A PROJECT REPORT ON

Online Recruitment System

SUBMITTED TO
MIT SCHOOL OF COMPUTING, LONI, PUNE IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE

BACHELOR OF TECHNOLOGY
(Computer Science & Engineering)

BY

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

MIT School OF COMPUTING
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2023-24

MIT SCHOOL OF COMPUTING
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
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RAJBAUG CAMPUS, LONI-KALBHOR, PUNE 412201

CERTIFICATE

This is to certify that the project report entitled
"Online Recruitment System"

Submitted by

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is a bonafide work carried out by them under the supervision of Prof./Dr/ ….. and it is submitted towards the partial fulfillment of the requirement of MIT ADT university, Pune for the award of the degree of Bachelor of Technology (Computer Science and Engineering)

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Seal/Stamp of the College
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CERTIFICATE

This is to certify that the Project report entitled

“Online Recruitment System”

Submitted by

Name of the Candidate Exam No: ----------

is a bonafide work carried out by him/her (with the Sponsorship from ----------) under the supervision of Mr/Ms/Miss. …….. and has been completed successfully.

(Mr. ……)
(Designation)
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Place :
Date :

DECLARATION

We, the team members

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Adarsh Arun	(MITU21BTCS0025)

Hereby declare that the project work incorporated in the present project entitled **"Online Recruitment System"** is original work. This work (in part or in full) has not been submitted to any University for the a ward or a Degree or a Diploma. We have properly acknowledged the material collected from secondary sources wherever required. We solely own the responsibility for the originality of the entire content.

Date: 02/11/2023

Name & Signature of the Team Members

Member 1: _____

Member 2: _____

Member 3: _____

Member 3: _____

Name and Signature of Guide

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Place: Pune

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
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EXAMINER'S APPROVAL CERTIFICATE

The project report entitled "Online Recruitment System" submitted by Naman Jani (MITU21BTCS0304), Alwin Shaji (MITU21BTCS0067), Parth Lajurkar (MITU21BTCS0406), Adarsh Arun (MITU21BTCS0025) in partial fulfillment for the award of the degree of Bachelor of Technology (Computer Science & Engineering) during the academic year 2023-24, of MIT-ADT University, MIT School OF COMPUTING, Pune, is hereby approved.

Examiners:

1.

2.

ACKNOWLEDGEMENT

We would like to express our humble gratitude towards our mentor **Dr. *Amol A. Bhosle*** as well as our Director ***Prof.Dr. Rajneeshkaur Sachdeo*** who gave this this golden opportunity to work on this interesting project. This project helped us gain in depth knowledge about natural language processing which is the future of this fast-paced world. It also helped analyze the Pros and Cons of a particular application and its market viability. We provide valuable information through our analysis which will help upcoming app developers plan meticulously as to how their application has to be designed. Both members contributed greatly to the timely completion of this project which would have been difficult without the assistance of our guide.

ABSTRACT

The Online Recruitment System is not just a tool, but a comprehensive solution that transforms the recruitment landscape. It provides a centralized platform where job postings can be made visible to a global audience, thereby eliminating geographical barriers and expanding the scope of talent acquisition.

The system's ability to automate various stages of the recruitment process, such as sorting and screening applications, scheduling interviews, and providing feedback, significantly reduces the administrative burden on HR teams. This allows them to focus on more strategic aspects of recruitment, such as employer branding and candidate experience.

Moreover, the system's analytics capabilities provide valuable insights into hiring trends, candidate behavior, and recruitment marketing effectiveness. These data-driven insights can guide decision-making and strategy formulation in talent acquisition.

The “Online Recruitment System” is a revolutionary approach to the traditional hiring process. It leverages the power of the internet and digital technologies to streamline and enhance recruitment procedures. This system allows employers to post job vacancies, screen resumes, and conduct preliminary interviews online, thereby significantly reducing the time and resources spent on manual processes. Furthermore, it provides a platform for job seekers to apply for positions from anywhere in the world, broadening the talent pool for employers. The system also includes features such as automated resume screening, applicant tracking, and analytics, which aid in making informed hiring decisions. Despite its numerous advantages, challenges such as data security and privacy concerns need to be addressed for its widespread adoption.

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Chapter 1
INTRODUCTION

1. Introduction

Online recruitment system, also known as e-recruitment or internet recruitment, is the use of web-based resources and software to attract, assess, select, and onboard job candidates. Online recruitment system can streamline the hiring process by posting jobs, accepting applications, communicating with applicants, and monitoring their progress throughout the hiring cycle. Online recruitment system can also leverage active and passive recruitment techniques, such as internet advertising, social media, and online talent databases, to find the best candidates for the organization's needs. Online recruitment system has many advantages over traditional methods of recruitment, such as reducing costs, increasing efficiency, enhancing quality, and boosting the organization's image. Understanding the importance of recruitment system So, we decided to develop a graphical user interface on online recruitment system system. This GUI based system has been developed using HTML, CSS, JS, PHP, Xampp Server, jQuery and a connection with a database system MySQL.

