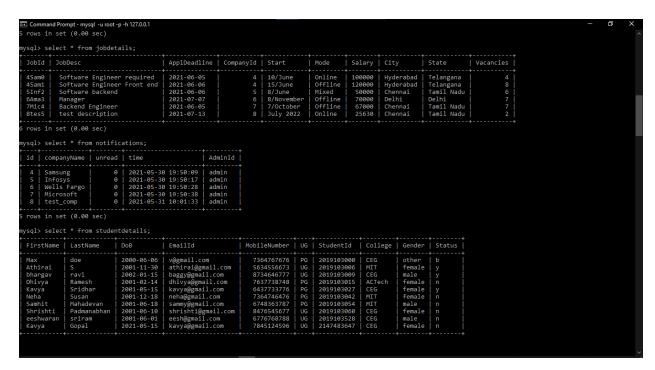
```
    require_once 'dbconnect.php';
    $id=$_SESSION['username'];
    //var_dump($_SESSION);
    if(!mysqli_query(Database::$conn,"SELECT * FROM studentdetails where studentid=$id")){
        echo mysqli_error(Database::$conn);
    }
    $result=mysqli_query(Database::$conn,"SELECT * FROM studentdetails where studentid=$id");
}
```

List of all tables

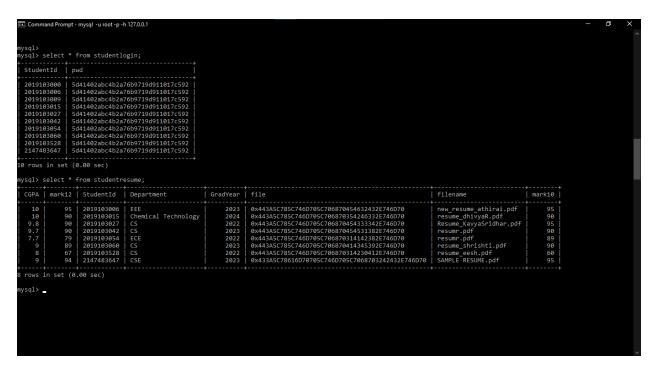
Adminlogin, alumni and companylogin



companyprofile, eligibilitycriteria and jobappl



jobdetails, notifications and studentdetails



Studentresume and studentlogin

SQL Procedures

Stored Procedures are used in the application for updations/insertions

Creating Stored Procedure and calling Stored Procedure for updating Admin Password:

```
mysql> CREATE PROCEDURE AdmPwdChange(IN replpwd VARCHAR(255))
   -> BEGIN
   -> UPDATE adminlogin SET pwd = replpwd WHERE AdminId = 'admin';
   -> COMMIT;
   -> END
   -> //
Query OK, 0 rows affected (0.02 sec)
mysql>
```

Creating Stored Procedure and calling Stored Procedure for inserting notification

```
mysql> CREATE PROCEDURE insert_notif(IN Compname varchar(100))
    -> BEGIN
    -> INSERT INTO notifications(companyName,time) values (Compname,NOW());
    -> END
    -> //
Query OK, 0 rows affected (0.04 sec)
```

```
if(isset($_POST['reg_user']))
{
    $compname=$_POST['name'];
    if(mysqli_query(Database::$conn,"CALL insert_notif('$compname')")){
        $message="Success";
        echo "<script>alert('Request Submitted Successfully. Please Wait for Admin to authorize account');</script>"
        echo "<script>location.replace('../mainpage/index.html');</script>";
    }
    else{
        echo mysqli_error(Database::$conn);
}
```

Transactions

A simple SQL transaction is used in this application when the admin adds a new company to the portal

The transaction ensures that integrity of the data is maintained when the admin views the unread notifications and inserts the data into the table. If at any point in the execution an operation fails, the transaction performs a ROLLBACK, and if no problems are encountered, the transaction performs a COMMIT.

Triggers

Creating trigger 'ALUMNI' to insert student details into the alumni table when they get placed.

Creating trigger 'VACANCY' to decrement the number of vacant jobs when a student gets placed.

