

Alumni Website For Educational Institutions

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I. Abstract :

An alumni website is an important part of maintaining a thriving campus community. By maintaining an alumni network, the campus has vast benefits and the alumni will always be linked to the institution. The alumni can also guide students, who connect with them, with their experiences.

This project would provide a web application (to maintain an alumni network) where the alumnus can register and access (login/logout) the website using their account. An admin can create various clubs which the alumni can join. Also, they can follow other alumni, organize events, post job opportunities and attend various events. Current students are also able to follow the alumni and connect with them through the website.

II. Introduction:

Alumni website is java spring based web portal with centralized MYSQL database which contains the information of registered alumnus and students. There are various users for this application. Admin, Alumni and student are the three user roles available. All the roles have common services like Register to the portal, Login to the portal and View the user profile. The Admin has the privilege to create clubs and delete the user profile. The Alumni can view/join any events and clubs, create job postings and can follow other alumni. The students can follow alumni and can join the events. For this application, the frontend is developed using Angular, backend is developed using Java Spring Framework and MYSQL DB is hosted on AWS.

Objective:

The main objective of this Alumni Website is to allow alumni and current students to communicate with each other and share their ideas. To provide information about the institution, college, job opportunities etc. Also to organize and attend various events through clubs which are created by the alumni.

Scope:

Each registered user will have access to the database. They will not have access to sections outside their permissions. For example, Admin will have full access over the database and to delete other user profiles.

Each user's permission is decided by the role they register.

III. Software Requirements Specification

A. Technical Information:

Alumni website is web based application built using Angular for UI and Java Spring framework. Angular is used for its structural framework and is more suitable for dynamic web applications. Also it has inbuilt functionalities to support authentication related UI actions. MYSQL hosted on AWS is used for Database.

Programming Languages : Java Spring Framework for backend, Angular for UI.

Prerequisite : Java sdk 1.8, Apache tomcat server.

Database System : MYSQL database hosted on AWS.

Platform : Windows, Mac OS.

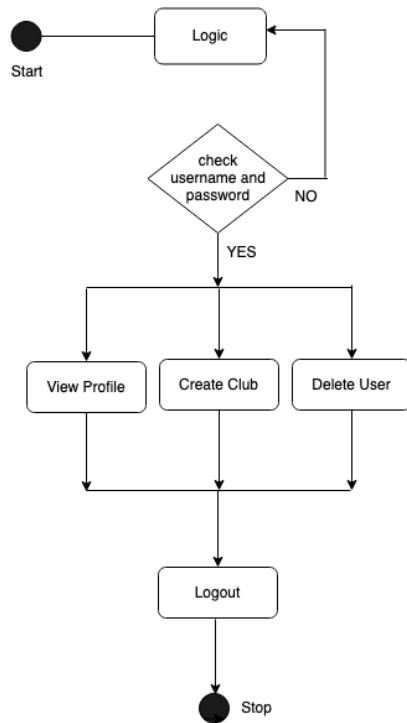
B. Application Design:

Use cases offer a global perspective over functionalities that the application provides. Major functional requirements can be translated to use cases. Below diagrams depict detailed presentation of the use cases that are present in the system.

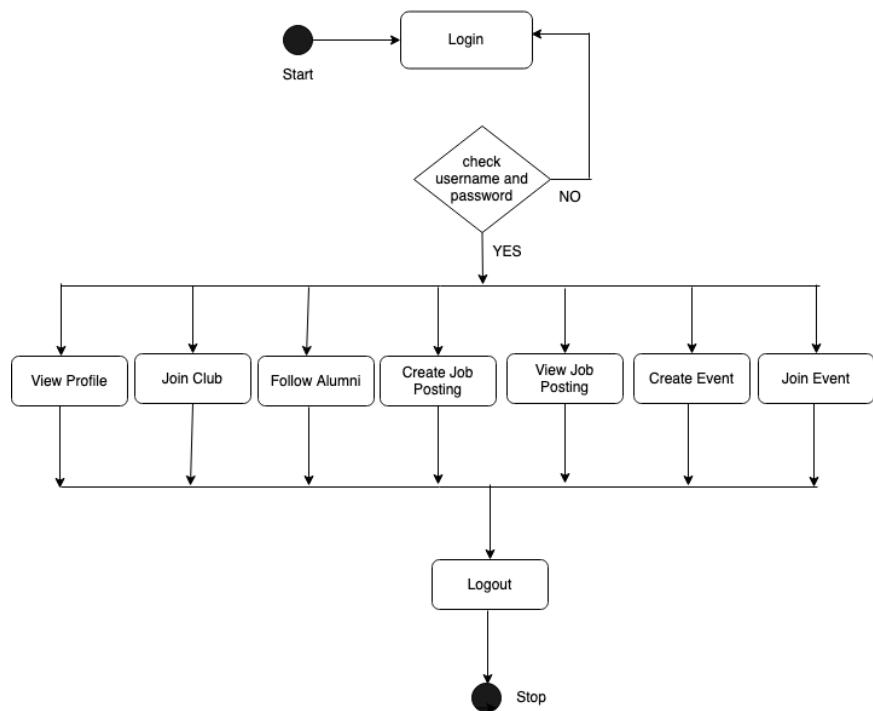
System Actors:

- Admin
- Alumni
- Student

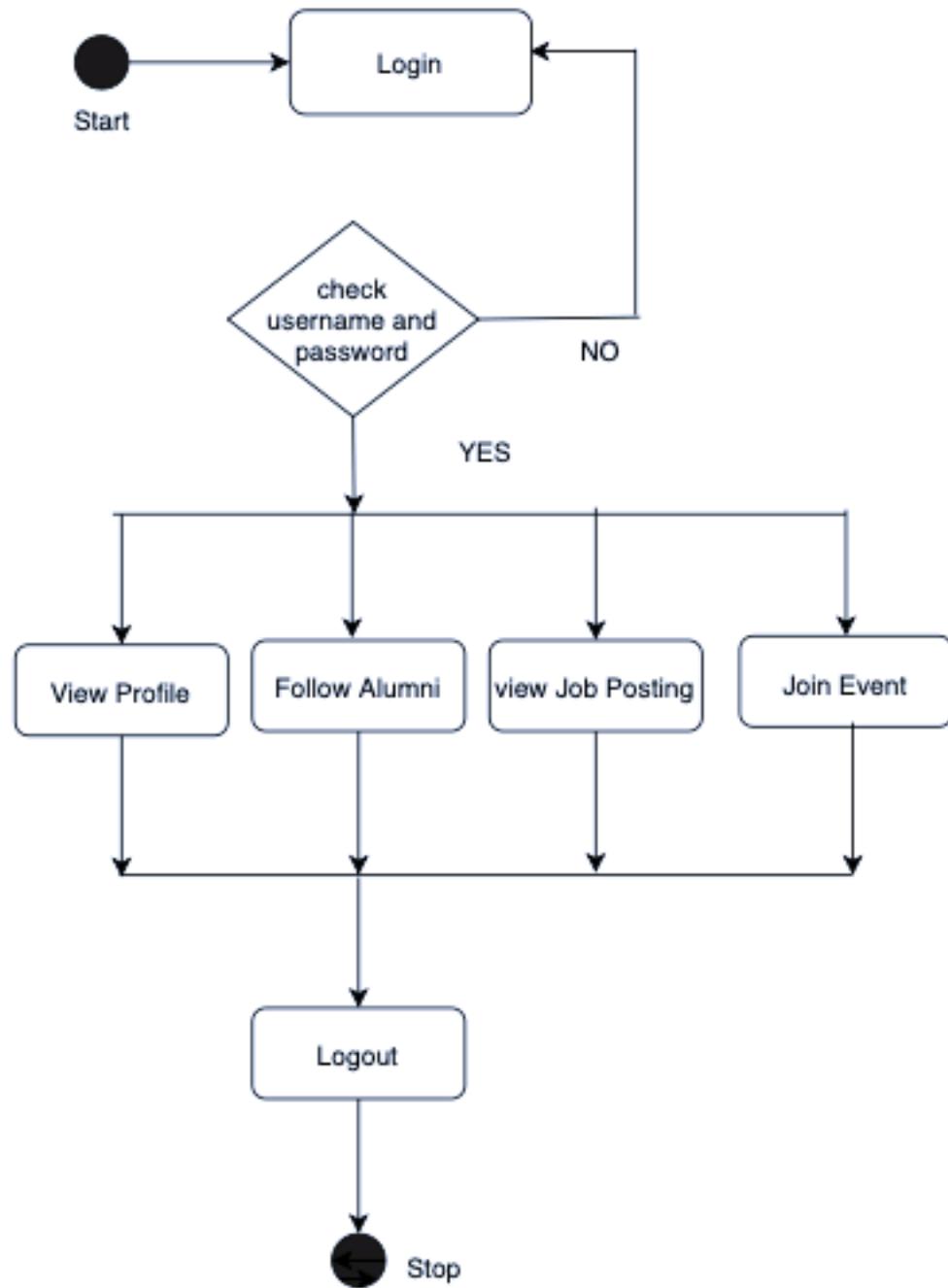
Admin Activity:



