



International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

ONLINE PLACEMENT CELL MANAGEMENT SYSTEM

**K.Mahalakshmi*¹, #*Mr.R.Sathish Kumar*²

¹Master of Computer Applications, Krishnasamy College of Engineering &Technology, Cuddalore,India

²MCA.,M.Phil.,Assistant Professor, Master of Computer Applications, Krishnasamy College of Engineering &Technology, Cuddalore,India

ABSTRACT:

Online Placement Cell Management System is a software solution aimed at simplifying the operations of placement cells in educational institutions. This Web application is done by using Python Django, HTML, CSS, JavaScript, and Bootstrap 5. MVT (Models, Views, Template), a software designing architecture is also used to design this project. It will help the placement coordinator as well as the students to coordinate every activity effortlessly. Here, Admin who will be the placement coordinator just needs to post the Company Info and available Jobs. Students can register on this platform and can apply for the Jobs available based on their skills and interest and applied students can receive invitation mail for the interview from the admin. Here everybody related to the College Placement cell will be benefited from this application. With analytics and reporting features, this system enables placement officers to track placement trends and assess student performance. Overall, it streamlines the placement process, and enhances students' employability.

Keywords: Python Django, HTML, CSS, JavaScript, and Bootstrap 5. MVT (Models, Views, Template).

INTRODUCTION :

The Online Placement Cell Management System, developed using the Django framework, is a comprehensive web application designed to streamline the placement activities of educational institutions. It provides a centralized platform for managing all placement-related processes, facilitating interaction among students, placement officers, and recruiters. Students can create and update profiles, build resumes, and apply for job opportunities, while placement officers can verify student information, post job openings, schedule interviews, and generate detailed reports on placement statistics. Recruiters can manage their company profiles, post job requirements, search for potential candidates, and handle interview schedules.

The system incorporates role-based access control for data security and a communication module for notifications and messaging. By automating routine tasks and offering comprehensive analytics, the system enhances the efficiency of the placement process, providing a structured approach to managing campus placements. The primary objectives of this system are to provide a unified platform for managing all placement-related data and activities, ensuring easy access and organization. It enables students to create, update, and maintain their profiles and resumes online, facilitating seamless applications to job opportunities and real-time tracking of application status. Placement officers can efficiently schedule interviews, manage logistics, and notify relevant parties about upcoming interviews. Recruiters are provided with tools to post job vacancies, search for suitable candidates, and manage interview schedules effectively. The system also automates routine administrative tasks such as verifying student profiles, posting job opportunities, and generating reports to save time and reduce errors, while improving communication among students, placement officers, and recruiters through notification and messaging systems.

Furthermore, the Online Placement Cell Management System aims to enhance transparency and accountability in the placement process. It achieves this by providing detailed audit trails of activities such as job postings, student applications, interview schedules, and recruiter interactions. These audit trails ensure that all actions within the system are logged and can be reviewed for compliance and performance evaluation purposes. This transparency not only fosters trust among stakeholders but also helps in identifying areas for process improvement based on data-driven insights. In addition to its operational benefits, the system contributes significantly to the overall branding and reputation of the educational institution. A well-managed placement process reflects positively on the institution's ability to prepare and support its students for successful careers. By showcasing comprehensive profiles of students to recruiters and enabling efficient communication channels, the system helps in attracting a diverse range of recruiters and job opportunities. This, in turn, enriches the placement experience for students by offering them a broader array of career prospects and networking opportunities with industry leaders.

LITERATURE SURVEY :

1.Design and Development of a Campus Placement Management System Authors: Rajkumar S, Suresh K, Vignesh B.

This paper discusses the creation of a campus placement management system aimed at automating the placement process in educational institutions. The system is designed to handle student registrations, job postings, and interview scheduling. The authors highlight the challenges faced during manual

placement processes and propose a solution that leverages web technologies to streamline these activities. The system also includes features for maintaining student profiles, tracking application status, and generating placement reports. This automation helps in reducing administrative workload and improving the overall efficiency of the placement process.