"Success in Management requires learning as fast as the world is changing".

An Online Recruitment System is a software platform or application that facilitates the process of finding, attracting, assessing, and hiring candidates for job positions through the internet. It provides an efficient way for organizations to manage their recruitment process.

2. Existing Work

There are a few existing systems related to our project field. After some research and analysis, we came across the methodology of the system and a few of its drawbacks. The below table gives us the gist about these existing systems:-

1.1: Existing Work

System	Description	Limitation
LinkedIn	LinkedIn provides a professional networking platform with extensive job postings, applicant tracking, and company pages.	- Premium features come with a subscription fee. - Limited customization for job postings. - Highly competitive job listings may get lost in the volume of posts.
Greenhouse	Greenhouse provides tools for creating job postings, managing candidates, and optimizing the hiring process.	- Limited built-in analytics and reporting. - Can be costly for small and medium businesses. - Integration challenges with certain HR systems.
iCIMS Talent Cloud	iCIMS offers a scalable and customizable recruitment platform with applicant tracking, onboarding, and AI-powered insights.	- Limited customization options for some users. - Complex pricing structure can be confusing. - Some features may require additional payments.
Lever	Lever streamlines the hiring process with features like collaborative candidate sourcing, interview scheduling, and analytics.	- Limited integration capabilities with certain third-party tools. - User interface might be overwhelming for some.
Workday	Workday's recruitment module offers a comprehensive platform integrating recruitment, HR, and payroll functions.	- High implementation costs for customization. - Complex interface for beginners. - Requires extensive training for effective use.

3. Motivation

In the current digital landscape, the demand for efficient and dependable recruitment processes is of utmost importance. Our private college institute has always been dedicated to offering top-notch educational experiences for our students. We firmly believe that ensuring a smooth and hassle-free hiring journey for both employers and candidates is equally crucial. That's why we are thrilled to introduce the innovative concept of an Online Recruitment System to our institution. This initiative stems from our unwavering commitment to enhancing the overall recruitment experience for employers, job seekers, and our faculty.

Our objective is to eliminate the uncertainties and challenges associated with traditional recruitment methods. By implementing this cutting-edge Online Recruitment System, our aim is to provide real-time information to employers and candidates alike. This technology will empower them to navigate the recruitment process more effectively, reduce waiting times, and enhance the overall experience. Embracing this technological solution, we equip our community with the tools needed to make informed decisions about their hiring processes, ultimately optimizing their time, which can be better utilized for professional growth and development.

Furthermore, this project signifies not only convenience but also our dedication to efficiency. By streamlining the hiring process and reducing unnecessary delays, we can potentially enhance the productivity of our recruitment services. We envision a future where our college becomes a benchmark for streamlined and eco-friendly recruitment, setting an example for responsible talent acquisition practices. In conclusion, the introduction of our Online Recruitment System perfectly aligns with our mission to provide a comprehensive and forward-thinking approach to education, focusing not only on academic excellence but also on the overall well-being of our college community.

4. Objectives

- To reduce the time and cost of hiring by using web-based technology and software.
- To reach a larger and more diverse pool of candidates by using online advertising, social media, and talent databases.
- To improve the quality and fit of candidates by using pre-screening, assessments, and background checks.
- To enhance the employer brand and reputation by providing a positive and engaging candidate experience.
- To streamline the hiring process by posting jobs, accepting applications, communicating with applicants, and monitoring their progress online.
- To align the recruitment strategy with the organizational goals and vision.

5. Scope

1. The platform will be beneficial for every job seekers or college freshers, whether they are actively job hunting or exploring career opportunities. It is not limited to specific industries; instead, it caters to individuals seeking employment across various sectors.

2. The application's tracking feature will provide precise information about job applications, making it convenient for the HR to monitor and shortlist the candidates for the next round or process.

3. Initially, our focus is on implementing the tracking system exclusively for our college. However, in the future, other companies can register with our system and seamlessly integrate their recruitment processes with our platform.

Chapter 2
CONCEPTS AND METHODS

2.1 Definitions

HTML: HTML stands for Hyper Text Markup Language. HTML is the standard markup language for Web pages .HTML elements are the building blocks of HTML pages .HTML elements are represented by <> tags.

CSS: CSS stands for Cascading Style Sheets CSS describes how HTML elements are to be displayed on screen, paper, or in other media CSS saves a lot of work. It can control the layout of multiple web pages all at once External stylesheets are stored in CSS files.

JS: JavaScript (JS) is a scripting language, primarily used on the Web. It is used to enhance HTML pages and is commonly found embedded in HTML code. JavaScript is an interpreted language. Thus, it doesn't need to be compiled.

