Project Title

MINOR PROJECT - I

Submitted in Partial Fulfilment of the Requirements for the Award of the Degree of

MASTER OF COMPUTER APPLICATIONS

(M.C.A.)

BY

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MCA – 1st SEMESTER

BHARATI VIDYAPEETH'S INSTITUTE OF COMPUTER APPLICATIONS AND MANAGEMENT (BVICAM)

(GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY)

NEW DELHI

January, 2023

CANDIDATE'S DECLARATION

I hereby declare that the work which is being presented in this project work entitled "**Result Analysis**" in partial fulfilment of the requirements for the award of the degree of **Master in Computer Applications at Bharati Vidyapeeth's Institute of Computer Applications and Management (BVICAM), New Delhi** is an authentic record of my own work carried out during the period January 2021 to April 2022 under the supervision and guidance of **Sunil Pratap Singh Sir (Assistant/Associate Professor, BVICAM)**.

I have not submitted the matter embodied in this project work anywhere for the award of any degree or diploma.

Ankit Budhori

Enroll. No. 00811604422

ACKNOWLEDGEMENT

It is my proud privilege to express my profound gratitude to the entire management of Bharati Vidyapeeth's Institute of Computer Applications and Management and teachers of the institute for providing me with the opportunity to avail the excellent facilities and infrastructure. The knowledge and values inculcated have proved to be of immense help at the very start of my career. Special thanks to Hon'ble Founder, Bharati Vidyapeeth, Pune for having provided us an excellent infrastructure at BVICAM.

I am grateful to **Sunil Pratap Singh Sir** (Project Guide, BVICAM, New Delhi) for his astute guidance, constant encouragement and sincere support for this project work.

I feel pride and privileged in expressing my deep sense of gratitude to all those who have helped me in presenting this assignment. I would be failing in my endeavour if I do not place my acknowledgement**.**

Ankit Budhori

Enroll. No. 00811604422

ABSTRACT

In this minor project, we have developed a web-based application for developers to check their skills. The application is developed using React JS paired with Node JS and Express JS at the backend. Mongo DB database is used to manage the database for the application. The development of application is carried out by following the waterfall model of software development. The web-based application allows users to connect and collaborate on projects. The application follows Model-View-Controller (MVC) architecture for providing robust and reliable services. There are mainly 4 modules of the system: extracting data from pdf and formatting the data, populating the Mongo DB database, searching for records, analysing the results. All the modules are tested by following Unit tests testing mechanism and found correct in all respects.

TABLE OF CONTENTS

CHAPTER 4: CONCLUSION AND FUTURE SCOPE

CHAPTER 1: INTRODUCTION

1.1) Brief Introduction

Devconnect is a social networking platform that connects professionals in the software development industry. Similar to LinkedIn, Devconnect allows members to create profiles that showcase their professional experience, education, and skills. Members can connect with other professionals, join groups related to their interests, and follow companies to stay up-to-date with the latest news and job openings. In addition, Devconnect provides a platform for software developers to showcase their work, share knowledge, and collaborate on projects. Devconnect is a valuable resource for professionals in the software development industry who are looking to expand their network, stay current with industry trends, and build their careers.
Devconnect is a platform designed specifically for professionals in the software development industry, including software engineers, developers, designers, project managers, and other related roles. The platform is designed to facilitate professional networking and collaboration, making it easier for members to connect with other professionals in their industry, find new job opportunities, and stay up-to-date with the latest industry news and trends.

In addition to providing standard social networking features, such as the ability to create a profile and connect with other members, Devconnect also offers several unique features tailored to the needs of software developers. For example, members can use Devconnect to showcase their portfolio of work, participate in open-source projects, and share knowledge and expertise through articles, posts, and other content.

Devconnect is free to use and is available worldwide. The platform has a strong focus on privacy and security, with features such as two-factor authentication and the ability to control who can view and access your profile and information. Devconnect is a valuable resource for professionals in the software development industry who are looking to build their network, stay current with industry trends, and advance their careers.

1.2) Team Structure Role

Frontend: Apoorv Chaturvedi

Backend: Ankit Budhori

CHAPTER 2: PROJECT DESCRIPTION

2.1) System Specification

2.1.1) Hardware Requirements

Operating Systems

- Windows 7
- Windows Server 2008 R2
- Windows 8, 8.1
- Windows 10
- Linux
- Unix
- Mac

Hardware Environment

- Processor: x86 or x64
- RAM: 2 GB (minimum), 8 GB (Recommended)
- 2 CPU Cores, 4 Cores (Recommended)
- Disk I/O subsystem applicable to a write-intensive database
- Hard disk: up to 5GB of available space may be required. However, 50 MB free space is required in boot drive even if you are installing in other drive.

Development Environment

- Node JS and NPM version 8.
- Mongo DB

- React
- Express Server

2.1.2) Software Requirements

Following are the software used for the result analysis.

Software used	Description
Operating system	We have chosen Windows operating system for its best support and user-friendliness.
Database	MONGO DB
Languages used	React JS, Node JS, JS, CSS, HTML
IDEs used	Visual Studio Code
Express Server	For hosting the website

2.2) Methodology

2.2.1) Waterfall model

We have used waterfall model for the development of this project.