2. Automated Training and Placement Cell Authors: Vishnu P, Anand MK.

The authors present an automated training and placement cell system that aims to enhance the efficiency of the placement process by digitizing various activities. This system includes modules for student registration, job notifications, and scheduling of interviews and training sessions. By automating these processes, the system reduces the administrative burden on placement officers and provides students with timely updates on job opportunities. The paper also discusses the technical implementation of the system using web-based technologies, ensuring that it is accessible and user-friendly for both students and employers.

3. A Comprehensive Web-Based Training and Placement System Authors: Sai Krishna G, Raju M

This paper describes a web-based training and placement system designed to facilitate interaction between students, placement officers, and companies. The system offers functionalities such as resume management, job application tracking, and interview scheduling. It also includes a feedback mechanism for employers to provide insights on student performance. The authors discuss the system's architecture, which is built using PHP and MySQL, and emphasize its scalability and reliability. The system aims to improve the overall placement process by providing a centralized platform for all stakeholders involved.

4. Development of an Online Placement Portal with Real-Time Analytics Authors: Kumar A, Patel N, Gupta S.

The authors introduce an online placement portal that incorporates real-time analytics to enhance the placement process. This portal allows students to create profiles, apply for jobs, and receive notifications about upcoming interviews. The real-time analytics feature provides insights into placement trends, helping placement officers make informed decisions. The system also includes a dashboard for monitoring key performance indicators such as the number of placed students and company participation. By leveraging data analytics, the portal aims to optimize the placement process and improve the overall success rate.

5. A smart approach for campus recruitment management Authors: Divya S, Ramesh K.

This paper presents a smart campus recruitment management system designed to streamline the recruitment process in educational institutions. The system features modules for student registration, job postings, and interview scheduling. It also includes advanced functionalities such as automated resume screening and matching students with suitable job opportunities based on their skills and preferences. The authors discuss the technical aspects of the system, including its implementation using web technologies, and highlight its benefits in terms of efficiency and accuracy. The system aims to reduce the manual effort involved in campus recruitment and improve the overall experience for both students and employers.

6. Web-based placement management system using PHP and MySQL Authors: Sharma R, Verma M, Singh K.

The authors describe the development of a web-based placement management system using PHP and MySQL, aimed at automating the placement processes in educational institutions. The system includes features such as student registration, job postings, resume management, and interview scheduling. By providing a centralized platform, the system ensures that all placement-related activities are streamlined and easily accessible to students and placement officers. The paper also discusses the technical architecture of the system and its advantages in terms of scalability and user-friendliness. The system aims to enhance the overall efficiency of the placement process and improve communication between students and employers.

III. PROPOSED SYSTEM

In the proposed system, we are intended to add extra features to make the portal user-friendly. We are providing informative videos on how-to-face interviews and videos regarding their career necessities, and provide updates on all job availabilities posted within the past 15 days along with their opening and closing dates on the home page. In this project, we are going to add the feature of detecting the search error using the LIKE operator (Pattern Matching) and string matching algorithm. We are using Models-Views-Template (MVT), software designing architecture, to design our system where 'Models' connect the frontend and backend, "Views" provides business logic for manipulating data, and "Template" acts as an interface (GUI) that facilitates the user and system interaction. MVT architecture is provided by Django which is scalable and reusable.