MySQL: MySQL is a popular, time-tested, but also modern and fully- featured relational database management software. Businesses everywhere use it for mission-critical enterprise data storage, processing, as a backend to major customer- facing applications, and as part of powerful, established web software stacks.

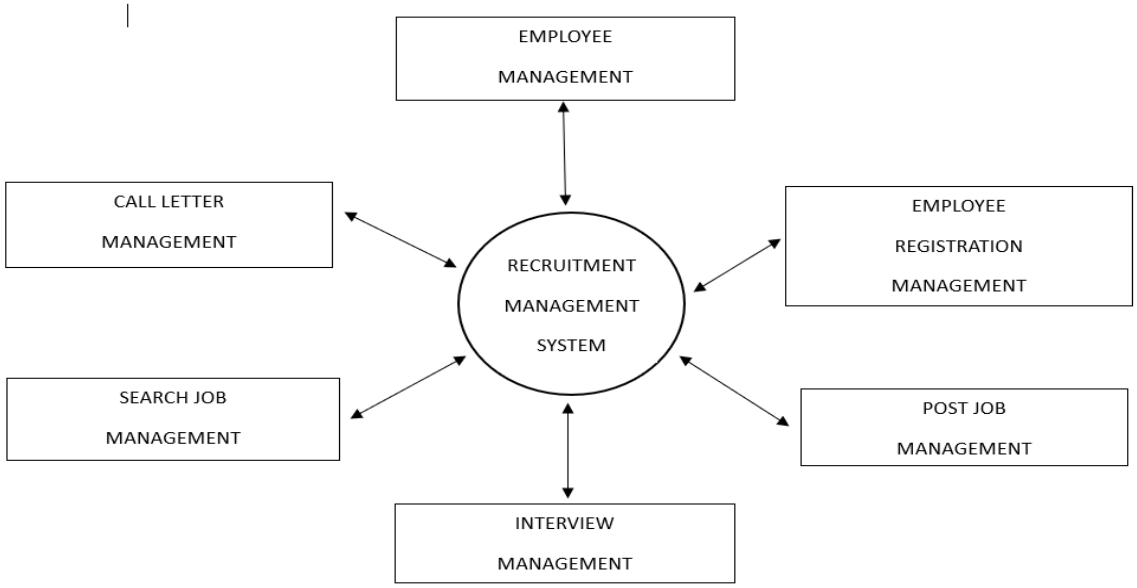
PHP: PHP (recursive acronym for PHP: Hypertext Preprocessor) is a widely-used open-source general-purpose scripting language that is especially suited for web development and can be embedded into HTML.

Xampp Server: XAMPP is an abbreviation where X stands for Cross-Platform, A stands for Apache, M stands for MYSQL, and the Ps stand for PHP and Perl, respectively.

It is an open-source package of web solutions that includes Apache distribution for many servers and command-line executables along with modules such as Apache server, MariaDB, PHP, and Perl.

jQuery: Query is a lightweight, "write less, do more", JavaScript library. The purpose of jQuery is to make it much easier to use JavaScript on your website. jQuery takes a lot of common tasks that require many lines of JavaScript code to accomplish, and wraps them into methods that you can call with a single line of code. jQuery also simplifies a lot of the complicated things from JavaScript, like AJAX calls and DOM manipulation.