This model has five phases: Requirements analysis and specification, design, implementation, and unit testing, integration and system testing, and operation and maintenance. The steps always follow in this order and do not overlap. The developer must complete every phase before the next phase begins. This model is named "**Waterfall Model**", because its diagrammatic representation resembles a cascade of waterfalls.

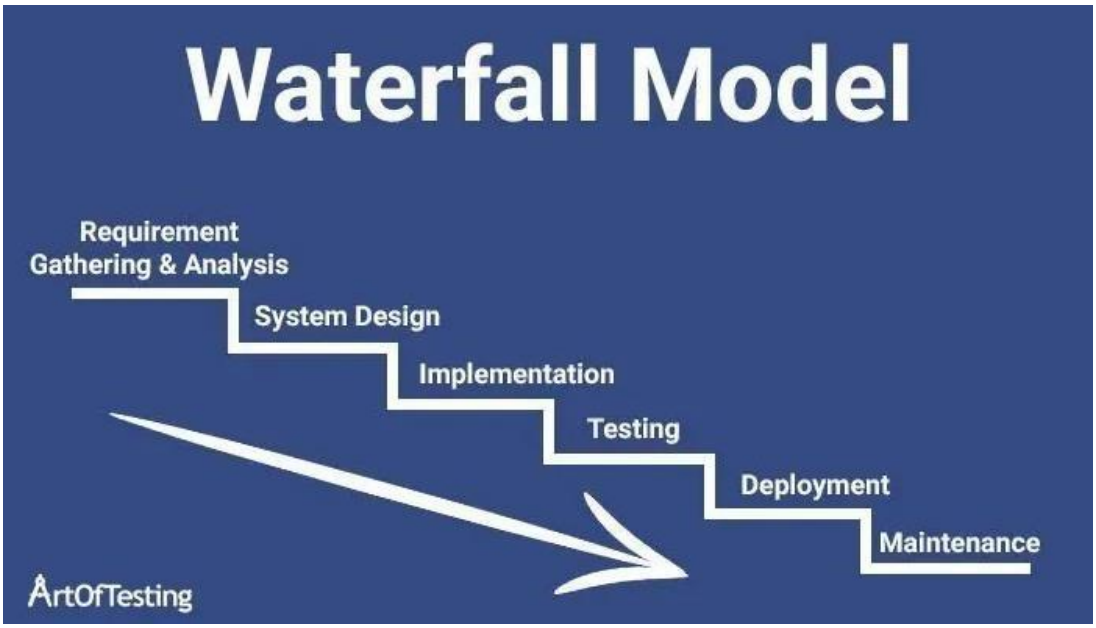
1. **Requirements analysis and specification phase:** The aim of this phase is to understand the exact requirements of the customer and to document them properly. Both the customer and the software developer work together so as to document all the functions, performance, and interfacing requirement of the software. It describes the "what" of the system to be produced and not "how. “In this phase, a large document called **Software Requirement Specification (SRS)** document is created which contained a detailed description of what the system will do in the common language. **2. Design Phase:** This phase aims to transform the requirements gathered in the SRS into a suitable form which permits further coding in a programming language. It defines the overall software architecture together with high level and detailed design. All this work is documented as a Software Design Document (SDD).

2. **Implementation and unit testing:** During this phase, design is implemented. If the SDD is complete, the implementation or coding phase proceeds smoothly, because all the information needed by software developers is contained in the SDD.

During testing, the code is thoroughly examined and modified. Small modules are tested in isolation initially. After that these modules are tested by writing some overhead code to check the interaction between these modules and the flow of intermediate output.

3. Integration and System Testing: This phase is highly crucial as the quality of the end product is determined by the effectiveness of the testing carried out. The better output will lead to satisfied customers, lower maintenance costs, and accurate results. Unit testing determines the efficiency of individual modules. However, in this phase, the modules are tested for their interactions with each other and with the system.

4. Operation and maintenance phase: Maintenance is the task performed by every user once the software has been delivered to the customer, installed, and operational.



