A Mini Project Synopsis on

RECRUITMENT MANAGEMENT SYSTEM

S.E. _ Computer Science and Engineering -Data Science

Submitted By

Saaras Gaikwad	**22207003**
Meet Jamsutkar	**22207004**
Umesh Nehete	**22207006**
Vedant Mayekar	**22207007**

Under The Guidance Of

Prof. Poonam Pangarkar

DEPARTMENT OF CSE -DATA SCIENCE

A.P.SHAH INSTITUTE OF TECHNOLOGY

G.B. Road,Kasarvadavali, Thane (W), Mumbai-400615

UNIVERSITY OF MUMBAI

Academic year : 2022-2023

CERTIFICATE

This to certify that the Mini Project report on **Recruiter management system** has been submitted by **Saaras Gaikwad** (22207003),**Meet Jamsutkar**(22207004),**Umesh Nehete** (22207006) and **Vedant Mayekar (**22207007) who are a Bonafide students of A. P. Shah Institute of Technology, Thane, Mumbai, as a partial fulfilment of the requirement for the degree in **Computer Science and Engineering(Data Science)**, during the academic year

2022-2023 in the satisfactory manner as per the curriculum laid down by University of Mumbai.

Prof. Poonam Pangarkar
Guide

Prof. Anagha Aher
Head Department of CSE-Data Science

Dr. Uttam D.Kolekar
Principal

External Examiner(s)
1.
2.
Place: A. P. Shah Institute of Technology, Thane
Date:

TABLE OF CONTENTS

ACKNOWLEDGEMENT

This project would not have come to fruition without the invaluable help of our guide **Prof. Poonam Pangarkar** Expressing gratitude towards our HOD, **Prof. Anagha Aher**, and the Department of Computer Science and Engineering (Data Science) for providing us with the opportunity as well as the support required to pursue this project. We would also like to thank our teacher **Prof.Rajashri Chaudhari** and **Prof. Vaibhav Yawalkar** who gave us their valuable suggestions and ideas when we were in need of them. We would also like to thank our peers for their helpful suggestions.

CHAPTER 1

INTRODUCTION

The Recruitment Management System is a web-based application that helps organizations manage their recruitment process efficiently. The system is designed to automate the entire recruitment process, from job posting to hiring, and to provide a centralized platform for recruiters, hiring managers, and job applicants.

The purpose of this project is to develop a Recruitment Management System using the Django framework. The system will allow organizations to post job vacancies, accept job applications, and manage the recruitment process effectively. The system will be user-friendly, secure, and scalable, and will provide a seamless experience to all stakeholders involved in the recruitment process.

The Recruitment Management System in Django will have several features, including job posting, applicant tracking, resume parsing, interview scheduling, candidate evaluation, and offer management. The system will also have reporting and analytics capabilities, which will provide valuable insights into the recruitment process.

Overall, the Recruitment Management System in Django will help organizations streamline their recruitment process, reduce manual effort, and improve the quality of hires. The system will be easy to use and will provide a centralized platform for recruiters, hiring managers, and job applicants.

1.1 PURPOSE

RECRUITER:-The purpose of the Recruitment Management System project in Django is to develop a web-based application that automates the recruitment process, from job posting to hiring, and provides a centralized platform for recruiters, hiring managers, and job applicants. The system will be user-friendly, secure, and scalable, and will help organizations streamline their recruitment process, reduce manual effort, and improve the quality of hires.

1.2 OBJECTIVES

1. Automate the recruitment process: This objective aims to develop an application that automates the entire recruitment process, from job posting to hiring, to reduce manual effort and save time.
2. Streamline the recruitment process: The objective is to provide a centralized platform for recruiters, hiring managers, and job applicants to interact and manage the recruitment process effectively, leading to an efficient recruitment process.
3. Reduce manual effort: The system should reduce manual effort by automating routine tasks such as resume parsing, candidate evaluation, and interview scheduling to increase efficiency.
4. Improve the quality of hires: The objective is to develop tools that help recruiters and hiring managers evaluate candidates and make informed hiring decisions, leading to better quality hires
5. Enhance security: The objective is to ensure the security of sensitive candidate data by developing a system that protects data from unauthorized access and breaches.
6. Provide reporting and analytics capabilities: The objective is to provide reporting and analytics capabilities that help recruiters and hiring managers measure the effectiveness of the recruitment process and identify areas for improvement.