Alumni Activity:



Student Activity:

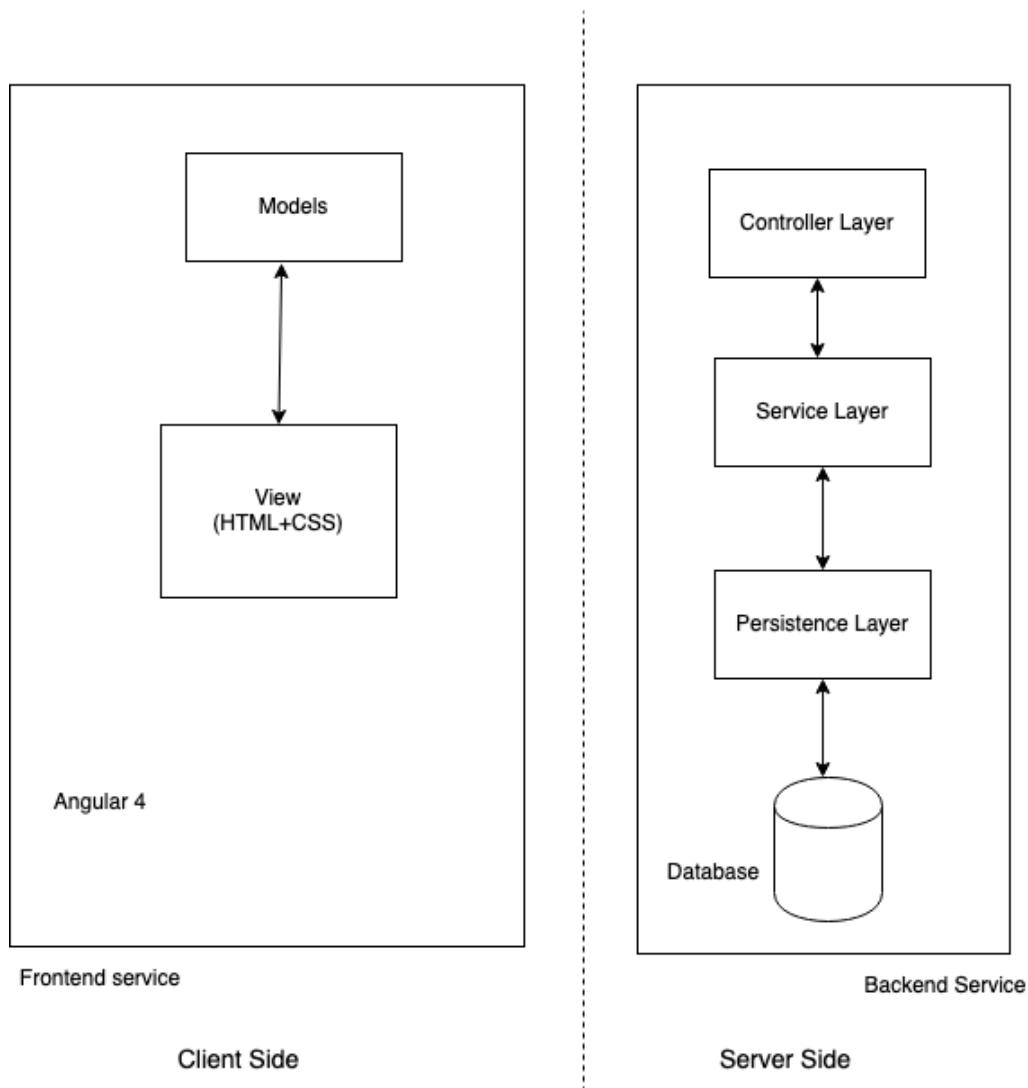


Use Case Diagram:



C. Application Architecture:

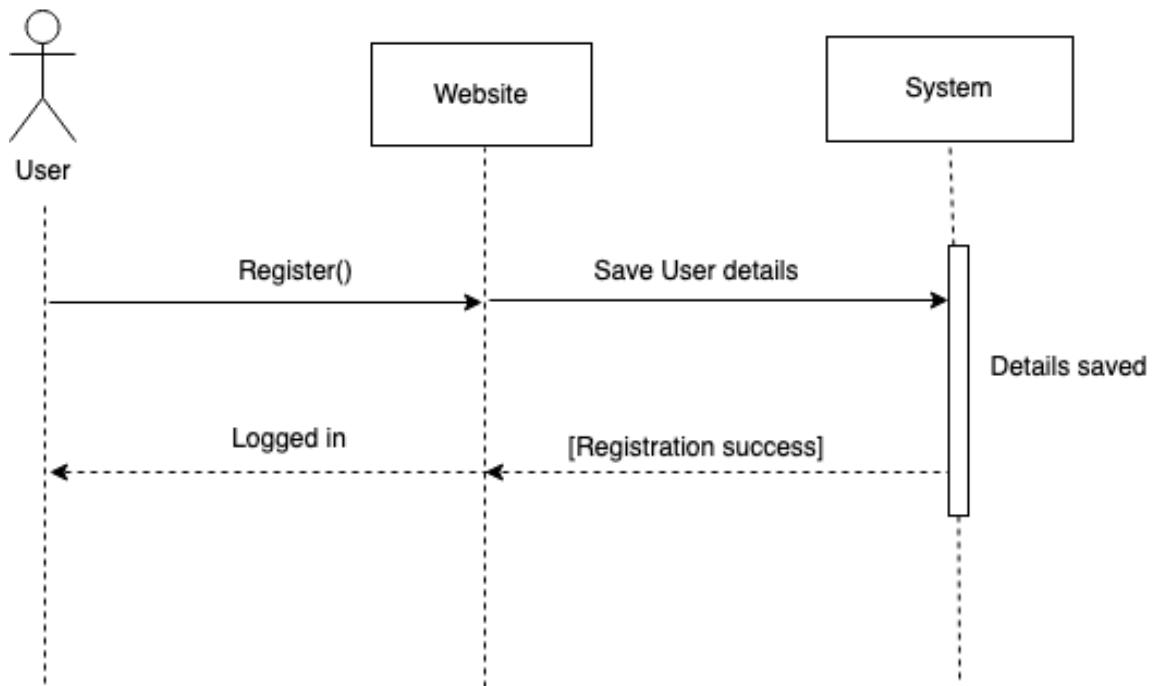
The architecture of this application follows a three-tiered architecture. The application is built using Java Spring Framework, the client side UI of Angular interacts with service layer through standard HTTP protocols. The service layer receives the request from the UI and interacts with the Database through another layer which a Data Model layer to retrieve and store information to the Database. The service layer is responsible to handle user requests, implement the functionalities, interact with Database and return a response to the Client Side UI. Data Model Layer consists of Database schema models and database related functionalities to store and fetch the information from Database layer.