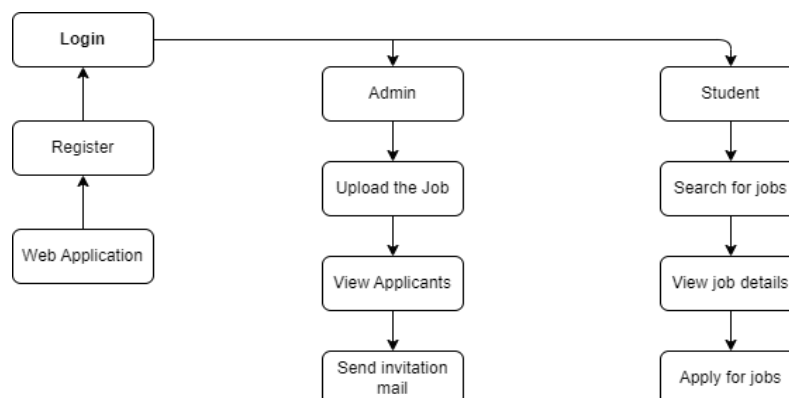


Figure 1: System Architecture of the proposed system

3.1 IMPLEMENTATION

Our project constituted of the below modules,

- Authentication and User Management
- User Profile Management
- Apply for Job
- Admin Dashboard
- Interview Status Tracking

Authentication and User Management

User Registration This feature allows new users to seamlessly create an account within the system by providing necessary details such as name, email, password, and other relevant information. The registration process includes verification steps like email confirmation to ensure the authenticity of the users. Once registered, users can access personalized features and functionalities based on their profiles. Additionally, the system can handle cases of duplicate registrations and guide users through the retrieval of forgotten credentials, enhancing the overall user experience and security. User Login/Logout Secure authentication mechanisms are employed to allow users to log into the system using their registered credentials. This includes the implementation of multi-factor authentication (MFA) to add an extra layer of security. Users can securely log out when they have finished their session, ensuring that their accounts remain protected from unauthorized access. Persistent sessions with token-based authentication can be used to maintain user state across different parts of the application, while ensuring timely expiration and revocation of tokens.

User Profile Management

Users have the capability to update and manage their personal information through a user-friendly interface. This includes changing contact details, updating preferences, and managing privacy settings. The module also encompasses password reset functionalities, enabling users to securely change their passwords through verified methods. Session management features allow users to view active sessions, terminate unwanted sessions, and get notified of unusual activity, providing comprehensive control over their accounts. Role-based Access Control (RBAC) This crucial feature ensures that users have access only to the functionalities pertinent to their roles within the system. For instance, admins have comprehensive control over the platform, whereas students and placement coordinators have access to specific modules. RBAC is dynamically managed, allowing administrators to assign, modify, and revoke roles as necessary, thereby maintaining a secure and organized environment. This also includes detailed auditing and logging of access patterns to monitor and respond to any anomalies effectively. Student Management Job Search This module provides students with a powerful search interface to explore job opportunities. Users can filter job postings based on various criteria such as location, industry, job type, company size, and more. Advanced search options and predictive search capabilities make finding relevant jobs more intuitive and efficient. The module may also include recommendation systems that suggest jobs based on the student's profile, past applications, and search history. View Drive Details: Students can access comprehensive information about each job drive, including detailed job descriptions, qualifications required, benefits offered, and company background. This module allows students to save job postings for future reference and set reminders for application deadlines. Interactive elements such as company ratings and reviews, interview experiences, and FAQs can help students better understand the job roles and prepare accordingly.

Apply for Job

This feature enables students to apply for job positions directly through the platform. The application process is streamlined, allowing students to submit resumes, cover letters, and other necessary documents with ease. The system ensures that all required fields are completed and documents are properly formatted before submission. Additionally, students can track the status of their applications, receive feedback from recruiters, and get notified of any updates or additional requirements. Admin Dashboard The admin dashboard is a centralized control panel providing administrators with an overview of the platform's activities.