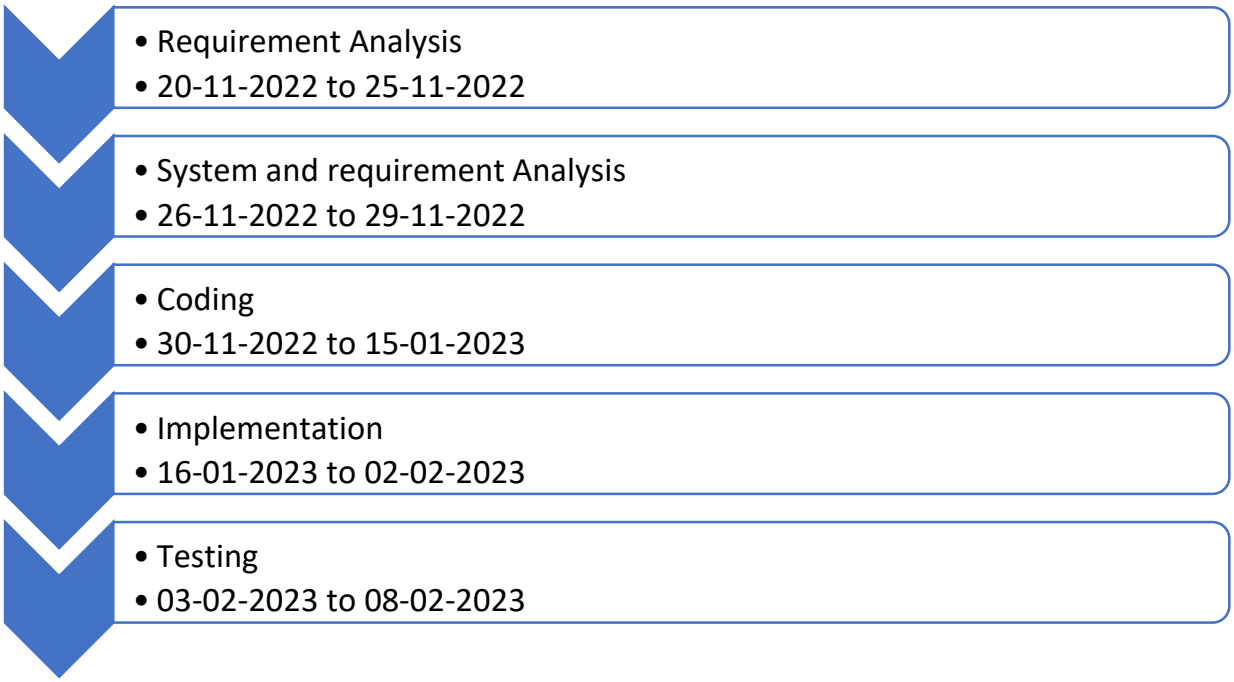
(Source: ArtofTesting)

Why we chose the Waterfall Model?

Waterfall model is most suited when:

- When the requirements are constant and not changed regularly.
- A project is short
- The situation is calm
- Where the tools and technology used is consistent and is not changing When resources are well prepared and are available to use.

2.2.2) Timeline



2.3) Constraints

1. **Time constraint:** The time constraint refers to the project's schedule for completion, including the deadlines for each phase of the project, as well as the date for rollout of the final deliverable.

2. **Scope constraint:** The scope of a project defines its specific goals, deliverables, features, and functions, in addition to the tasks required to complete the project.

3. **Cost constraint:** The cost of the project, often dubbed the project's budget, comprises all of the financial resources needed to complete the project on time, in its predetermined scope. Keep in mind that cost does not just mean money for materials — it encompasses costs for labour, vendors, quality control, and other factors, as well.

2.4) Assumptions & Dependencies

Logical Dependencies:

The application needs EXPRESS server to be hosted. MongoDB is used for dealing with database operations. The system also needs React version 17.0.2 for Frontend.

Resource Dependencies:

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Assumptions:

The application assumes that the data format of the pdf won't change same and remain same for extracting the data from the pdf and handling complex values. If the data format in the pdf changes the backend developers would need to remap the columns and handle new complex values and then only the result would get uploaded on to the website.

2.5) User Characteristics

Database Administrator:

- Creating and maintaining database standards and policies

- Supporting database design, creation, and testing activities
- Managing the database availability and performance, including problem and incident management
- Administering database objects to achieve optimum utilization

Website Frontend/Backend Developer:

- Handling bugs and unexpected exceptions
- Adding new functionalities to the website
- Reflecting new adding functionalities to the frontend

Guest User:

- Guest User should register himself/herself first to enter his/her credentials including Educational Qualifications and Experience.

User:

- User can post his/her Queries and can comment on others posts.
- User gets opportunity to learn from other professionals in his/her specialized field.
- User can like/dislike someone's post and connect with huge network of professionals.

2.6) Modules and their Description

- User Authentication

  User Authentication and Profile Management: This module would handle user registration, login, and profile creation. It would allow users to create and manage their profile, add their professional experience and skills, and set their preferences for notifications, privacy settings, and other features..