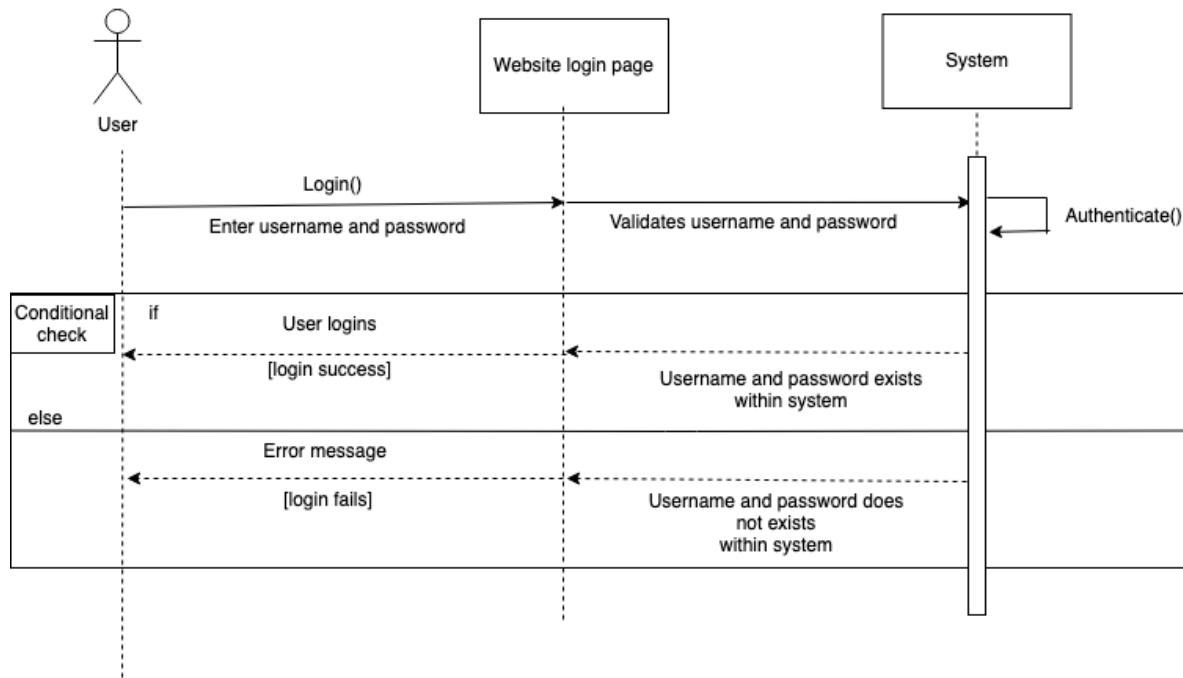
D. Sequence Diagrams:

The various interaction of actors with system can be represented using below sequence diagrams:

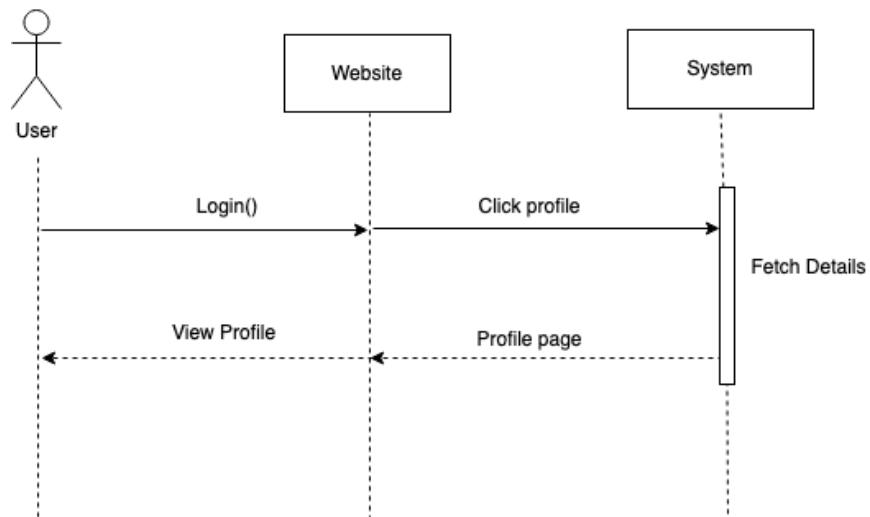
Register Sequence Diagram:



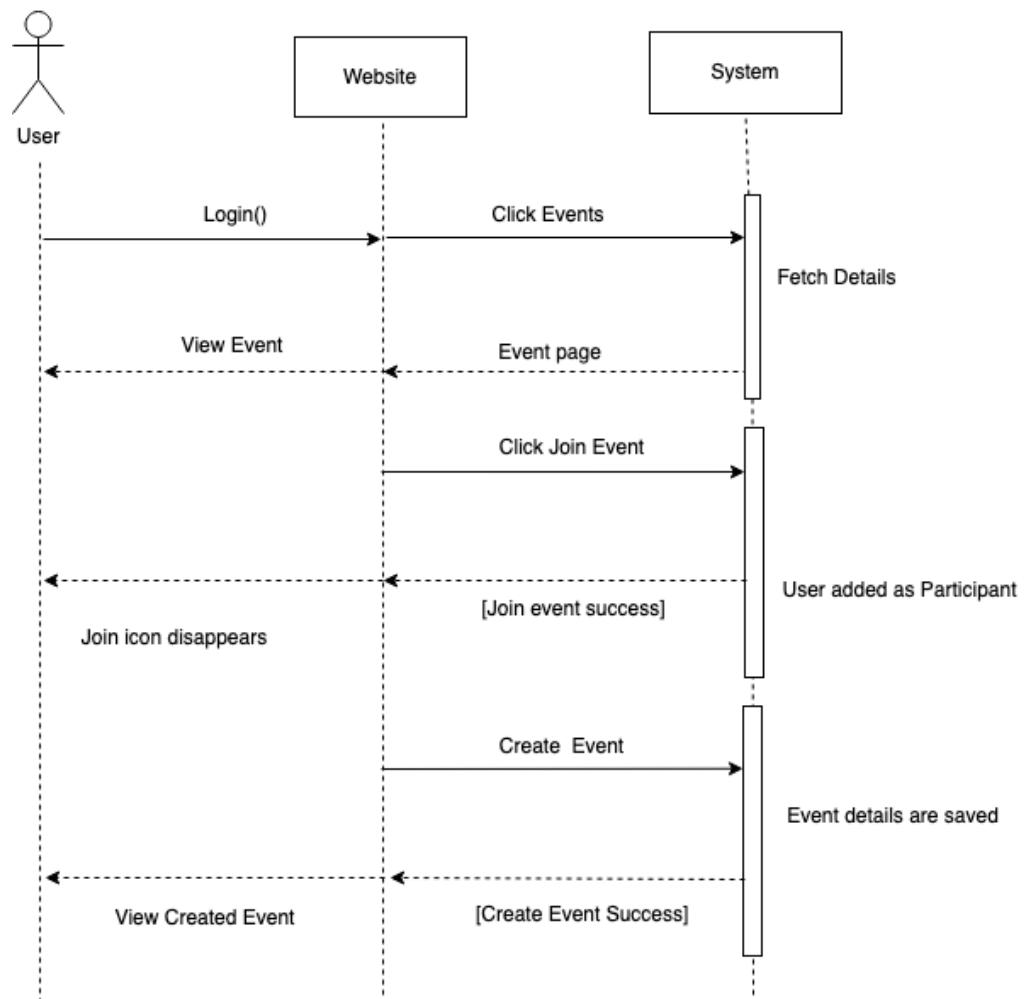
Login Sequence Diagram:



View Profile Sequence Diagram:

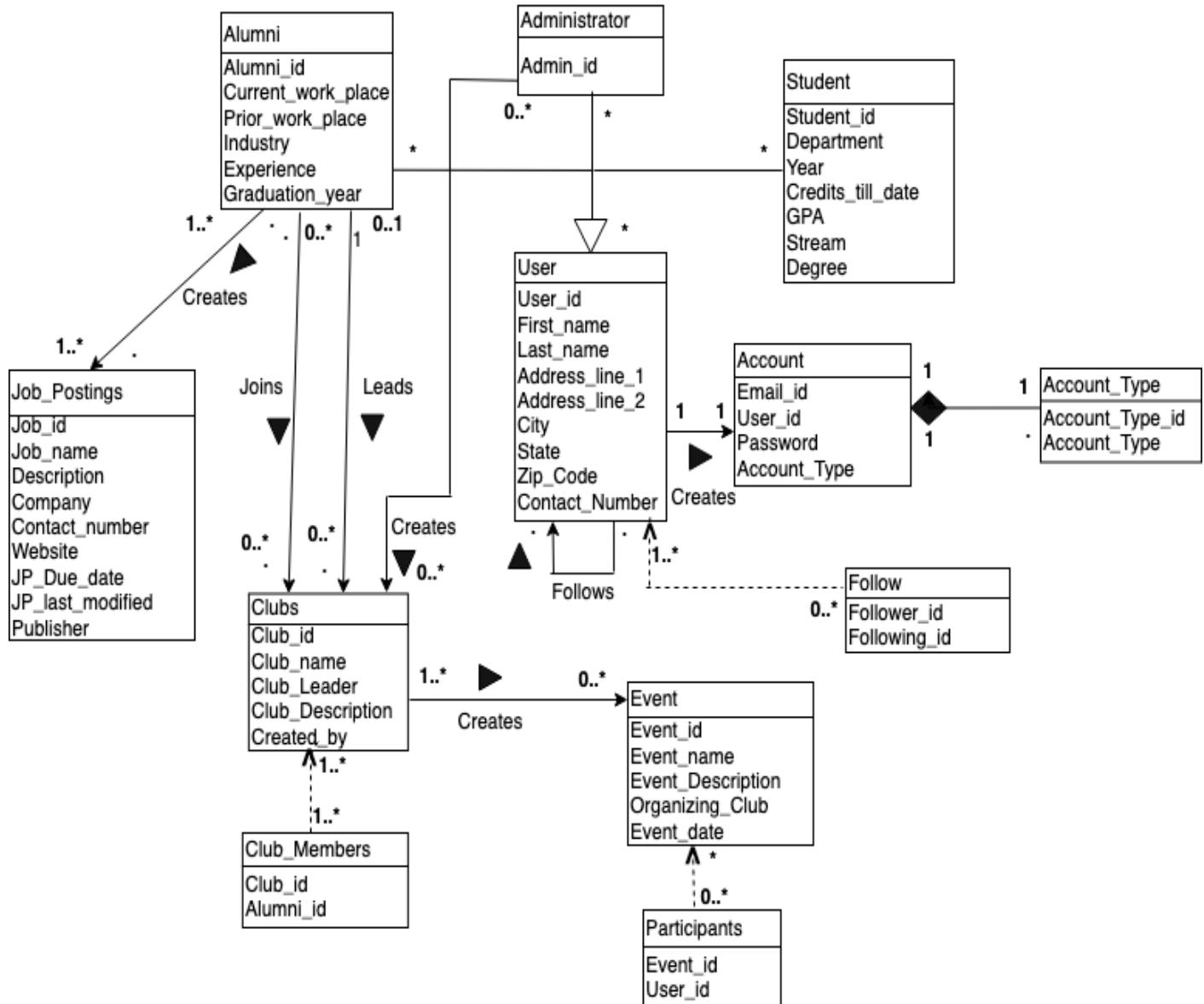


View Join and Create Event Sequence Diagram:

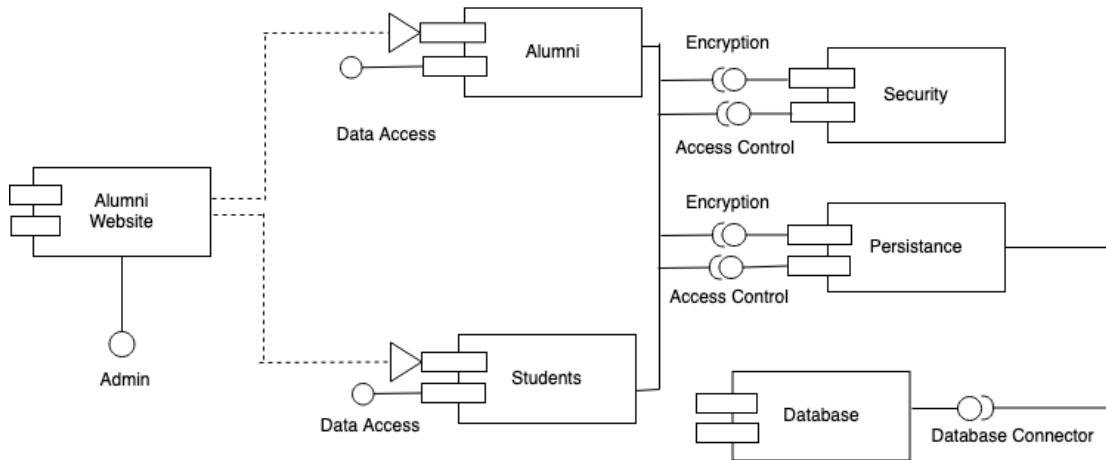


E. Class Diagram:

The class diagram with all the classes and the relationships between them is specified below



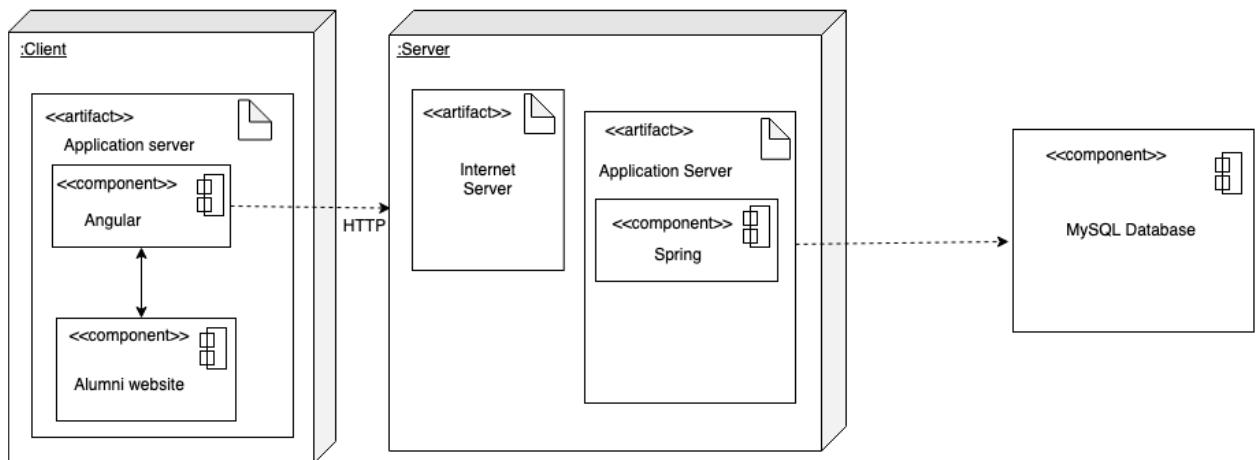
F. Component Diagram:



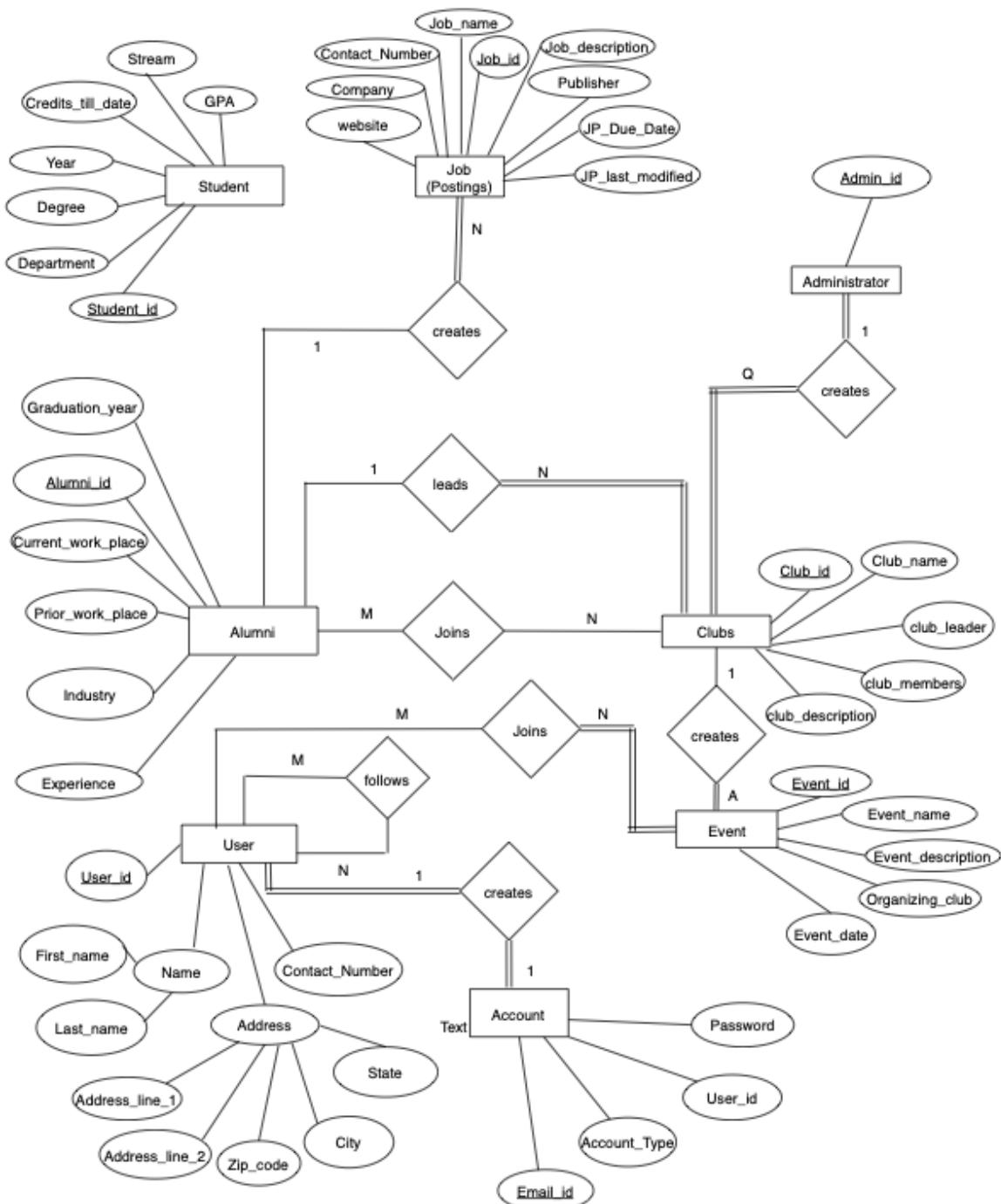
G. Deployment Diagram:

Deployment Diagram: The deployment diagram presents not only the hardware on which the software components of the proposed application runs on, but also the way in which they are interconnected. Even though deployment is not performed on a specific server/host, the proposed deployment structure for our Alumni website project would be as below.

Deployment Diagram

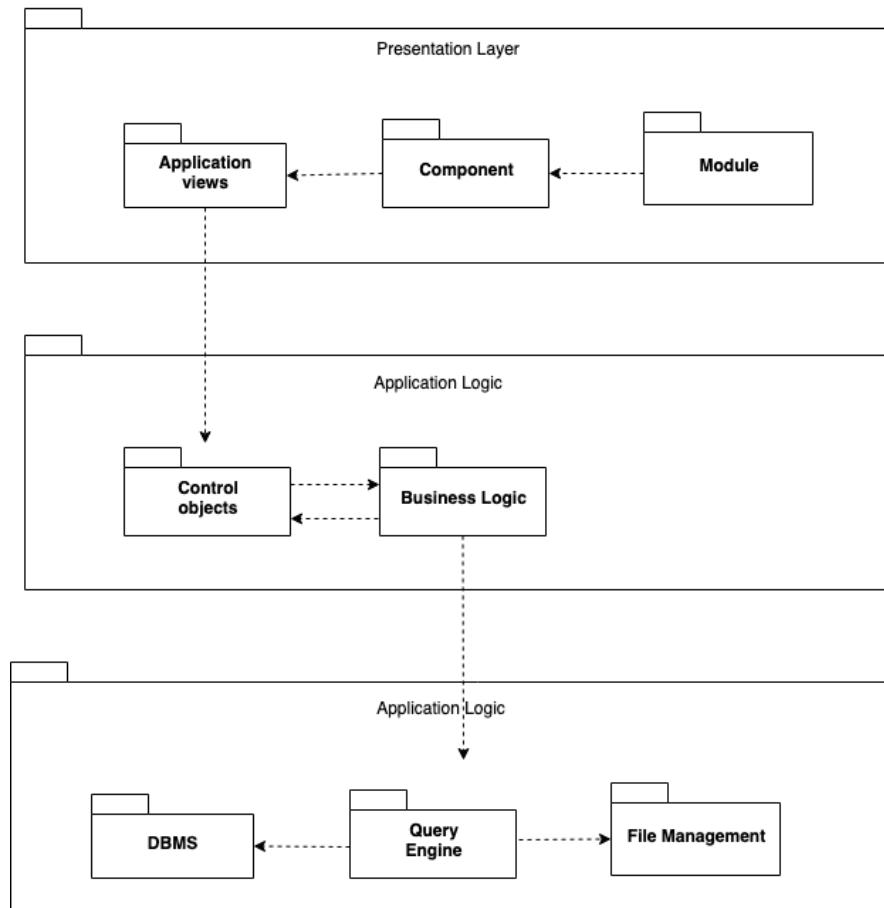


H. Entity Relation Diagram:



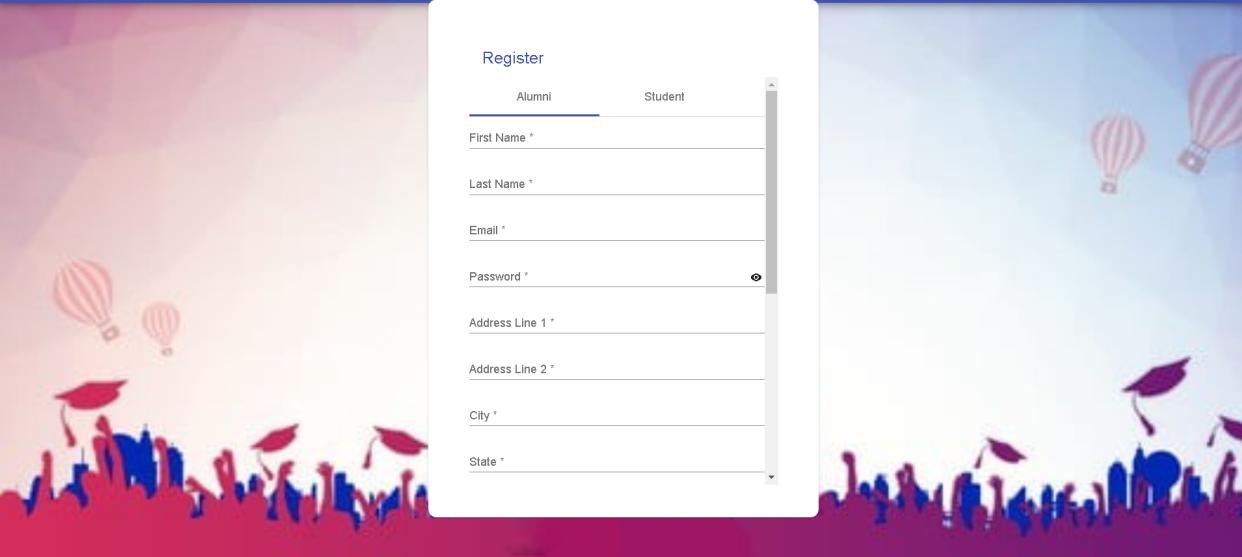
I. Package Diagram:

The package diagram depicts the structure of the code. Since the application is three-tiered architecture, the code structure also has three separate packages which has a Presentation layer, the Application logic layer and the Database Layer. The Presentation package contains the UI and its related APIs. The Application logic contains the main business logic of the alumni application. The Database layer contains the DTO classes and related Database modeling objects.