1.3 SCOPE

The scope of the Recruitment Management System project is to develop a web-based application using Django that automates the recruitment process and provides a centralized platform for recruiters, hiring managers, and job applicants. The system will allow job applicants to create profiles, apply for jobs, and track their application status. Recruiters and hiring managers will be able to post job vacancies, manage job applications, schedule interviews, and evaluate candidates.

The system will also include features such as resume parsing, job matching, and candidate evaluation tools to help recruiters and hiring managers make informed hiring decisions. The system will be designed to be scalable, user-friendly, and secure, and will provide reporting and analytics capabilities to measure the effectiveness of the recruitment process.

The scope of the project also includes testing and quality assurance to ensure the system functions as intended and meets the requirements of stakeholders. The system will be developed using agile methodologies, with frequent releases and feedback from stakeholders to ensure the system meets their needs.

CHAPTER 2

PROBLEM DEFINITION

2.1 EXISTING SYSTEM

Highlight the inefficiencies of the current recruitment process, such as time-consuming manual efforts and fragmented data that can lead to errors and missed opportunities. Emphasize the challenges that recruiters and hiring managers face, such as difficulties in tracking candidate progress and making data-driven decisions, which can delay hiring cycles and reduce the quality of hires.

Demonstrate how these inefficiencies and challenges impact the organization's bottom line, such as increased costs and decreased productivity. Introduce the proposed Recruitment Management System as a solution that addresses these limitations and challenges, emphasizing its features and benefits, such as streamlined processes, centralized data, and reporting and analytics capabilities. Show how the proposed system can improve the quality of hires, reduce hiring cycles, and provide greater insight into the recruitment process, leading to better decision-making and increased efficiency.

Finally, provide a clear and concise recommendation for adopting the proposed system or implementing specific process improvements, backed up by data and examples of successful implementation in other organizations.

2.2 DISADVANTAGES:

1. Cost: Although a recruitment management system can improve the recruitment process, it may come with a significant cost. Small businesses or organizations with limited budgets may find it difficult to bear the initial software and hardware costs, as well as the ongoing maintenance and support costs. Additionally, training staff to use the new system may add to the overall cost.

2. System complexity: Recruitment management systems are designed to be powerful and feature-rich, which can make them complex and difficult to learn for some users. Staff members may require time to adjust to the new system, which can lead to a temporary dip in productivity. Providing additional training and support can also increase the cost of implementing the system. Furthermore, some users may prefer the simplicity of a manual recruitment process and may resist the adoption of a new system

CHAPTER 3

PROPOSED SYSTEM

Recruitment management systems are software applications that streamline the recruitment process by automating various tasks and providing centralized data, reporting, and analytics capabilities. These systems can help organizations save time, reduce costs, improve data quality, and make better hiring decisions. They can also provide a better candidate experience by enabling easy application submission and real-time status updates. Recruitment management systems typically include features such as job posting, resume screening, applicant tracking, interview scheduling, candidate profiling, reporting, and analytics. They can be customized to meet the unique needs of an organization, and are typically user-friendly, which makes them easy to adopt and use

ADVANTAGES:

Improved efficiency

Better collaboration

Increased quality of hires

Enhanced candidate experience

Reporting and analytics capabilities

Reduced cost

Scalability

Recruitment management systems automate time-consuming tasks, provide a centralized database, filter unsuitable candidates, and provide an easy-to-use interface. These systems also offer powerful reporting and analytics capabilities, reducing recruitment cost and providing a

competitive advantage. Additionally, they can be scaled to meet the needs of organizations of all sizes.

3.1 FEATURES AND FUNCTIONALITY

Job Posting: The system enables recruiters to create and post job vacancies across multiple channels, such as job boards, social media, and company career sites.
Applicant Tracking: The system tracks the progress of each candidate throughout the recruitment process, from application submission to job offer or rejection.
Resume Screening: The system automates the screening of resumes to filter out unsuitable candidates and identify the most qualified candidates.
Candidate Communication: The system enables recruiters to communicate with candidates easily and efficiently, providing timely updates on their status throughout the recruitment process. Interview Scheduling: The system automates the scheduling of interviews, reducing the need for manual coordination and streamlining the process.

Reporting and Analytics: The system provides powerful reporting and analytics capabilities, allowing recruiters and hiring managers to make data-driven decisions and improve the recruitment process over time.

User:

1. Register: Allows users to create a new account if he/she is a first-time user by entering the basic and personal details.
2. Login: Allows users to login with a unique username and password when account is created.
3. Home: Allows users to see available job postings and their details.
4. Applicant: Allows users to apply to the job posting of their choice by showing all details regarding it.