Admin Dashboard

Admins can create and manage placement drives, including adding job vacancies, specifying salary details, working hours, and job designations. The dashboard allows for real-time editing and updating of job details, ensuring that the information remains current and accurate. Admins can also delete outdated or irrelevant job postings to maintain a clean and relevant job board. Interview Details Viewing Interview Schedule/Calendar View: This module presents a visually appealing calendar view of all scheduled interviews, allowing students, placement coordinators, and companies to see upcoming interview slots at a glance. It supports color-coding and filtering options to distinguish between different companies, job roles, and interview stages. Notifications and reminders can be set for upcoming interviews, ensuring all stakeholders are well-prepared and punctual. Interview Details: Students and other stakeholders can access detailed information about each scheduled interview, including the date, time, participating company, and interview location. This feature provides comprehensive job descriptions, interview formats (e.g., technical, HR, group discussion), and preparation guidelines. It helps candidates understand the expectations and requirements of each interview, enabling better preparation and performance.

Interview Status Tracking

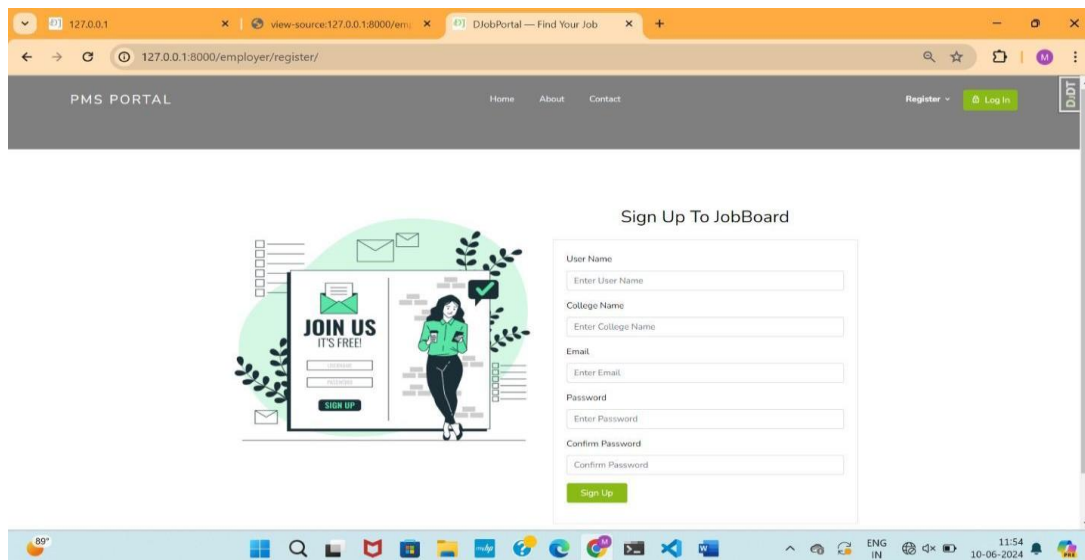
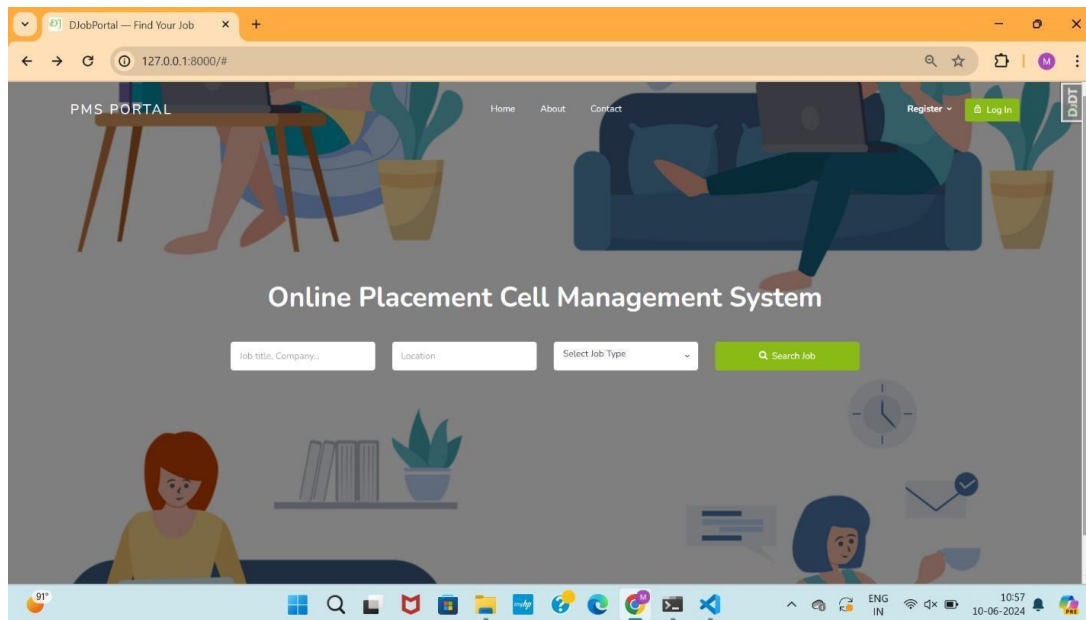
This feature tracks the status of interviews throughout the placement process, providing real-time updates on whether interviews are scheduled, completed, or pending. It offers a clear overview of the recruitment pipeline, helping students to plan their preparation and follow-up actions accordingly. Recruiters and placement coordinators can update the status of interviews, adding notes and feedback, which are then accessible to the relevant students. Notification Module Students receive invitations for interviews with details about the schedule, location, and participating company. These notifications include comprehensive information to help students prepare for their interviews, such as job role, expected format, and any prerequisites. The system can send reminders and updates if there are changes to the interview schedule, ensuring that students are well-prepared and punctual.