IV. Working Samples :

Register Screen for Alumni:



Alumni

Log In Register

Register

Alumni Student

First Name *

Last Name *

Email *

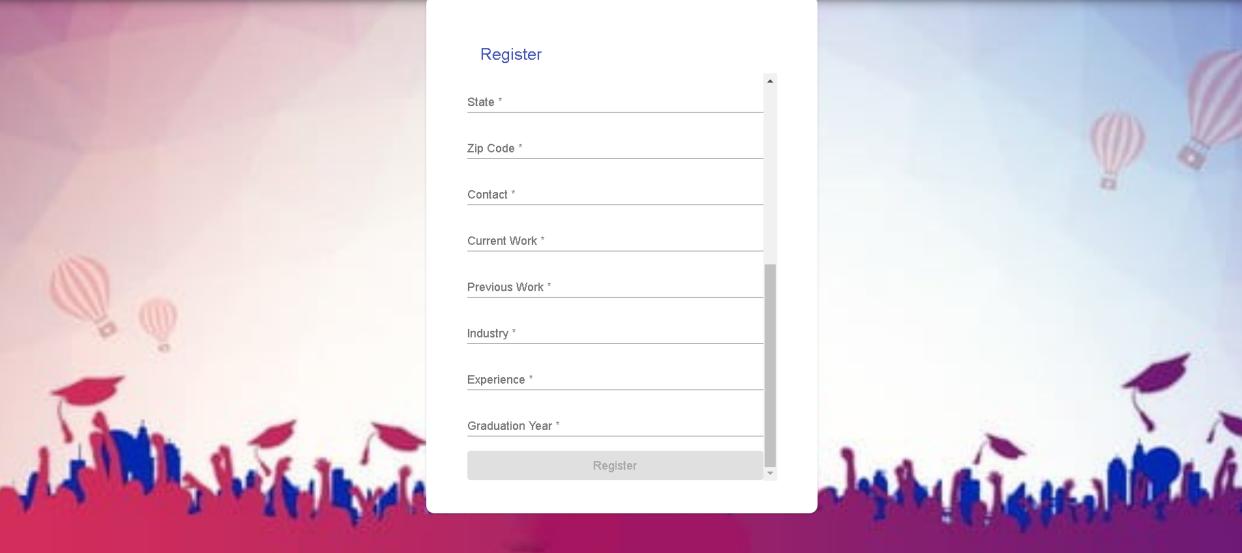
Password *

Address Line 1 *

Address Line 2 *

City *

State *



Alumni

Log In Register

Register

State *

Zip Code *

Contact *

Current Work *

Previous Work *

Industry *

Experience *

Graduation Year *

Register

Register Screen for Student:

Alumni

Log In Register

Register

Alumni Student

First Name *

Last Name *

Email *

Password *

Address Line 1 *

Address Line 2 *

City *

State *

Alumni

Log In Register

Register

Zip Code *

Contact *

Department *

Stream *

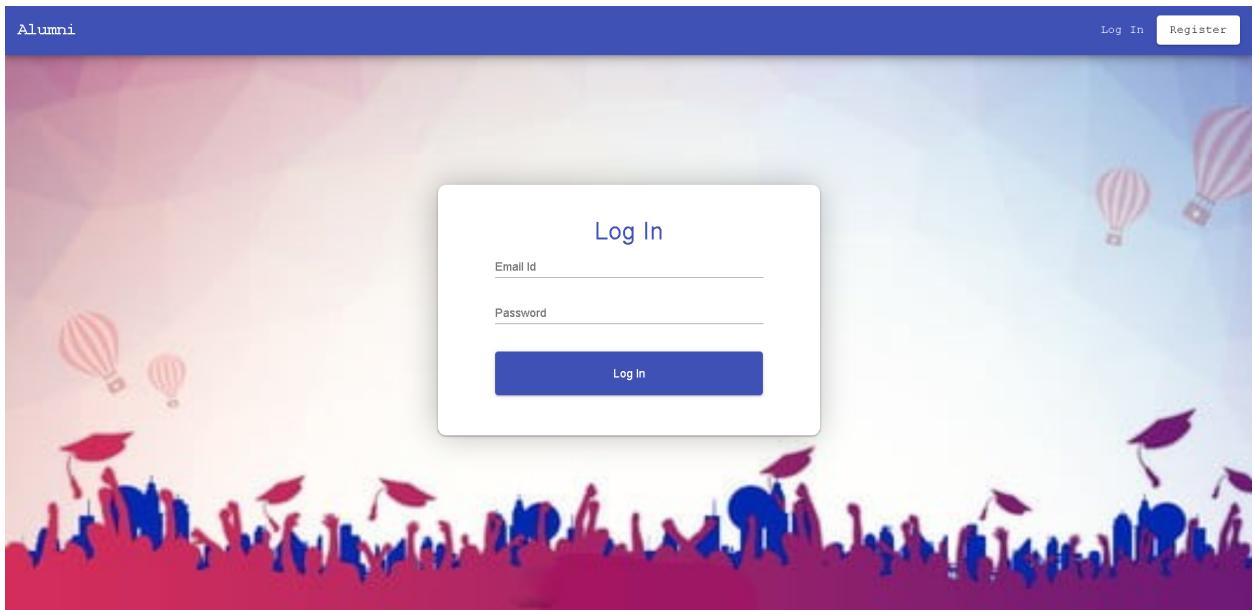
Degree *

GPA *

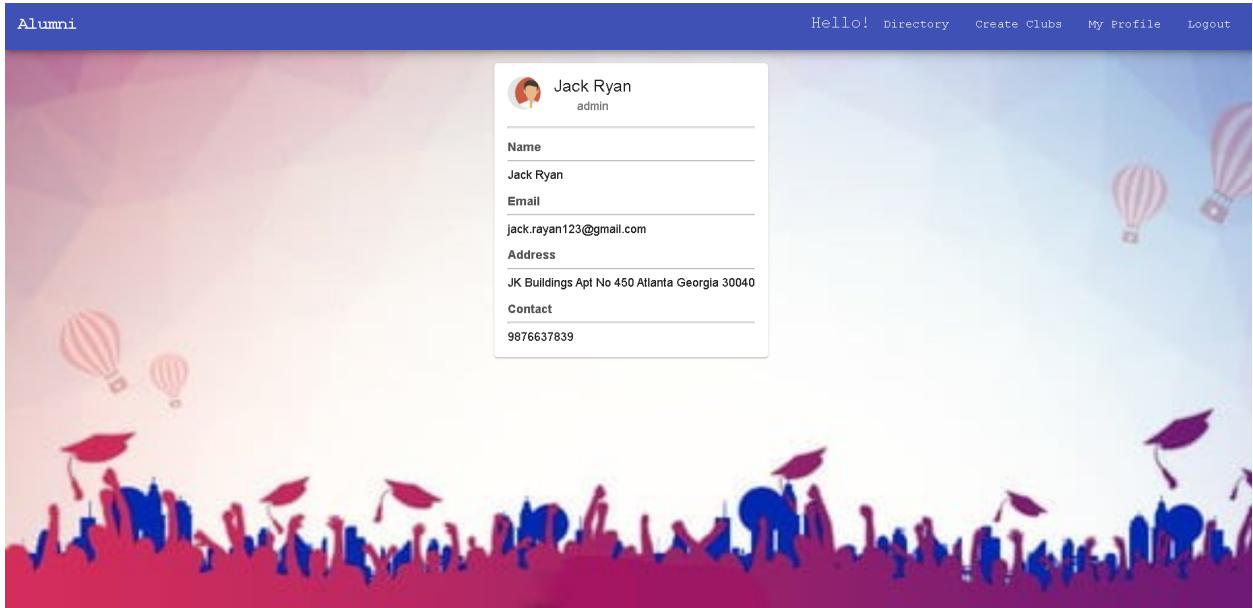
Credits till date *

Current Year *

Login Screen:



Admin Profile:



Admin Directory:

The screenshot shows a table titled "Alumni" with the following data:

| Name | Work Place | Industry | Experience | Grad Year | Email | Delete |
|---------------------|------------|------------------------|------------|-----------|--------------------|--------|
| Jacob Young | Deloitte | Finance | 4 years | 2017 | jyoung@ancc.edu | |
| David Smith | Google | Information Technology | 1 years | 2018 | dsmith56@gmail.com | |
| Donna Paulsen | Google | Information Technology | 10 years | 2010 | donna@gmail.com | |
| Franklin Bondonno | Google | Information Technology | 4 years | 2017 | Franklin@gmail.com | |
| Arna Bontemps | JD.com | Information Technology | 4 years | 2017 | Arna@gmail.com | |
| Lisa Breckenridge | Alibaba | Information Technology | 4 years | 2017 | Lisa@gmail.com | |
| Marnie Breckenridge | Facebook | Information Technology | 4 years | 2017 | Marnie@gmail.com | |
| John Burden | Tencent | Information Technology | 3 years | 2018 | John@gmail.com | |
| Harold Clark | Netflix | Information Technology | 3 years | 2018 | Harold@gmail.com | |
| Jon Dybdahl | PayPal | Information Technology | 3 years | 2018 | Jon@gmail.com | |

Items per page: 10 | 1 - 10 of 68 | < >

Admin Create Club:

The screenshot shows a "Create Clubs" form with the following fields:

- Club Name *
- Club Description *
-

Alumni Profile:

The screenshot shows a user profile for "Allen Breckenridge" on an alumni network website. The profile includes a small profile picture, the name "Allen Breckenridge", and the title "Alumni". Below the name are several input fields containing personal information: Name (Allen Breckenridge), Email (Allen@gmail.com), Address (Merrick Blvd Apt No 261 San Francisco California 94015), Contact (9398039394), Current Work (JPMorgan Chase), Previous Work (Finance), Experience (3 years), and Graduation Year (2018). The background of the page features a colorful illustration of hot air balloons and graduation caps.

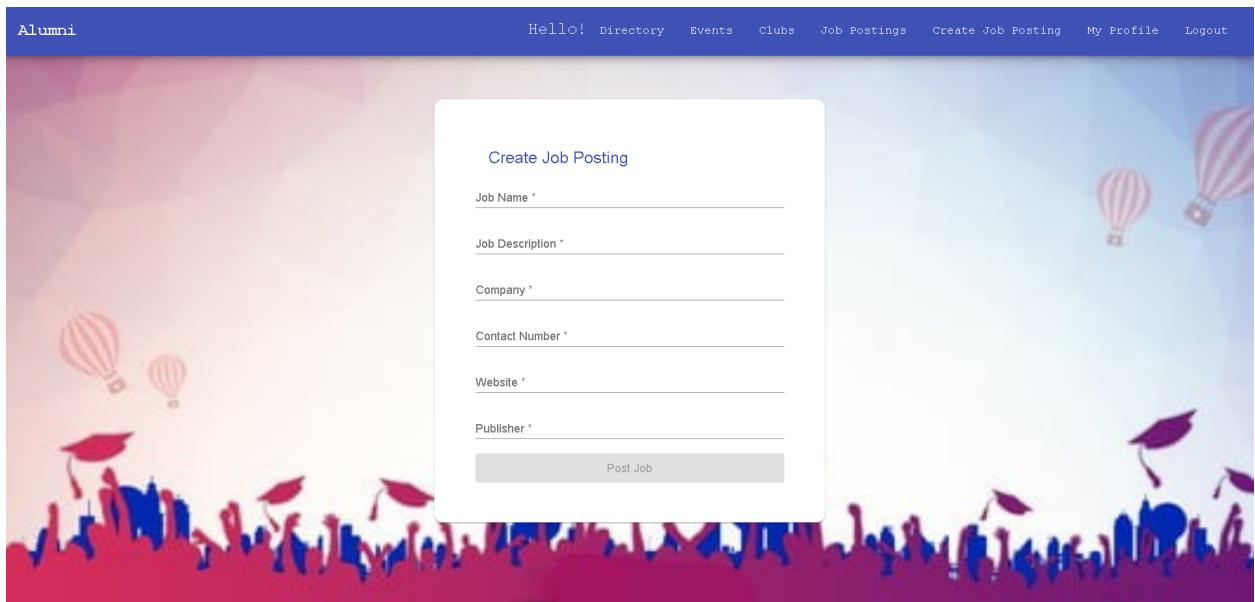
Alumni Directory:

The screenshot displays a table of alumni profiles from the directory. The columns include Name, Work Place, Industry, Experience, Grad Year, Email, and Follow. The profiles listed are:

| Name | Work Place | Industry | Experience | Grad Year | Email | Follow |
|---------------------|------------|------------------------|------------|-----------|--------------------|--------|
| Jacob Young | Deloitte | Finance | 4 years | 2017 | jyoung@ancc.edu | |
| David Smith | Google | Information Technology | 1 years | 2018 | dsmith56@gmail.com | |
| Donna Paulsen | Google | Information Technology | 10 years | 2010 | donna@gmail.com | |
| Franklin Bondonno | Google | Information Technology | 4 years | 2017 | Franklin@gmail.com | |
| Arna Bontemps | JD.com | Information Technology | 4 years | 2017 | Arna@gmail.com | |
| Lisa Breckenridge | Alibaba | Information Technology | 4 years | 2017 | Lisa@gmail.com | |
| Marnie Breckenridge | Facebook | Information Technology | 4 years | 2017 | Marnie@gmail.com | |
| John Burden | Tencent | Information Technology | 3 years | 2018 | John@gmail.com | |
| Harold Clark | Netflix | Information Technology | 3 years | 2018 | Harold@gmail.com | |
| Jon Dybdahl | PayPal | Information Technology | 3 years | 2018 | Jon@gmail.com | |

At the bottom of the table, there are navigation links for "Items per page: 10" and "1 - 10 of 65" along with previous and next page arrows.

Alumni Creating Job Postings:



Alumni's List of created Job Postings:

A screenshot of a web application showing a list of job postings. The page has a light gray header with the text 'Hello! Directory Events Clubs Job Postings Create Job Posting My Profile Logout'. Below the header is a large, semi-transparent background image featuring a graduation-themed illustration with silhouettes of students in caps and gowns, and several hot air balloons in the sky. The main content is a table with a dark blue header row and white data rows. The columns are labeled 'Name', 'Description', 'Company', 'Contact No.', and 'Website'. The data rows list various job positions and their details. At the bottom of the table, there is a navigation bar with 'Items per page: 10' and '1 - 10 of 128' along with previous and next page buttons.