 Networking

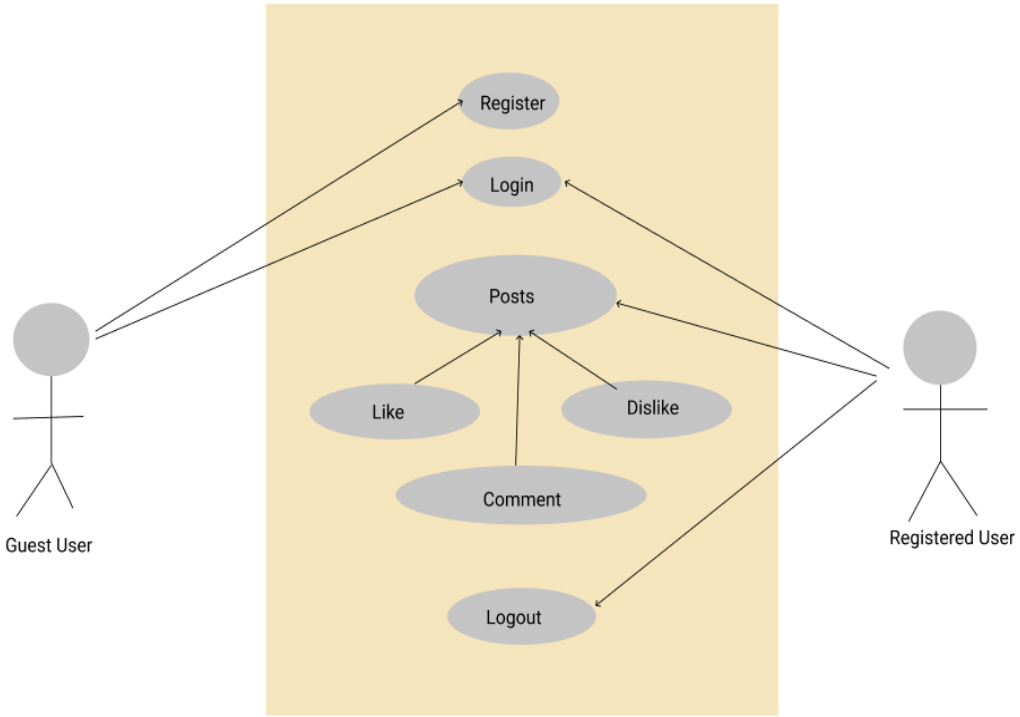
Networking: This module would allow users to connect with other users and build their professional network. It would provide features such as friend requests, search, recommendations, and the ability to follow other users, groups, and companies.

Groups and Forums:

This module would enable users to create and join groups and forums related to specific topics or industries, such as programming languages, software frameworks, or project management methodologies. It would allow users to share knowledge, ask questions, and collaborate on projects with other users who share their interests