5. Recruiter: Allows recruiters to create and post a job posting according to their requirements

6. Admin: The admin profile manages user access and permissions for the recruitment management system, ensuring that users have access to the appropriate tools and data based on their role.

CHAPTER 4

PROJECT OUTCOMES

1. Increased efficiency: With automation of time-consuming tasks, recruiters can focus on more strategic activities and reduce the time-to-hire.
2. Improved quality of hires: The system's filtering and screening capabilities can help identify the most qualified candidates, leading to better quality hires.
3. Enhanced candidate experience: With streamlined communication and easy access to information, candidates have a better experience throughout the recruitment process.
4. Reduced cost: with automation and centralization of recruitment processes, organizations can reduce recruitment costs and improve ROI.
5. Data-driven decision-making: The system's reporting and analytics capabilities provide valuable insights into the recruitment process, enabling data-driven decision-making and continuous improvement.
6. Competitive advantage: By improving the recruitment process and quality of hires, organizations can gain a competitive advantage and attract the best talent in the market.

CHAPTER 5

SOFTWARE REQUIREMENTS

1. Operating System: The system can be designed to work on various operating systems, such as Windows, Linux, or macOS.
2. Database Management System: A database management system is needed to store and manage candidate information. Popular choices include MySQL, Oracle, and PostgreSQL.
3. Web Framework: A web framework is used to develop the web-based user interface. Popular choices include Django, Ruby on Rails, and Laravel.
4. Front-end Technologies: The user interface of the system is developed using front-end technologies such as HTML, CSS, and JavaScript.

SYSTEM REQUIREMENTS

Operating system: Windows7/8/10/11

Coding Language: Python

Data Base : MYSQL Server

Tools : VSCode, Django Web framework.

Python 3.10 Interpreter

CHAPTER 6

PROJECT DESIGN

In this phase, a logical system is built which fulfils the given requirements. Design phase of software development deals with transforming the user's requirements into a logically working system. Normally, design is performed in the following in the following two steps:

1. Primary Design Phase: In this phase, the system is designed at block level. The blocks are created based on analysis done in the problem identification phase. Different blocks are created for different functions emphasis is put on minimizing the information flow between blocks. Thus, all activities which require more interaction are kept in one block.

2. Secondary Design Phase: In the secondary phase the detailed design of every block is performed. The general tasks involved in the design process are the following:

   i. Design various blocks for overall system processes

   ii. Design smaller, compact, and workable modules in each block

   iii. Design various database structures.

   iv. Specify details of programs to achieve desired functionality

   v. Design the form of inputs, and outputs of the system.

   vi. Perform documentation of the design.

   vii. System reviews

SYSTEM DESIGN AND IMPLEMENTATION

6.1 DESIGN STANDARD

The recruitment management system is designed with the user in mind, prioritizing user-friendliness, efficiency, and accessibility. A clear and simple navigation structure, a consistent layout, and responsive design are important design standards to ensure that users can easily find the tools and functions they need. The system is also visually appealing, provides clear feedback to users, and is customizable to meet the specific needs of the organization. Some of the modules are:

1. Apply Job/Get hired/recruiter
2. Check login
3. Feedback/Suggestions

6.2 OUTPUT SPECIFICATION

The system is designed in such a way that it efficiently provides output to the user promptly and in a well-organized manner. The format for the several outputs are made available on the output pages. Output can be relayed using the following page modules:

1. Job postings: Allows Recruiters to create and publish job postings
2. Candidate applications: The system is able to capture candidate applications and store them in a central database for easy tracking and management.
3. Reports and dashboards: The system should be able to generate reports and dashboards that provide an overview of the recruitment process, including the status of job postings.

6.3 INPUT SPECIFICATION

1. Allows users to see available job postings and their details.
2. Allows users to apply to the job posting of their choice by showing all details regarding it.
3. Allows recruiters to create and post a job posting according to their requirements
4. The admin profile manages user access and permissions for the recruitment management system, ensuring that users have access to the appropriate tools and data based on their role.