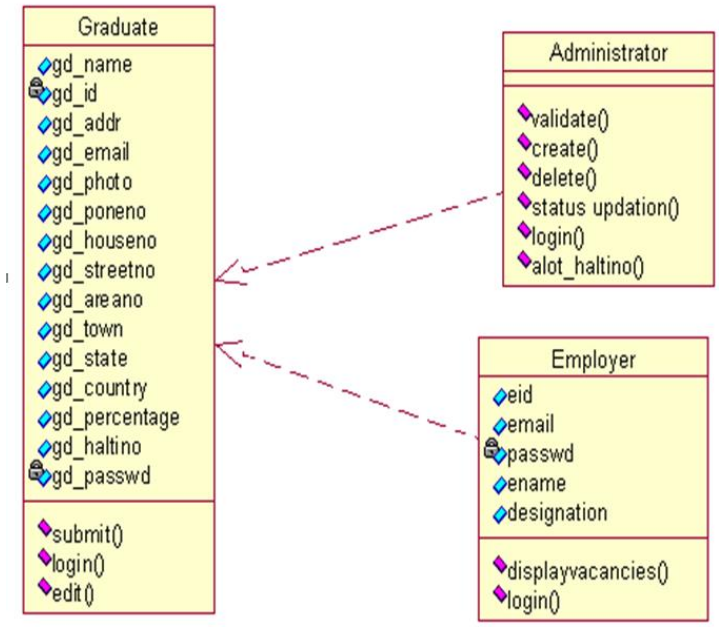
2.2 Architecture



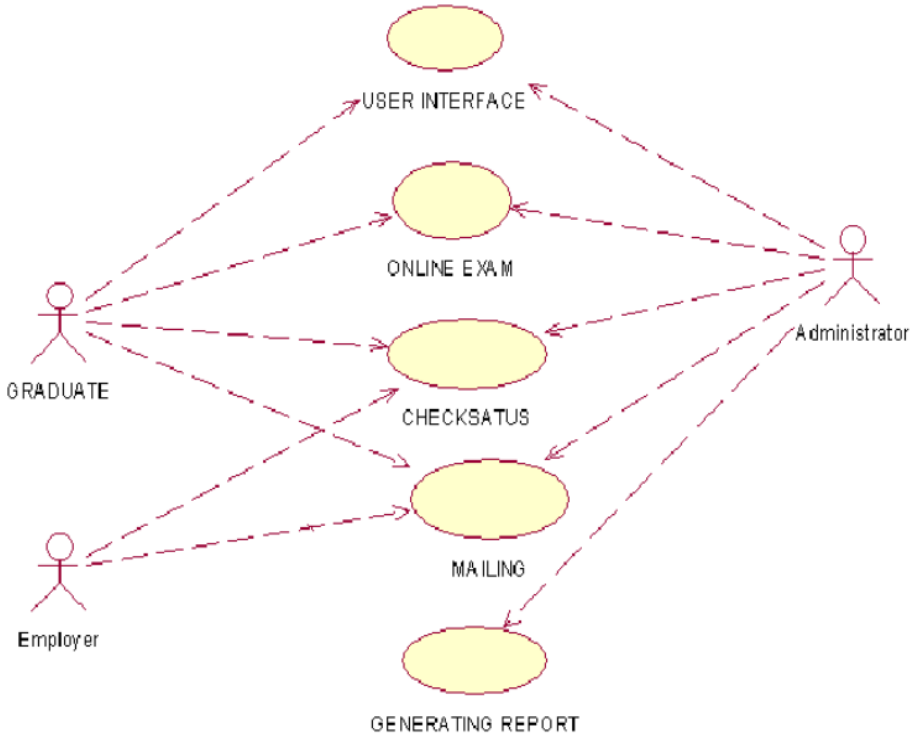
2.3 Methodology

The project is implemented in PHP. It is a widely-used, open-source scripting language. Its scripts are executed on the server. PHP is mostly used for making web servers. It runs on the browser and is also capable of running in the command line.

2.3.1 Class Diagram



2.3.2 Flowchart



2.3.3 Concept and Tools used

- Online recruitment system is a way of using web-based technology to streamline the hiring process and find the best talent for an organization. It can help reduce the cost, time, and effort of recruitment, as well as improve the quality and diversity of candidates.

- Also, it is a platform that integrates various online tools and methods to attract, assess, and hire candidates for a job. It can include posting jobs on websites, social media, and job boards, screening candidates with online tests and assessments, conducting interviews via video or chat, and onboarding new hires with digital documents and training.

- It is a solution that automates the entire recruitment cycle from sourcing to hiring. It can help recruiters manage and track candidates, communicate with them effectively, evaluate their skills and fit, and make data-driven decisions. It can also enhance the candidate experience and employer brand.

- Frontend: HTML, CSS, jQuery
- Backend: PHP, MySQL
- Tools: Xampp Server

Chapter 3
LITERATURE SURVEY

Yoon Kin Tong, David. "A study of e-recruitment technology adoption in Malaysia." Industrial Management & Data Systems 109.2 (2009): 281-300. The system uses snowball sampling for gathering the data. And it keeps participant profile of younger people with college degrees.

Kmail, Aseel B., et al. "An automatic online recruitment system based on exploiting multiple semantic resources and concept-relatedness measures." 2015 IEEE 27th International Conference on Tools with Artificial Intelligence (ICTAI). IEEE, 2015. It is an automatic online recruitment system based on coupling multiple semantic resources and statistical concept-relatedness measures. It first employs NLP techniques, then uses statistical-based concept-relatedness measures and finally employs multiple semantic resources

Faliagka, Evanthia, Athanasios Tsakalidis, and Giannis Tzimas. "An integrated e-recruitment system for automated personality mining and applicant ranking." Internet research 22.5 (2012): 551-568. The system employs AHP for candidate ranking based on criteria that can be extracted from the applicant’s LinkedIn profile and performs linguistic analysis on candidates’ blogs to infer their personality characteristics. The system was tested in a large-scale pilot scenario.