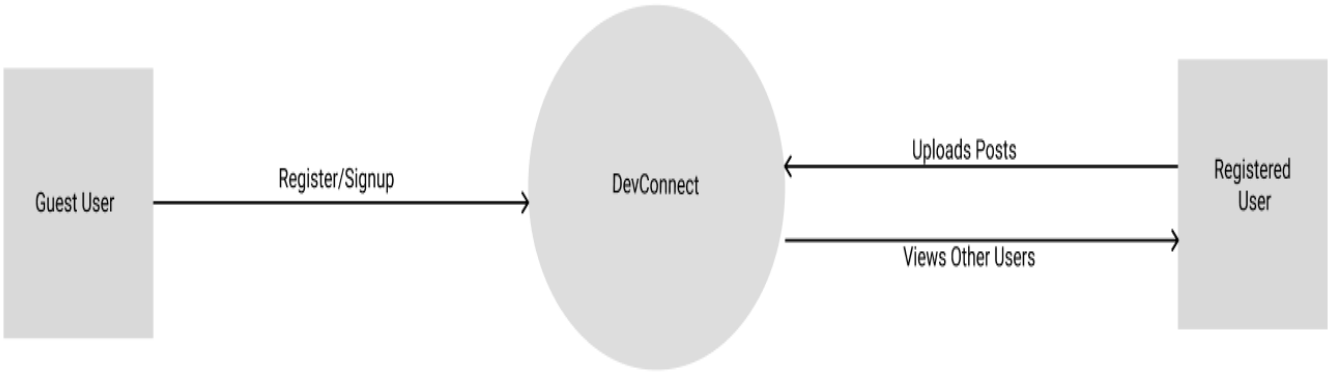
CHAPTER 3: FUNCTIONALITIES

3.1) Use Case Diagram

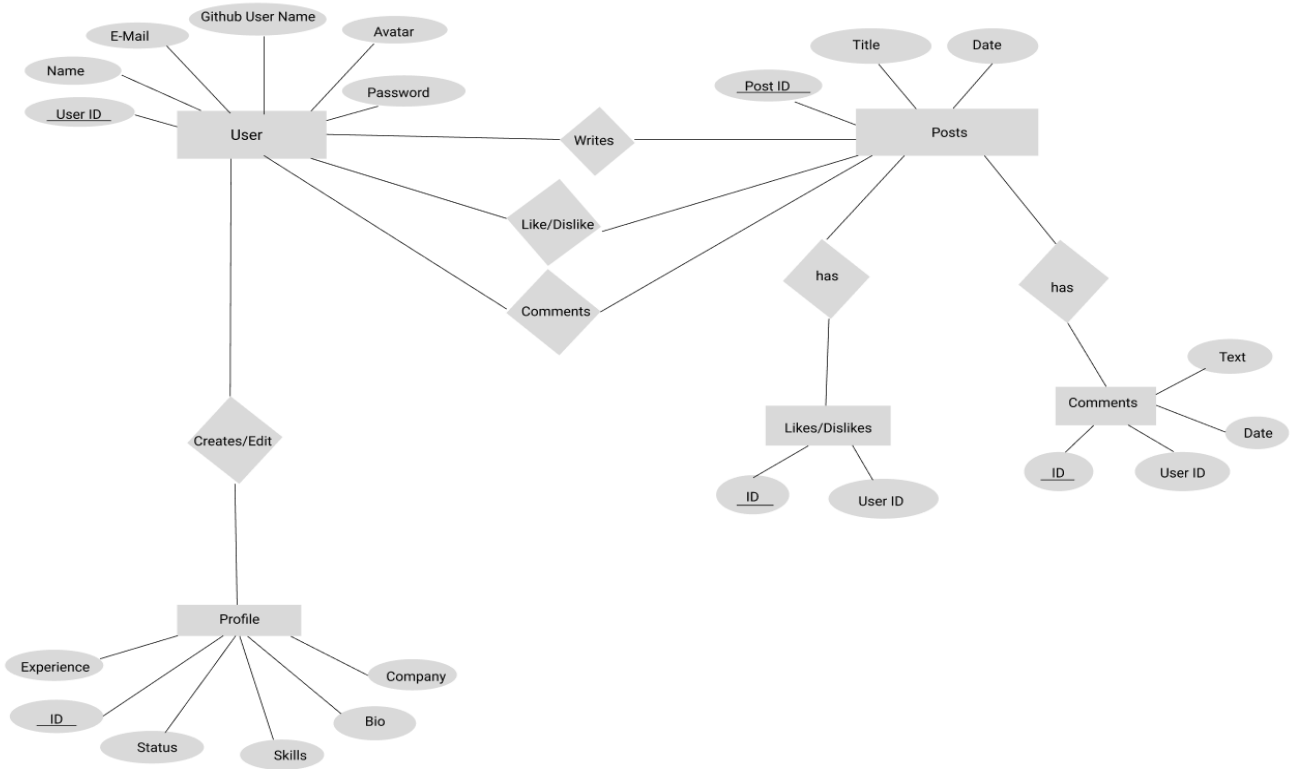


3.2) Data Flow Diagram

Level 0



3.3) Entity-Relationship(E-R) Diagram



Database Table

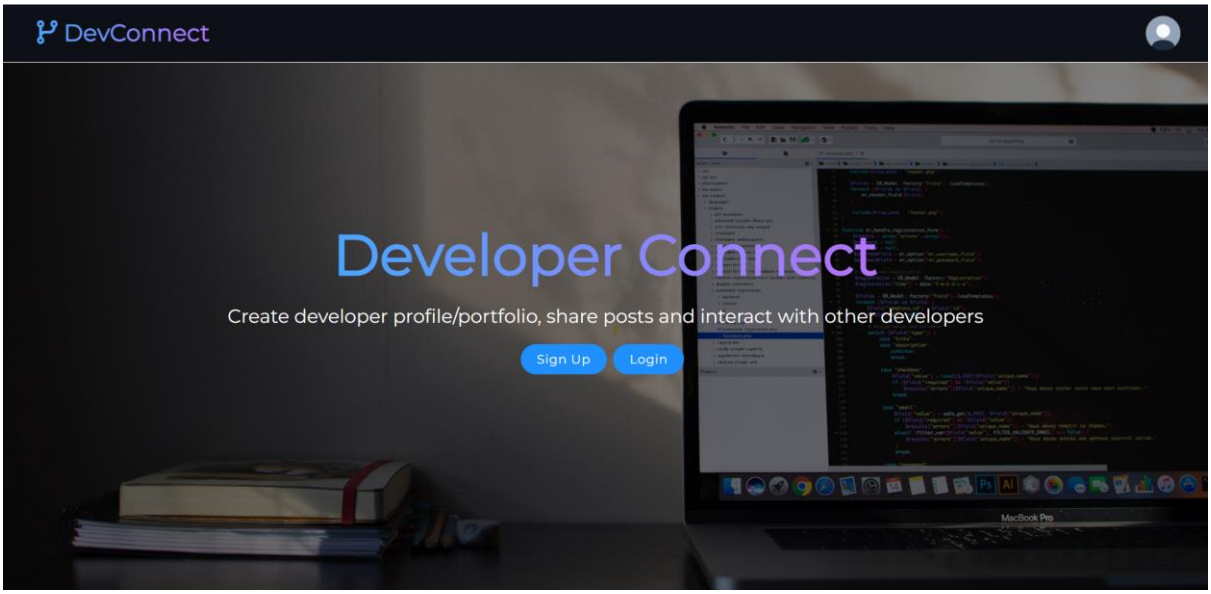
1) User

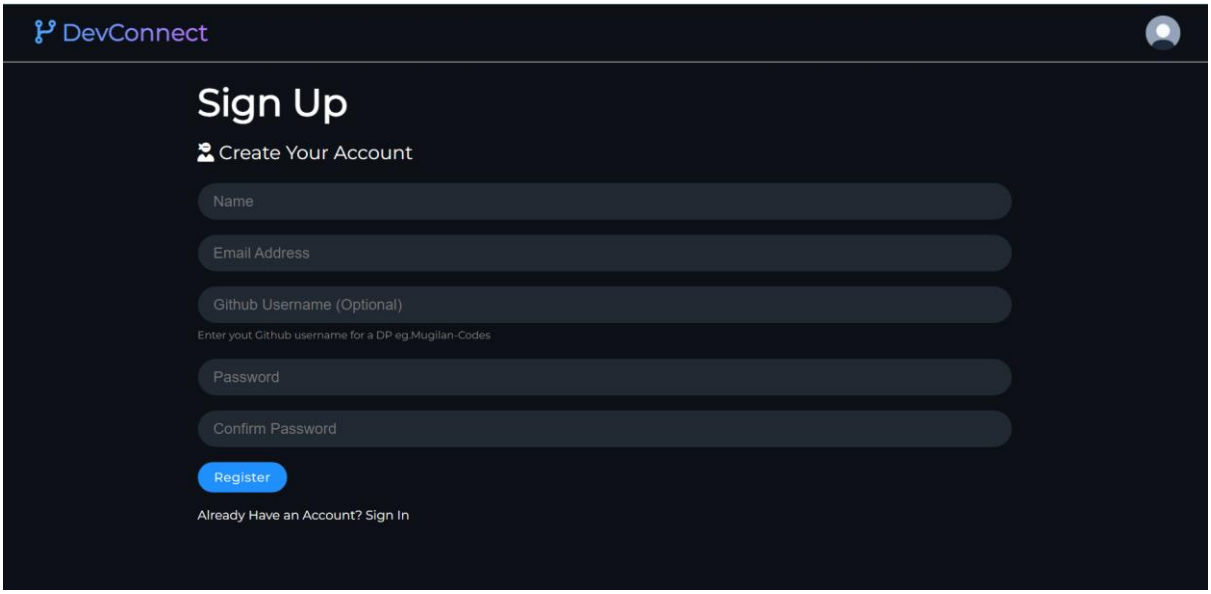
Name of column	Data Type	Constraints	Description
User Id	BIGINT	PRIMARY KEY	User Id