GRAPHICAL USER INTERFACE (GUI):

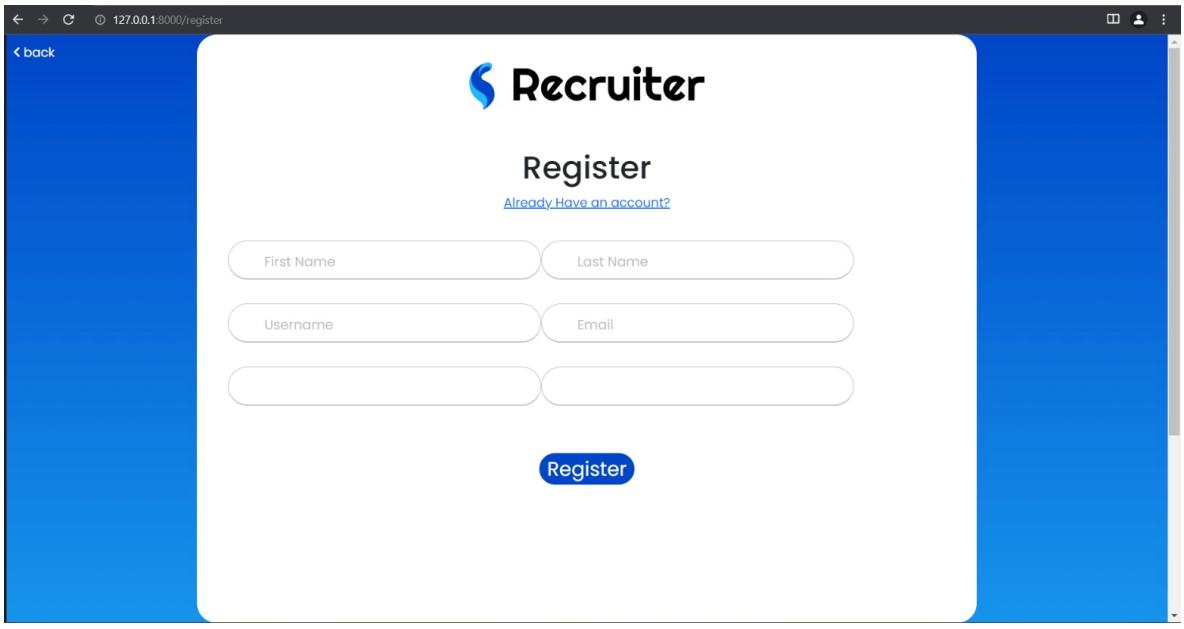

Figure 6.1: REGISTRATION PAGE

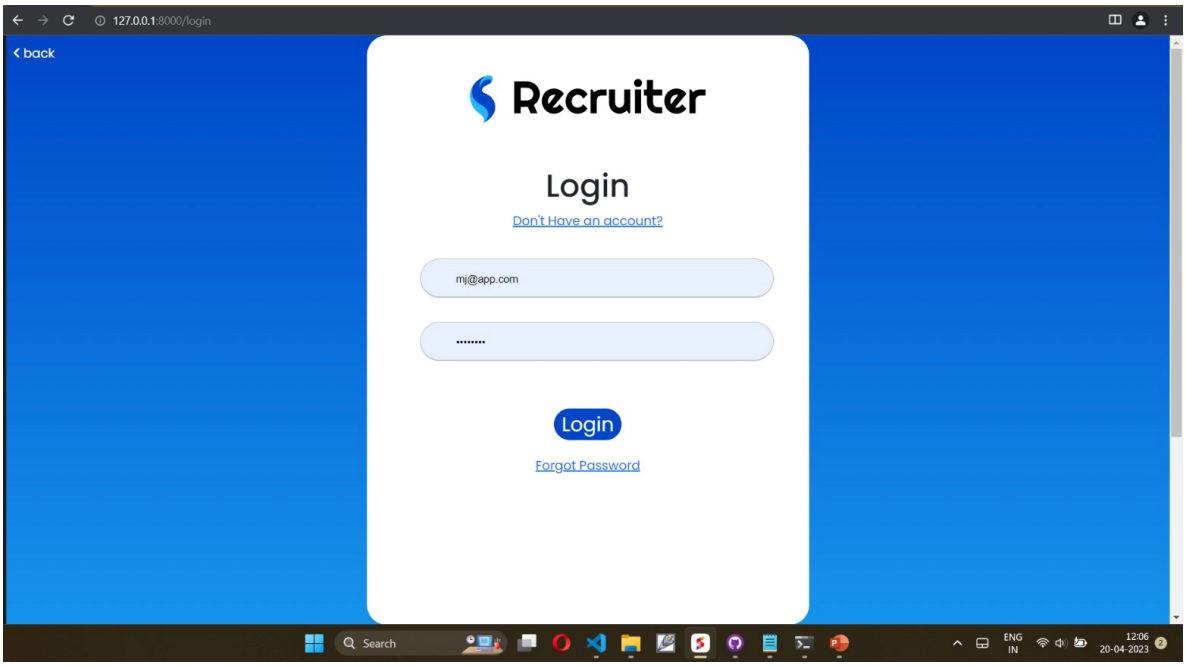

Figure 6.2: LOGIN PAGE

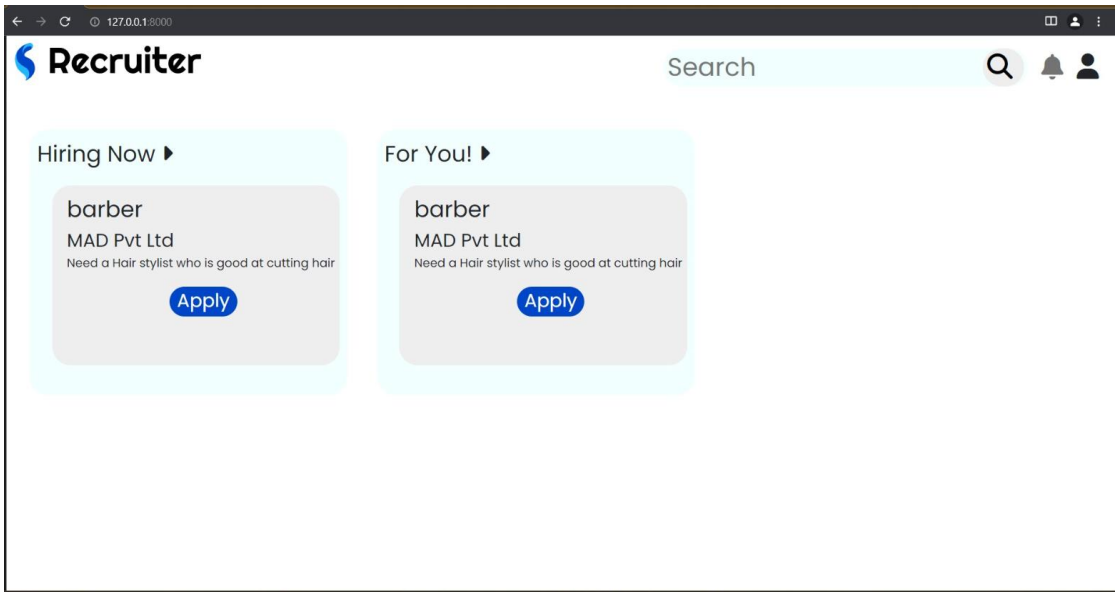

Figure 6.3: HOME PAGE

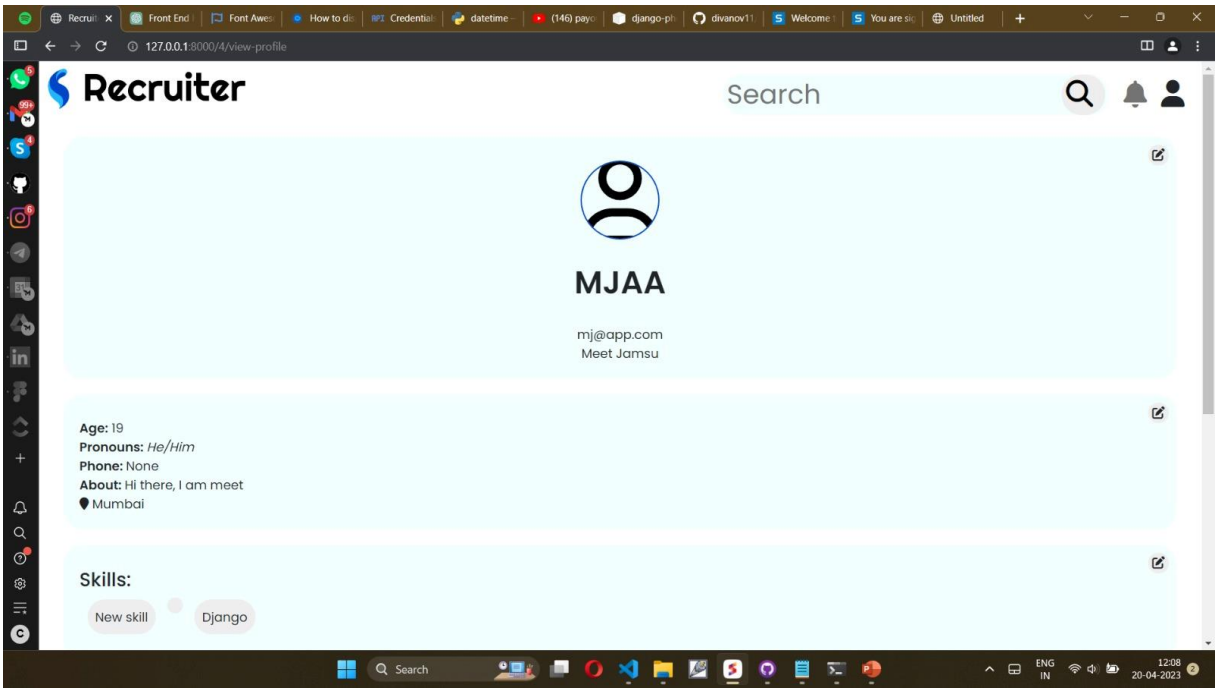

Figure 6.4: PROFILE PAGE

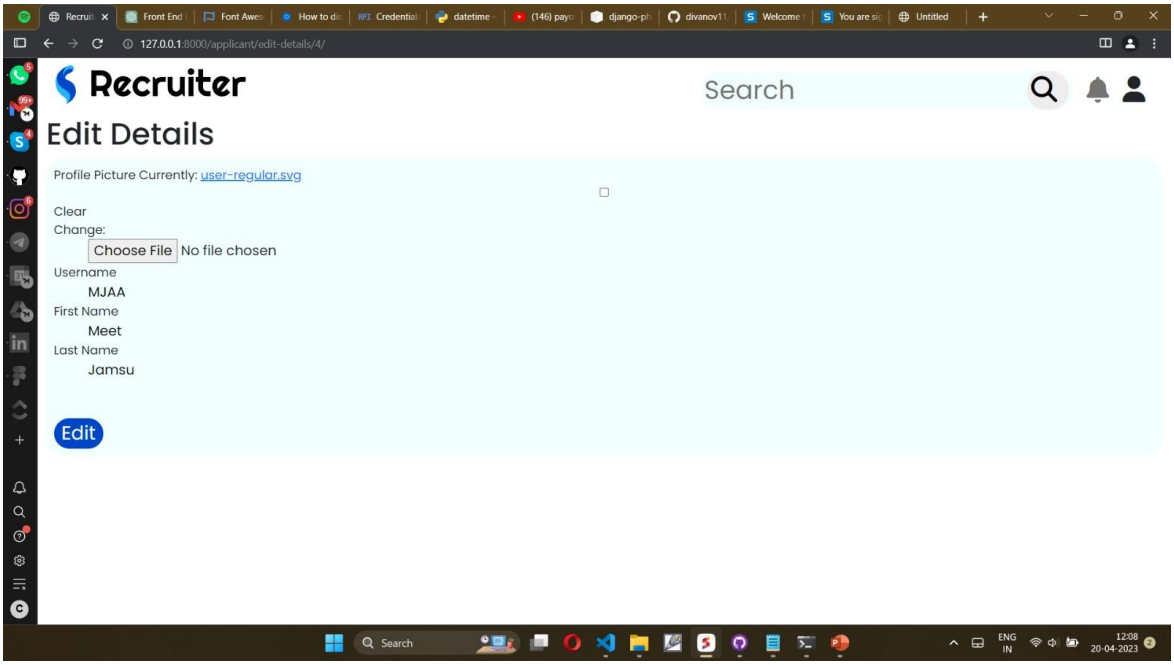

Figure 6.5: EDIT PAGE

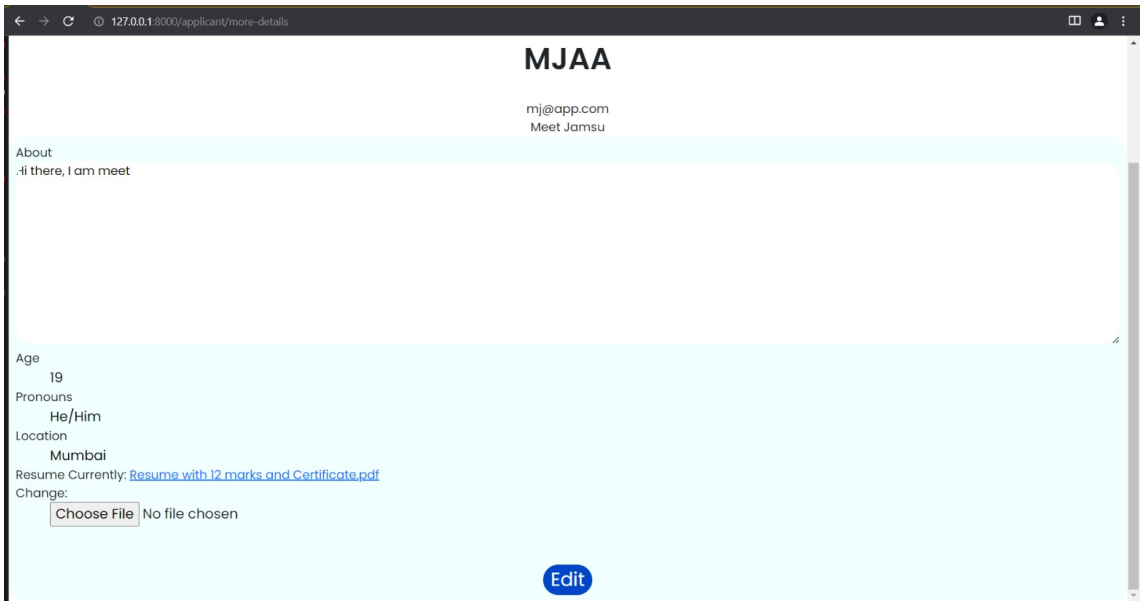

Figure 6.6:ABOUT ME PAGE

6.4 DATABASE SPECIFICATION

The database system used to implement the back end of the Housing Management System is MySQL. Access to the system was made possible by a graphical interface (Django) with Django web framework. The database name is SQL Schemas and the structure of the data tables in the database are as follows:

1. Login
2. Register
3. Applicant
4. Organisation

Applicant

Allows to add State, City, Address, Property Type, Bhk Type, Price and Image.

FIELD	TYPE	LENGTH
Id	Int	11
User	FK,Int	50
About	varchar	60
Age	int	..
Pronoun	varchar	10
Location	varchar	10
Resume	varchar	200
skills	FK,Int	16
Experience	varchar	20

Table 6.1:Database Table of Applicant Page

Organisation

FIELD	TYPE	LENGTH
Id	Int	11
Name	varchar	45
Logo	varchar	45
Admin	FK,Int	20

Mobile No.	BigINT	50
Email	varchar	20
website	varchar	25
Recruiter	FK,Int	50

Table 6.2: Database Table of Organisation

Recruiter

FIELD	TYPE	LENGTH
Org	Fk,int	-
Recruiter	FK, int	-
Position	varchar	20
Created	Date, AUTO	-
Start date	Date	-
pay_range	Int	20
Description	varchar	70
Skill	Varchar	20
Experience	varchar	50

Table 6.2: Database Table of Recruiter

6.6 PROGRAMMING LANGUAGE

So many programming languages were put into consideration in the cause of designing this software. A lot of factors were also considered which includes the online database access, data transmission via networks, online database retrieval, online data capture, multiuser network access database security, etc. The database system used to implement the back end of this system is MySQL. MySQL database is a robust database that can guarantee database integrity, database protection and accommodate large database.

CHAPTER 7

PROJECT SCHEDULING

Scheduling in this project management is the listing of activities, deliverables, and milestones within a project. A schedule also usually includes a planned start and finish date, duration, and resources assigned to each activity. Effective project scheduling is a critical component of successful time management, especially for professional service businesses.

The process for building a schedule is referred to the first six processes of time management:

1.Plan schedule management
2.Define project activities
3.Sequence activities
4.Estimate resources , estimate durations
5.Develop the project schedule