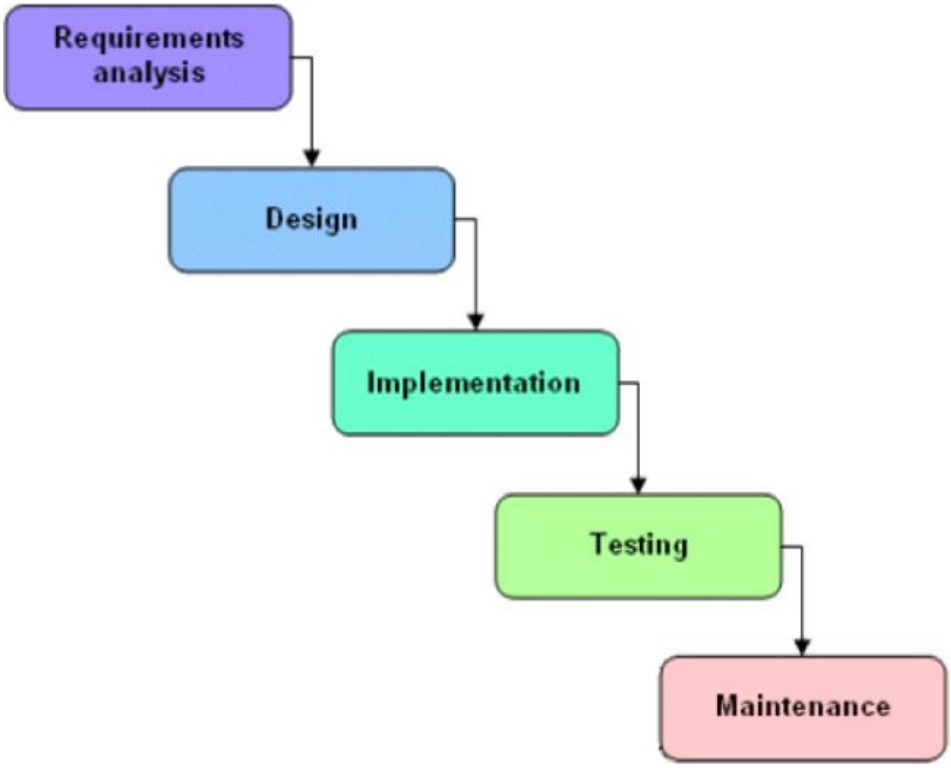
Table 3:1: Literature Survey

Sr. No	Paper	Remarks	Limitations
1.	Yoon Kin Tong, David. "A study of e-recruitment technology adoption in Malaysia." Industrial Management & Data Systems 109.2 (2009): 281-300.	The system uses snowball sampling for gathering the data. The system keeps participant profile of younger people with college degrees.	There is a country constraint in this system as the study was specific to Malaysia. The system uses self report method which makes result less reliable.
2.	Kmail, Aseel B., et al. "An automatic online recruitment system based on exploiting multiple semantic resources and concept-relatedness measures." 2015 IEEE 27th International Conference on Tools with Artificial Intelligence (ICTAI). IEEE, 2015.	It is an automatic online recruitment system based on coupling multiple semantic resources and statistical concept-relatedness measures. It first employs NLP techniques, then uses statistical-based concept-relatedness measures and finally employs multiple semantic resources.	The system has data quality issues, scalability challenges, language dependency, biases in decision-making, complexity, high costs and variable performance across job roles and industries.
3.	Faliagka, Evanthia, Athanasios Tsakalidis, and Giannis Tzimas. "An integrated e-recruitment system for automated personality mining and applicant ranking." Internet research 22.5 (2012): 551-568.	The system employs AHP for candidate ranking based on criteria that can be extracted from the applicant's LinkedIn profile and performs linguistic analysis on candidates' blogs to infer their personality characteristics. The system was tested in a large-scale pilot scenario.	The AHP and linguistic analysis algorithms used may introduce their own biases, affecting the fairness of candidate rankings and personality inferences. The system may prioritize hard skills and quantitative data but could overlook crucial soft skills and interpersonal qualities that are essential for certain roles.

Chapter 4

PROJECT PLAN

Figure 4.1: Software modeling



We approached the system development using the waterfall model depicted in the Based on this model, the required estimates have been stated in Annexure. In order to map our estimates with the steps in a waterfall model, we considered each phase separately and then stated the required estimate

Chapter 5

SOFTWARE REQUIREMENT SPECIFICATION

5.1 Project scope

1) The platform will be beneficial for every job seekers or college freshers, whether they are actively job hunting or exploring career opportunities. It is not limited to specific industries; instead, it caters to individuals seeking employment across various sectors.

2) The application's tracking feature will provide precise information about job applications, making it convenient for the HR to monitor and shortlist the candidates for the next round or process.

3) Initially, our focus is on implementing the tracking system exclusively for our college. However, in the future, other companies can register with our system and seamlessly integrate their recruitment processes with our platform.

5.2 User Classes & Characteristics Coder

User Classes

1)Administrator

i) Login

ii) Application – to check job application

iii) Status – to shortlist the candidates for next round

iv) Vacancy – to provide information of vacant jobs

v) Settings – to give access to staff /admin

2)End- User

i) Apply – to apply for a job

ii) Contact – to contact

Characteristics of Coder

- Proficient in web development consisting HTML, CSS, JS, PHP, MYSQL .