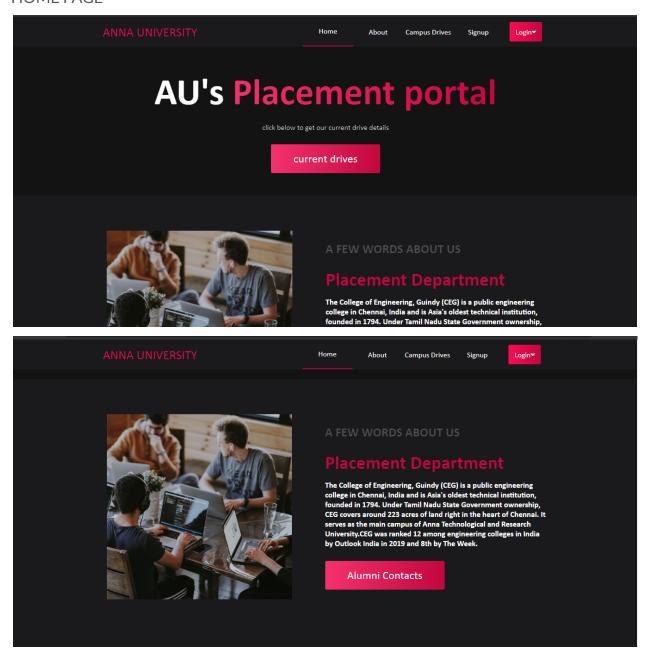
```
mysql> delimiter //
mysql> CREATE TRIGGER `VACANCY` AFTER UPDATE ON `jobappl`
   -> FOR EACH ROW if (NEW.Status = 'y')
   -> THEN
   -> UPDATE `jobdetails` SET `Vacancies`=`Vacancies`-1 WHERE `JobId` = NEW.`JobId`;
   -> end if
   -> //
Query OK, 0 rows affected (0.01 sec)
mysql> __
```

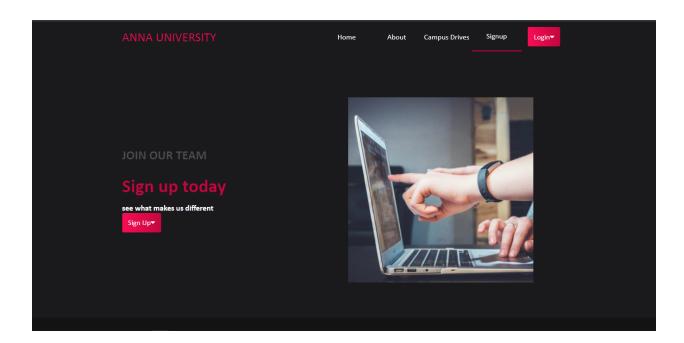
Creating trigger 'BANS_STUDENT' to delete student records from studentresume and jobappl tables when a student is removed by the admin.

```
mysql> delimiter //
mysql> CREATE TRIGGER `BANS_STUDENT` AFTER UPDATE ON `studentdetails`
    -> FOR EACH ROW BEGIN
    -> DELETE FROM `jobappl` WHERE StudentId=OLD.StudentId;
    -> DELETE FROM `studentresume` WHERE StudentId=OLD.StudentId;
    -> END
    -> //
Query OK, 0 rows affected (0.01 sec)
mysql> _
```