Name	VARCHAR	NOT NULL	Name of the User
E-Mail	VARCHAR	UNIQUE	Email of User
Github User name	VARCHAR		User name from Github
Avatar	VARCHAR		Profile Picture
Password	VARCHAR		Password

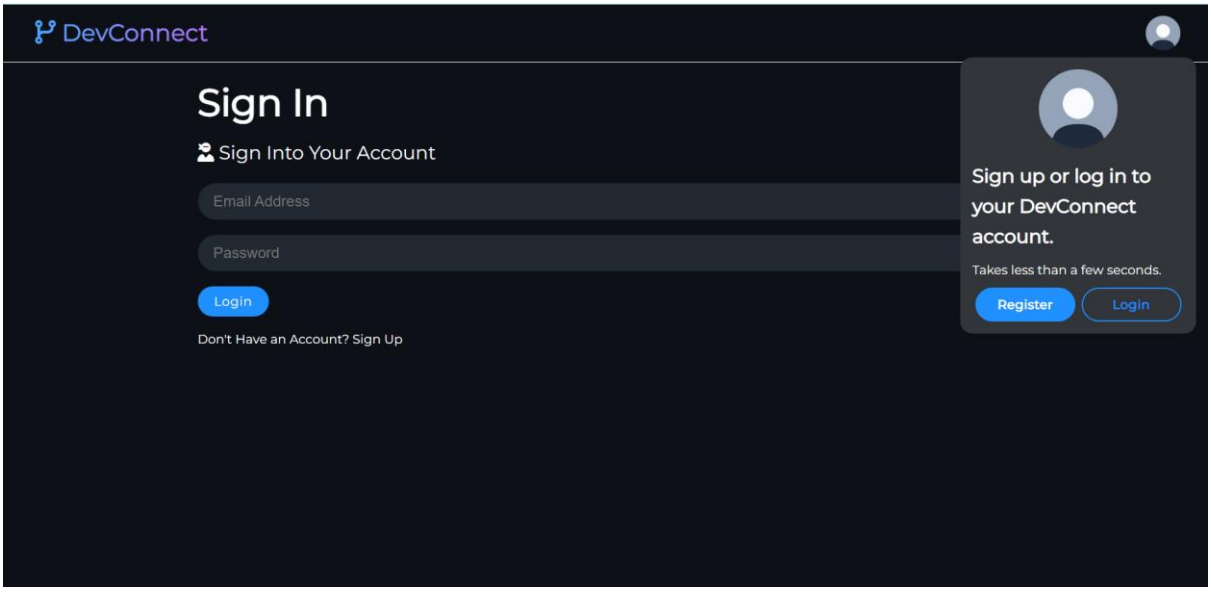
2) Posts

Name of column	Data Type	Constraints	Description
Post ID	BIGINT	PRIMARY KEY	Post ID
Title	VARCHAR	NOT NULL	Title name
Date	DATE		date