Chapter 6

RESULTS

Administrator - End

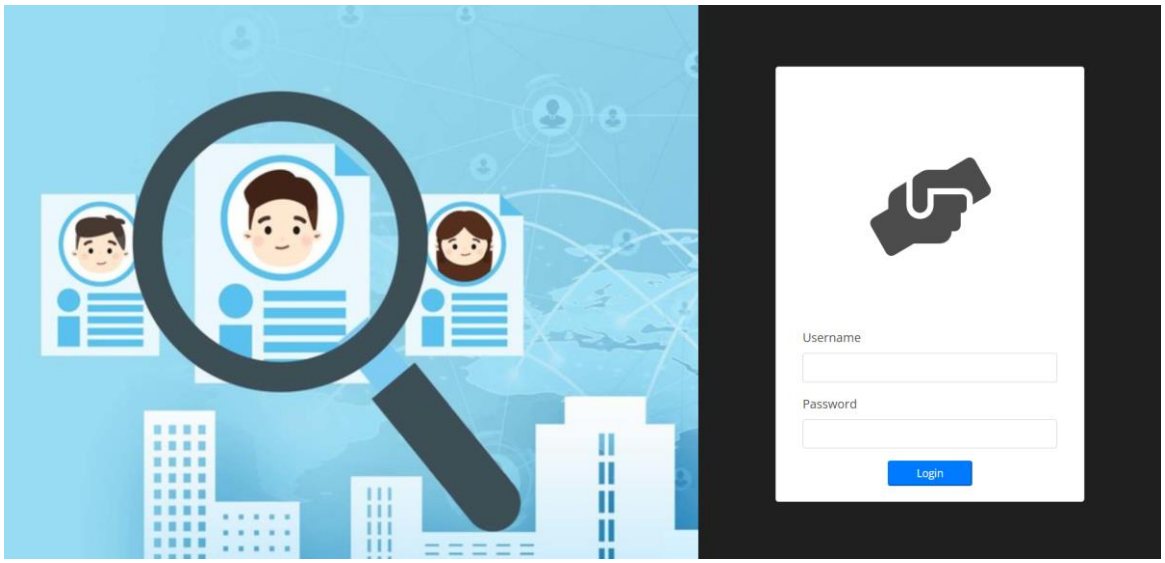


Fig.6.1

This is the login page of our website. Here user can enter valid details and can access the website.

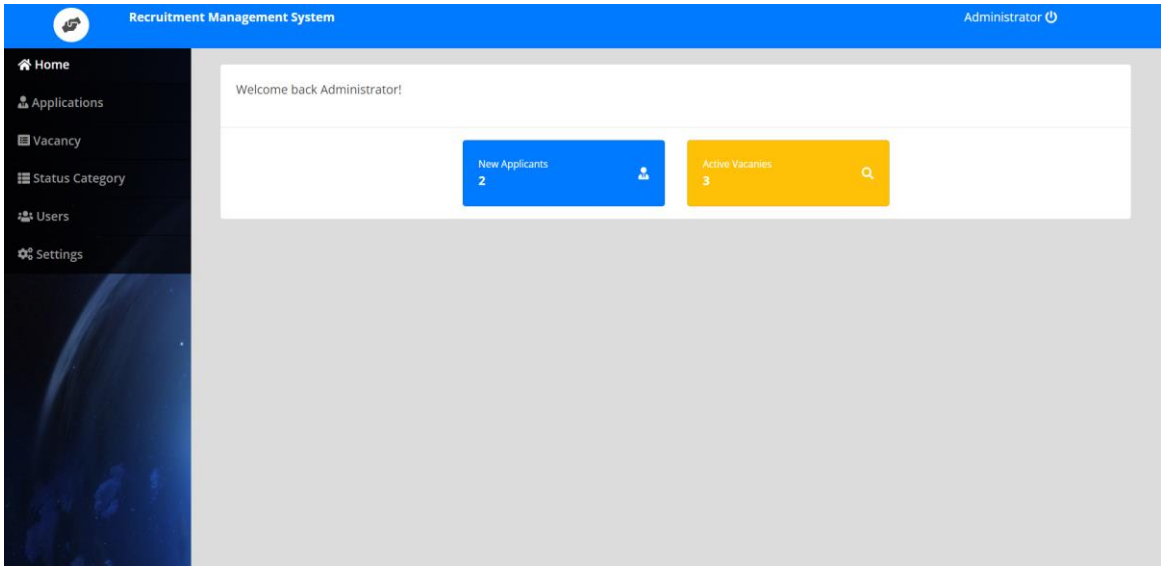


Fig.6.2

This is the home page which the administrator can see on their interface.