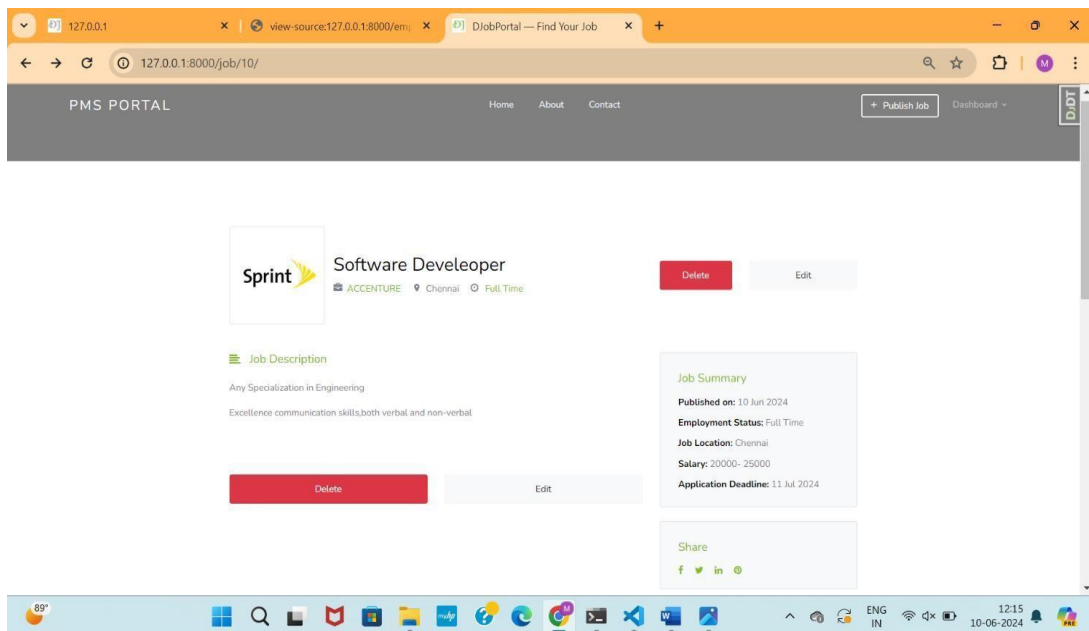
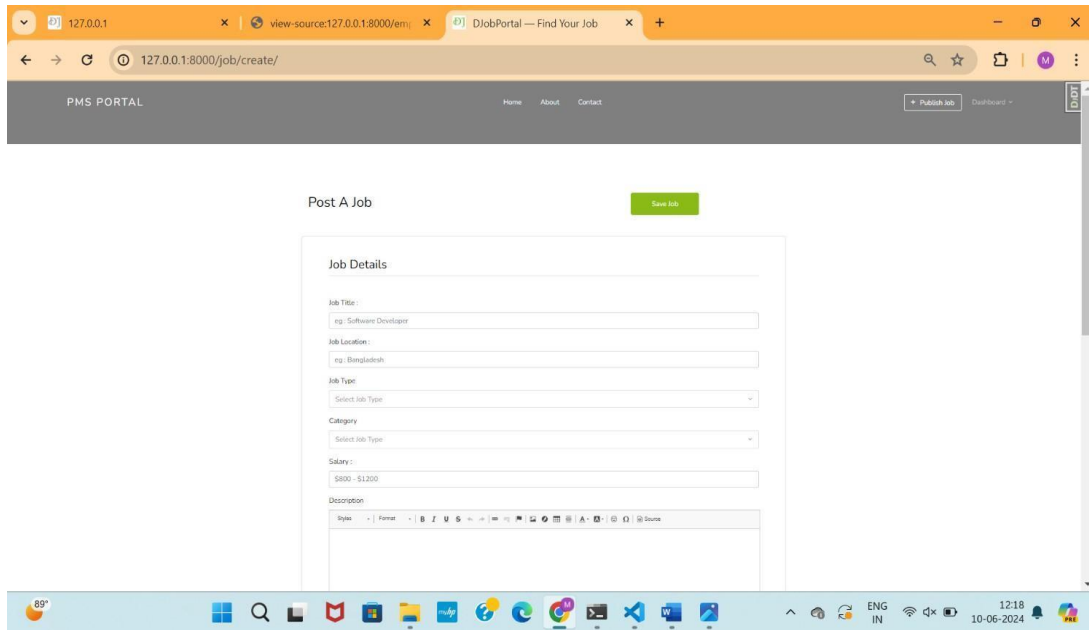
RESULTS AND DISCUSSION :