3.4) Screenshots






DevConnect
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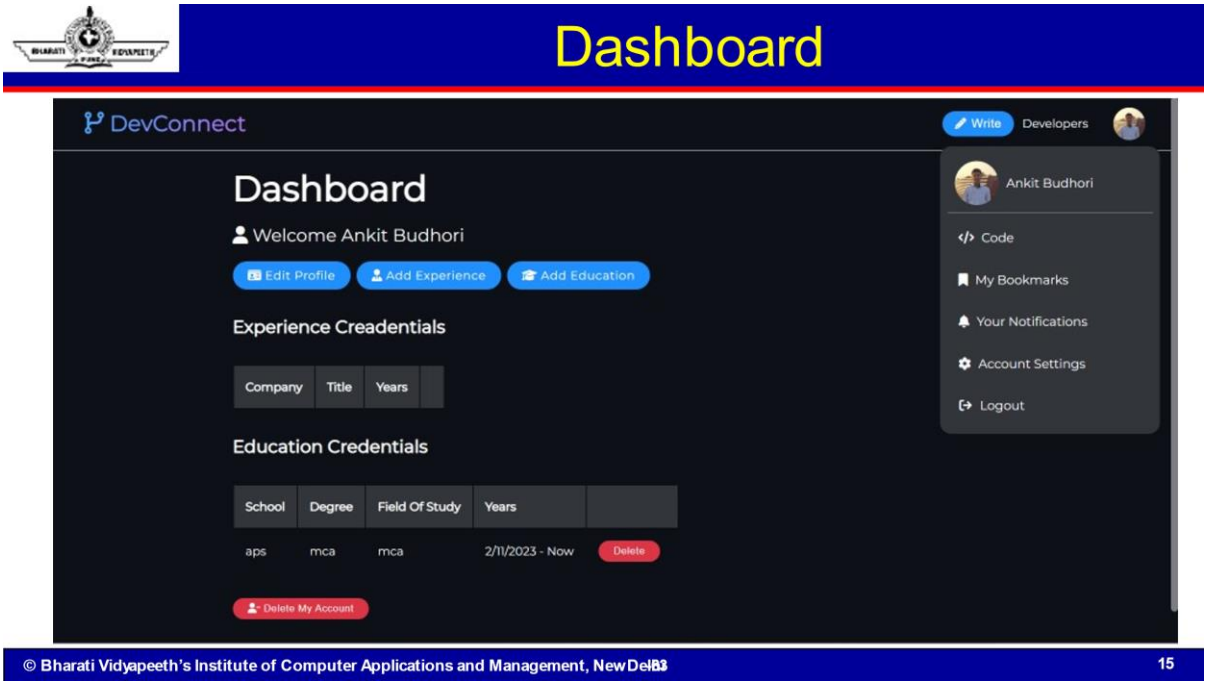
Password
Login
Don't Have an Account? Sign Up
Sign up or log in to your DevConnect account.
Takes less than a few seconds.
Register
Login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DevConnect
Write
Developers
Dashboard
Welcome Ankit Budhori
Edit Profile
Add Experience
Add Education
Experience Creadentials
Company
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Education Credentials
School
Degree
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Account Settings
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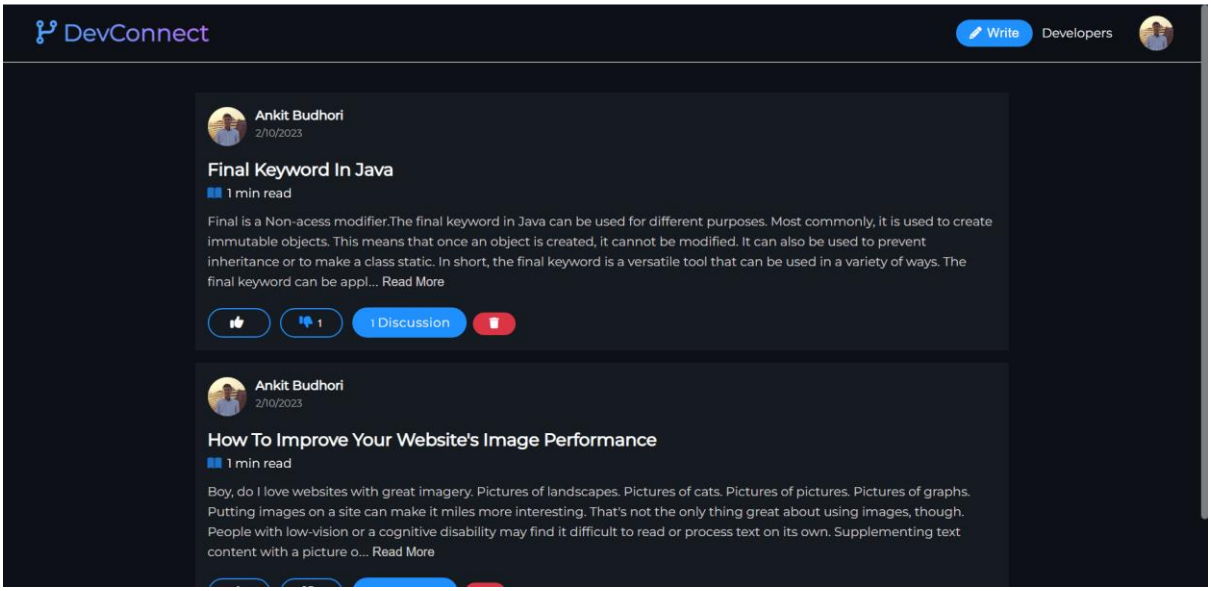
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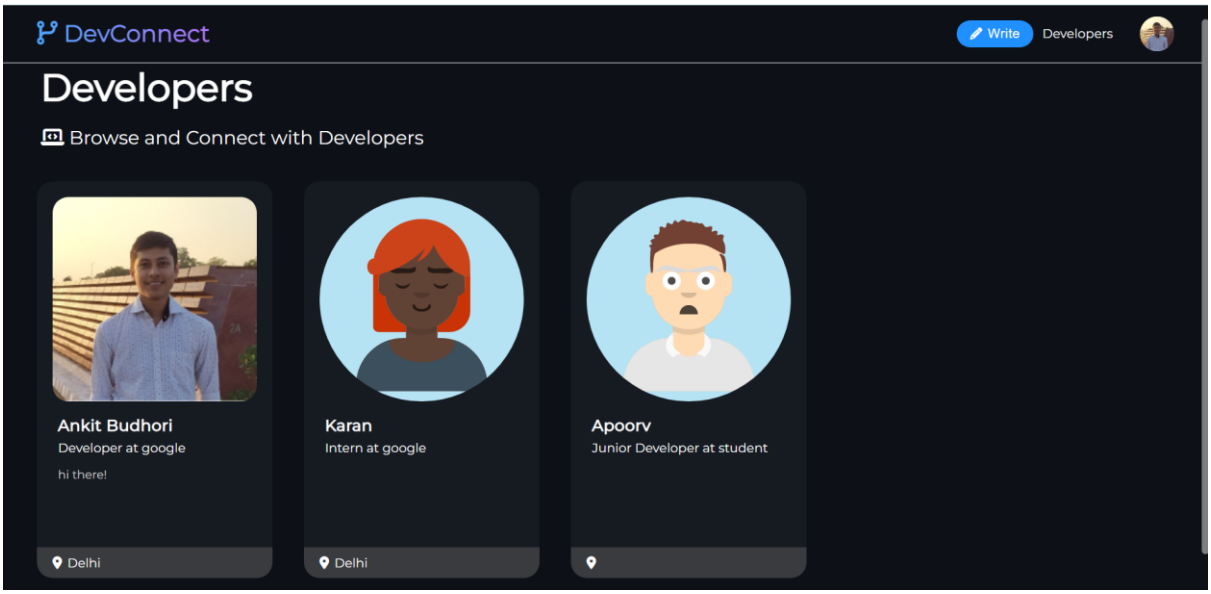