Alumni Clubs:

Alumni Hello! Directory Events Clubs Job Postings Create Job Posting My Profile Logout

| Name | Description | Join |
|---------------------|------------------------------------|----------------------|
| Career Center | club for individual development | Join |
| Academic Excellence | club for improvement in academics | Join |
| Basketball | gaming club | Join |
| Health & Fitness | Club for Health & Wellness | |
| Arts & Culture | Club for Arts & Culture | |
| Diversity | Club for Diversity & Multicultural | |
| Religions | Club for Religions | Join |
| Soccer | Club for Golf players | Join |

Items per page: 10 1 - 8 of 8 < >



Alumni Events:

Alumni Hello! Directory Events Clubs Job Postings Create Job Posting My Profile Logout

| Name | Description | Participate |
|---------------------------------|---|----------------------|
| Exploring Careers | Attend this event hosted by the Career Center to learn more about potential careers and how your current skills are applicable. | |
| Time Management | Attend this eventLearn to effectively organize your time and tasks so you can accomplish your goals | |
| Men's Basketball | Watch and enjoy the basketball match between two college teams | |
| Cardio Dance | This event creatively blends elements of various dance styles for a fun workout that everyone can do | |
| Lunch Time Art | Join this event during the lunch hour to use art as a way to express love and loss | |
| Yoga | Gentle yoga eases you through a series of poses and stretches that leaves you feeling rejuvenated and refreshed! | |
| Cardio Kickboxing | Come let out your inner boxer in this high-energy, choreographed shadow-boxing event | |
| Goal Setting | Identify short and long term goals, and create a specific, realistic, and well-informed action plan for achieving them. | Join |
| Meditation and Restorative Yoga | session involving information on benefits of meditation and to assist the body in releasing stress and tension. | Join |
| Bible Study | Join this event for a time in the Word, worship, and prayer | |

Items per page: 10 1 - 10 of 12 < >



Student Profile:

The screenshot shows a student profile for Alan Nakanishi. At the top, there's a navigation bar with links for Alumni, Hello!, Directory, Events, Job Postings, My Profile, and Logout. The background features a colorful illustration of graduation caps and hot air balloons. The profile card displays the following information:

| | |
|-------------------|--|
| Name | Alan Nakanishi |
| Email | Alan@gmail.com |
| Address | Nagle Ave Apt No 27 Charlotte NC 28288 |
| Contact | 9373389124 |
| Department | College of Arts |
| Stream | Physics |
| Degree | Undergraduate |
| Credits till date | 24 |
| Current Year | 2019 |

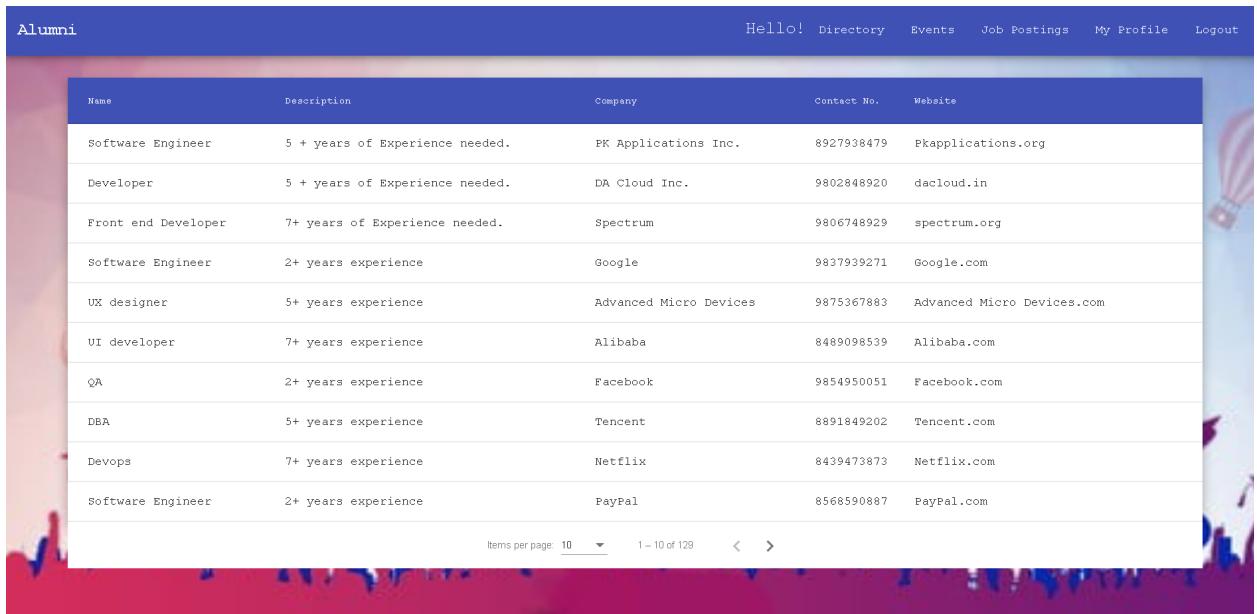
Student Directory:

The screenshot shows a list of alumni from the directory. At the top, there's a navigation bar with links for Alumni, Hello!, Directory, Events, Job Postings, My Profile, and Logout. The background features a colorful illustration of graduation caps and hot air balloons. The table lists the following information for each alumni entry:

| Name | Work Place | Industry | Experience | Grad Year | Email | Follow |
|---------------------|------------|------------------------|------------|-----------|--------------------|--------|
| Jacob Young | Deloitte | Finance | 4 years | 2017 | jyoung@ancc.edu | |
| David Smith | Google | Information Technology | 1 years | 2018 | dsmith56@gmail.com | |
| Donna Paulsen | Google | Information Technology | 10 years | 2010 | donna@gmail.com | |
| Franklin Bondonno | Google | Information Technology | 4 years | 2017 | Franklin@gmail.com | |
| Arna Bontemps | JD.com | Information Technology | 4 years | 2017 | Arna@gmail.com | |
| Lisa Breckenridge | Alibaba | Information Technology | 4 years | 2017 | Lisa@gmail.com | |
| Marnie Breckenridge | Facebook | Information Technology | 4 years | 2017 | Marnie@gmail.com | |
| John Burden | Tencent | Information Technology | 3 years | 2018 | John@gmail.com | |
| Harold Clark | Netflix | Information Technology | 3 years | 2018 | Harold@gmail.com | |
| Jon Dybdahl | PayPal | Information Technology | 3 years | 2018 | Jon@gmail.com | |

At the bottom of the table, there are pagination controls: 'Items per page: 10', '1 - 10 of 66', and arrows for navigating through the pages.

Students Viewing the Job Postings:



| Name | Description | Company | Contact No. | Website |
|---------------------|---------------------------------|------------------------|-------------|----------------------------|
| Software Engineer | 5 + years of Experience needed. | PK Applications Inc. | 8927938479 | Pkapplications.org |
| Developer | 5 + years of Experience needed. | DA Cloud Inc. | 9802848920 | dacloud.in |
| Front end Developer | 7+ years of Experience needed. | Spectrum | 9806748929 | spectrum.org |
| Software Engineer | 2+ years experience | Google | 9837939271 | Google.com |
| UX designer | 5+ years experience | Advanced Micro Devices | 9875367883 | Advanced Micro Devices.com |
| UI developer | 7+ years experience | Alibaba | 8489098539 | Alibaba.com |
| QA | 2+ years experience | Facebook | 9854950051 | Facebook.com |
| DBA | 5+ years experience | Tencent | 8891849202 | Tencent.com |
| Devops | 7+ years experience | Netflix | 8439473873 | Netflix.com |
| Software Engineer | 2+ years experience | PayPal | 8568590887 | PayPal.com |

Student Events:



| Name | Description | Participate |
|---------------------------------|---|----------------------|
| Exploring Careers | Attend this event hosted by the Career Center to learn more about potential careers and how your current skills are applicable. | Join |
| Time Management | Attend this eventLearn to effectively organize your time and tasks so you can accomplish your goals | Join |
| Men's Basketball | Watch and enjoy the basketball match between two college teams | Join |
| Cardio Dance | This event creatively blends elements of various dance styles for a fun workout that everyone can do | Join |
| Lunch Time Art | Join this event during the lunch hour to use art as a way to express love and loss | Join |
| Yoga | Gentle yoga eases you through a series of poses and stretches that leaves you feeling rejuvenated and refreshed! | Join |
| Cardio Kickboxing | Come let out your inner boxer in this high-energy, choreographed shadow-boxing event | Join |
| Goal Setting | Identify short and long term goals, and create a specific, realistic, and well-informed action plan for achieving them. | Join |
| Meditation and Restorative Yoga | session involving information on benefits of meditation and to assist the body in releasing stress and tension. | Join |
| Bible Study | Join this event for a time in the Word, worship, and prayer | Join |

V. Conclusion:

The application developed has met its objectives. The users are classified on roles, events can be created, jobs can be posted, Alumni can connect with each other and also students can connect with alumni and join clubs and also post job experience. System is tested with a small set of data and works fine with the happy path of execution. The components are tested on a small set of data, but the obtained results can be improved further to provide a better UI and performance.