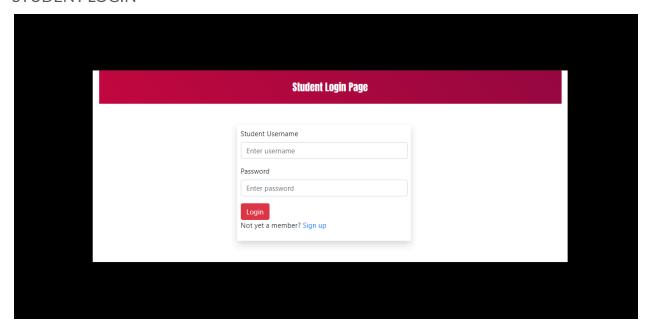
Front-End Screenshots

HOME PAGE

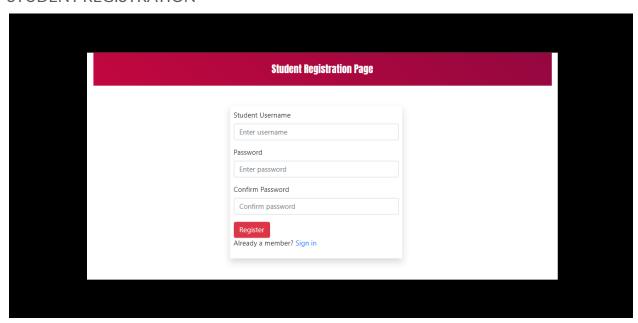




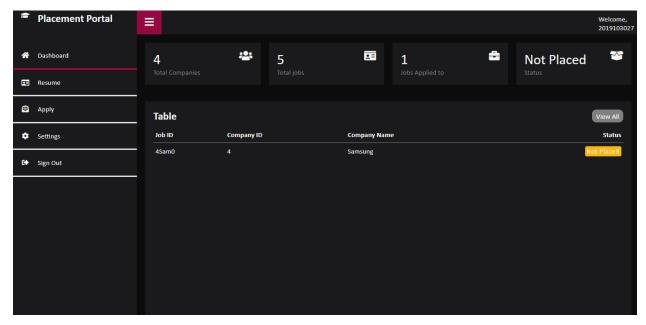
STUDENT LOGIN



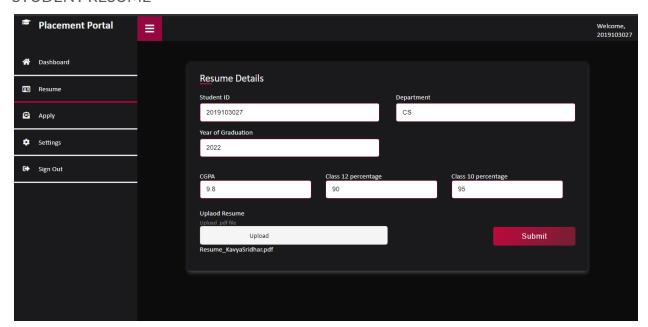
STUDENT REGISTRATION



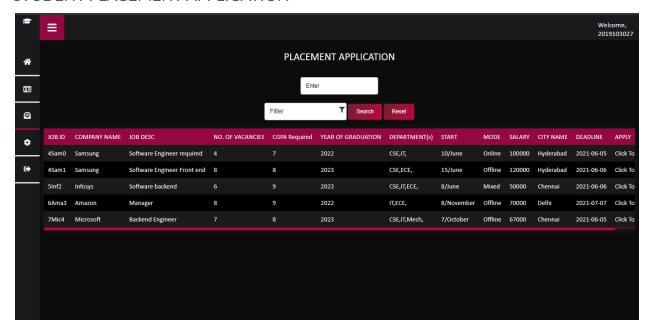
STUDENT DASHBOARD



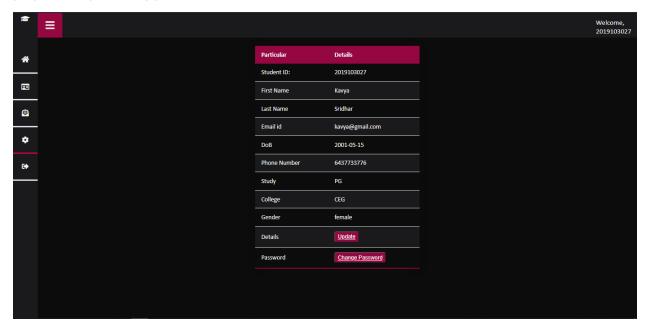
STUDENT RESUME



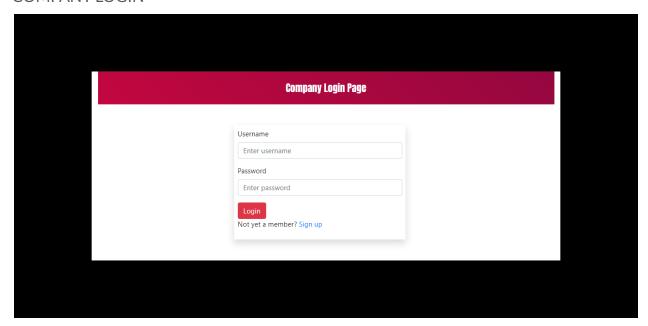
STUDENT PLACEMENT APPLICATION



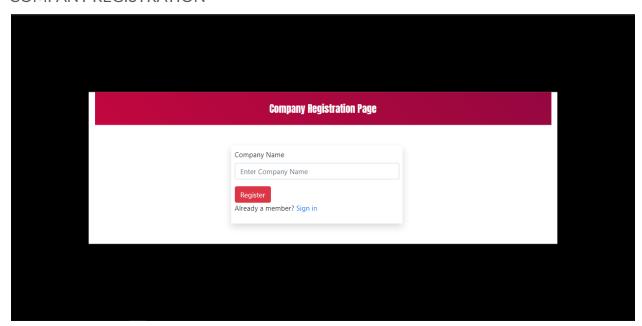
STUDENT SETTINGS



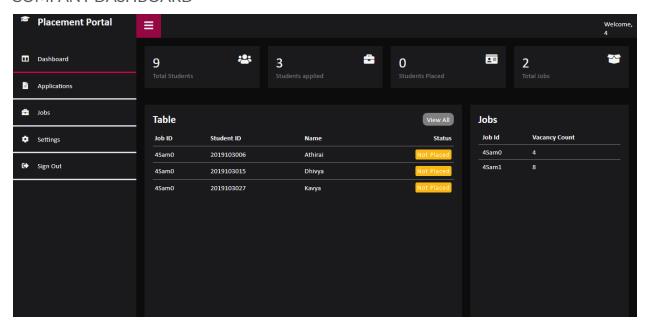
COMPANY LOGIN



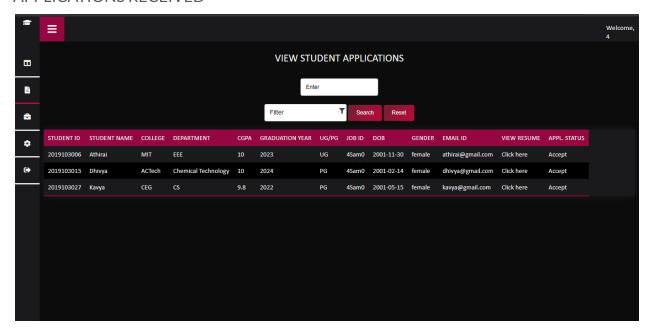
COMPANY REGISTRATION



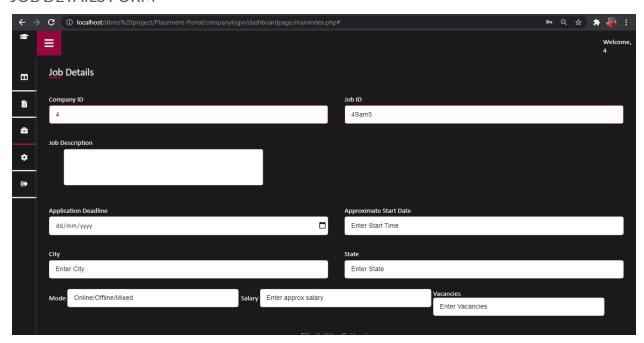
COMPANY DASHBOARD



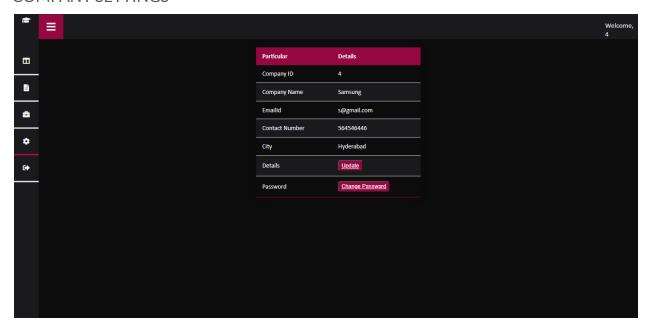
APPLICATIONS RECEIVED



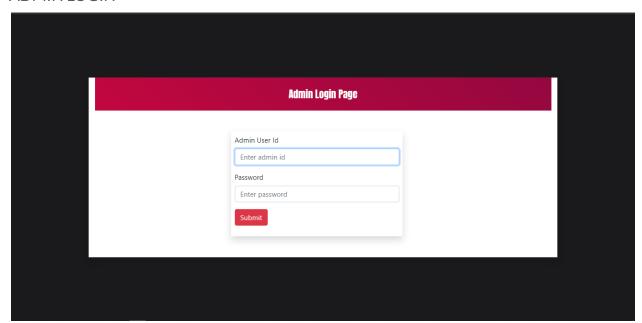
JOB DETAILS FORM



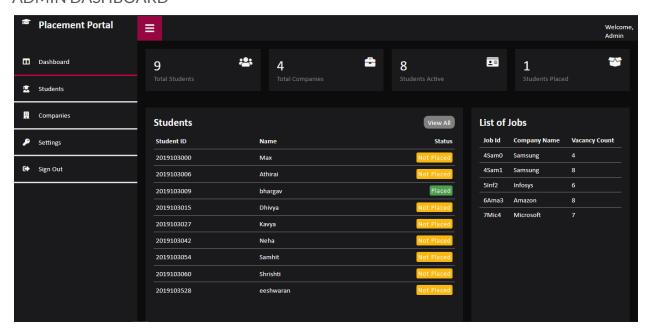
COMPANY SETTINGS