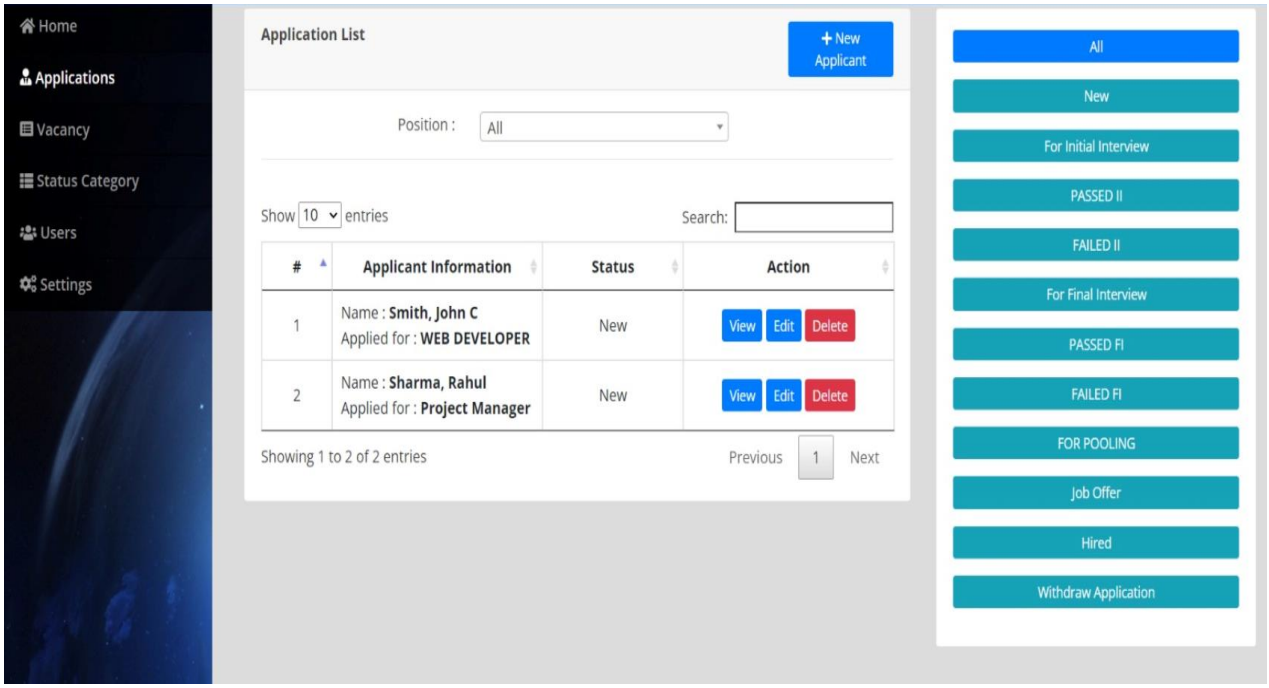


Fig.6.3

This is the application page where we can see the applicants who have applied for the job.

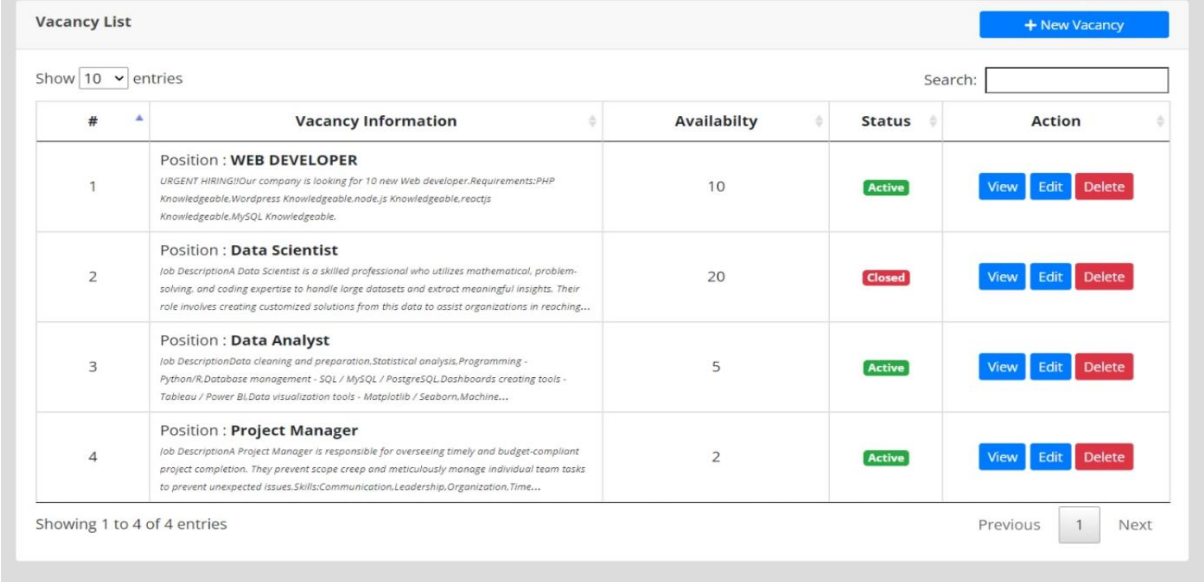


Fig.6.4

This is the vacancy list where we can see the job vacancies and we can also add and update the vacancies.