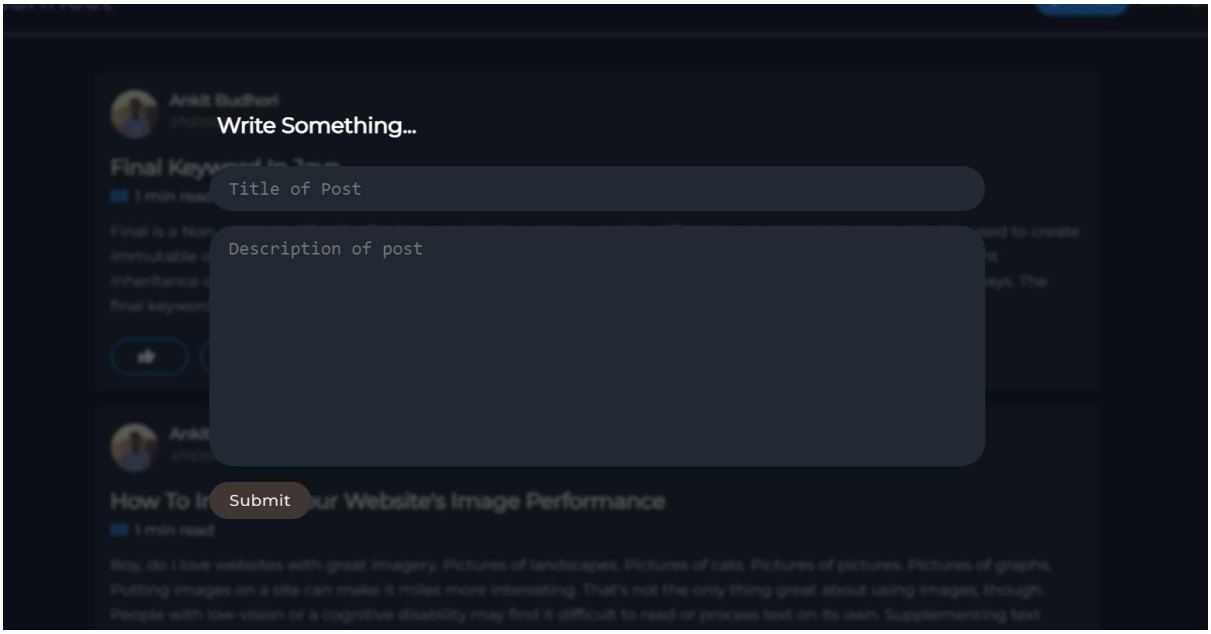

DevConnect
Write
Developers
Developers
Browse and Connect with Developers
Ankit Budhori
Developer at google
hi there!
Delhi
Karan
Intern at google
Delhi
Apoorv
Junior Developer at student



CHAPTER 4: CONCLUSION

Conclusion:

- A Social Media for Developers who want to connect and collaborate on projects.
- React Js, Node Js Programming is used for System Development.
- Waterfall model of SDLC has been followed for development of the project.
- The developed application has following features:
  - Online accessibility.
  - Responsive user-friendly interfaces to interact with the system.
  - Three-tier architecture.

BIBLIOGRAPHY

- • **Websites:**
  - **W3school**
  - **React js**