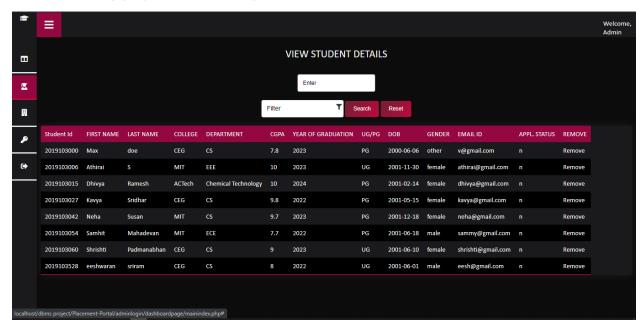
ADMIN LOGIN



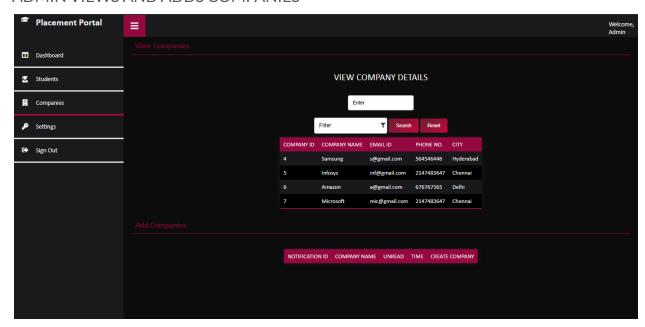
ADMIN DASHBOARD



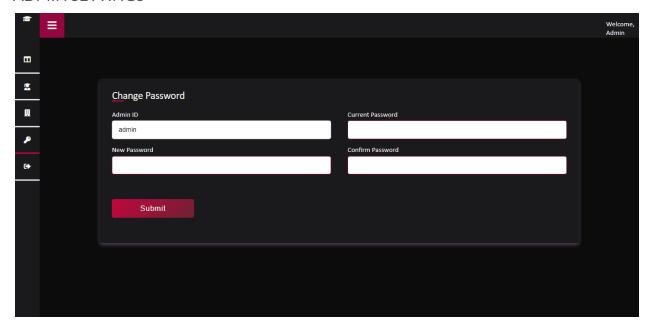
ADMIN VIEWS STUDENT DETAILS



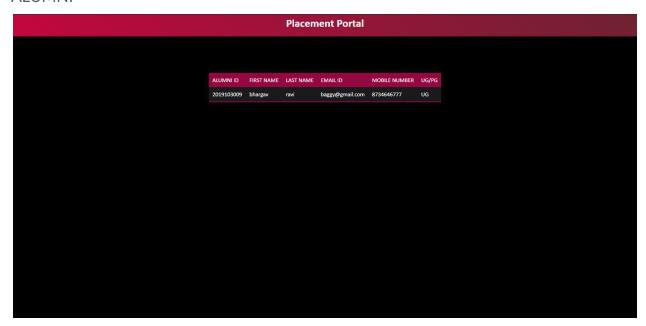
ADMIN VIEWS AND ADDS COMPANIES



ADMIN SETTINGS



ALUMNI



Contributions Conclusion

- Bhagavathi Ravikrishnan, 2019103009
 - Home Page (Front end)
 - o Relational Schema
 - Student/Admin/Company Dashboard(Backend)
 - Student Placement Application Applying for a job (Backend)
 - Student/Company Settings Change Password(Backend + Front end)
 - Company Applications received Accepting (Backend)
 - Admin view student details-remove a student (Backend +Trigger)
- Ishwarya Sriram, 2019103528
 - Student/Admin/Company page(Front end)
 - Student/Admin/Company Dashboard(Backend)
 - Student/Company Registration/Job details Registration (Frontend and Backend)
 - Implementing SQL Procedures updating Admin Password and inserting details into Notifications table
 - Implementing SQL transaction for reading notifications and inserting company
- Kavya Sridhar, 2019103027
 - Created all tables
 - Student/Admin/Companylogin (Backend)
 - Admin's view of student and company details(Backend)
 - Student Placement Application-Viewing & Filtering(Backend)
 - Company Applications received Viewing & Filtering(Backend)

Triggers for adding placed students into alumni tables and for decreasing no. of vacancies for the same. The project encompasses the fundamentals of Database Management Systems and possesses immense potential in terms of its growth.

Scope of the Project

- 1. Data Visualisation Tools to represent the statistics from Alumni
- 2. Machine Learning tools to increase student's prospects/boost applications