User – End

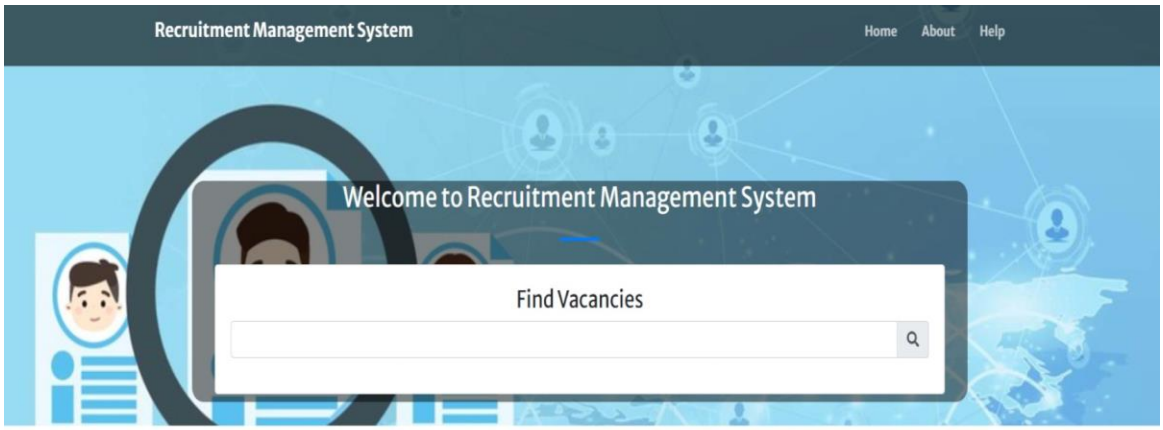


Fig.6.5

Here user can search for required job vacancies and can proceed to apply for job role user is master in.

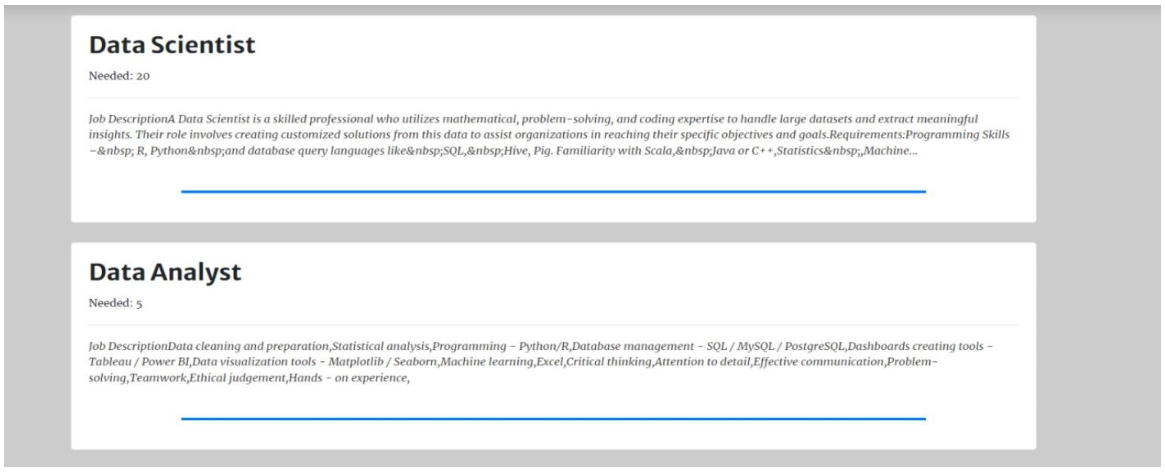


Fig.6.6

This part shows job description, skill set needed and also the number of employees the company want to recruit.

Chapter 7
CONCLUSION AND FUTURE WORK

The Online Recruitment System has proven to be a revolutionary tool in the field of recruitment. It has streamlined the hiring process, making it more efficient and effective. The system has enabled organizations to reach a wider pool of potential candidates, thereby increasing the chances of finding the right fit for the job. It has also reduced the time and resources spent on manual processes, leading to cost savings. The system's ability to store and manage large amounts of data has facilitated better decision-making. It has also improved communication between recruiters and candidates, leading to a more transparent and fair recruitment process. Overall, the Online Recruitment System has significantly improved the quality of recruitment.

Despite its numerous benefits, there is still room for improvement in the Online Recruitment System. Future work could focus on enhancing the system's capabilities in the following areas: Artificial Intelligence (AI) and Machine Learning (ML): Incorporating AI and ML algorithms could help in better matching candidates with job requirements. It could also automate repetitive tasks, freeing up time for recruiters to focus on more strategic aspects of recruitment.

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