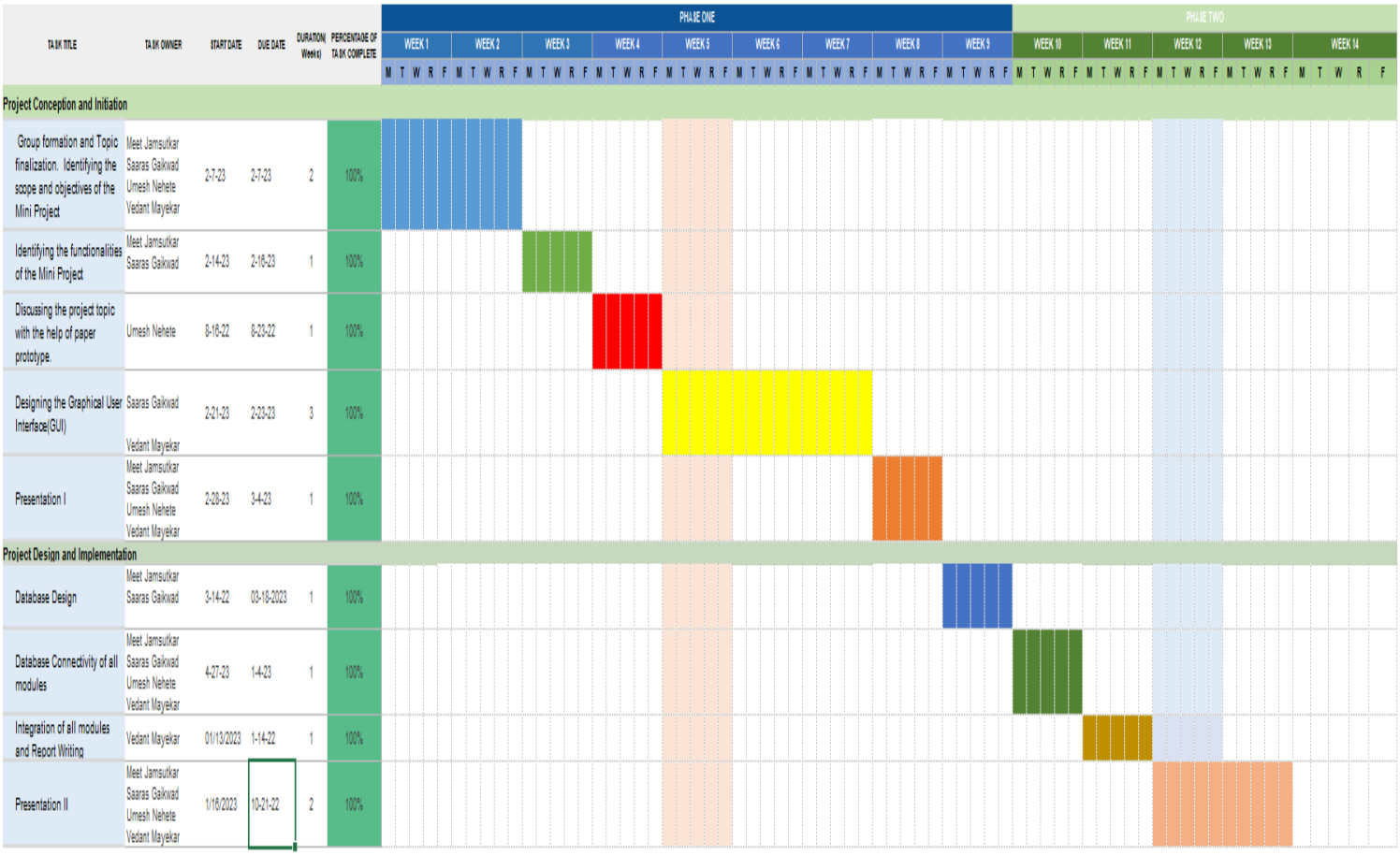

Figure 7.1: GANTT CHART

CHAPTER 8

CONCLUSION

In conclusion, the Recruitment Management System developed in Django is a valuable tool for organizations looking to improve their recruitment process. By automating time-consuming tasks and centralizing recruitment processes, recruiters can focus on more strategic activities and reduce the time-to-hire. The system's filtering and screening capabilities help identify the most qualified candidates, leading to better quality hires. The web-based user interface provides a user-friendly experience for recruiters and candidates, with features such as online applications, resume uploads, and status updates. The system's reporting and analytics capabilities enable data-driven decision-making and continuous improvement. With the system's benefits of improved efficiency, quality of hires, and cost reduction, it is a valuable investment for any organization. Overall, the Recruitment Management System in Django is a comprehensive solution for managing the recruitment process and improving recruitment outcomes.

At the end it is concluded that we have made effort on following points:

1. A description of the background and context of the project and its relation to work already done in the area.
2. Made statement of the aims and objectives of the project.
3. The description of Purpose, Scope, and applicability.
4. We define the problem on which we are working in the project
5. We describe the requirement Specifications of the system and the actions that can be done on these things.
6. We understand the problem domain and produce a model of the system, which describes operations that can be performed on the system.
7. We included features and operations in detail, including screen layouts.
8. We designed user interface and security issues related to system.
9. Finally, the system is implemented and tested according to test cases.

References:

- Django Documentation
  https://docs.djangoproject.com/en/4.2/

- Django Tutorial
  https://www.youtube.com/watch?v=PtQiiknWUcI&t=6639s

- Bootstrap Documentation:
  https://getbootstrap.com/docs/5.2/getting-started/introduction/

- Fontawesome documentation
  https://fontawesome.com/docs

- Django smtp Documentation
  https://docs.djangoproject.com/en/4.2/topics/email/

- Email Verification Docmumentation
  https://pypi.org/project/Django-Verify-Email/#:~:text=Email%2DVerification%20for%20Django,bat%20without%20any%20complex%20implementation.