The purpose of testing is to discover errors and ensure that software systems meet their requirements and user expectations without failing in an unacceptable manner. Testing aims to uncover every conceivable fault or weakness in a work product, providing a means to check the functionality of components, sub-assemblies, assemblies, and finished products. Various types of tests address specific testing requirements, including unit testing, functional testing, acceptance testing, and integration testing. Unit testing focuses on validating internal program logic and ensuring that program inputs produce valid outputs, while functional testing systematically demonstrates that functions are available as specified by business and technical requirements. User acceptance testing (UAT) is critical for confirming that the system meets functional requirements, requiring significant end-user participation. Integration testing ensures that different software components or modules interact correctly and that the system as a whole meets functional and non-functional requirements. By combining these testing strategies, software testing provides comprehensive validation that each unique path of a business process performs accurately, identified inputs and outputs are handled correctly, and interfacing systems or procedures function as expected.

CONCLUSION :

Maximum work goes manually in the present placement system which makes it take time to avail changes. This includes main problems like searching for the data of students and sorting them along with it. Also, updating student data is a cumbersome job and does not have a method to notify the student in time which makes the management of the placements very difficult. In the proposed system, many of these problems become automated. The registration of the student for an upcoming placement, the addition of a new user, sharing resume and details etc., is all met. The placement officer validates the information and gives the student list based on the criteria required which otherwise would have been very difficult to manage.





REFERENCE :

1. Rajkumar S, Suresh K, Vignesh B. Design and development of a campus placement management system. *Int J Sci Res Publ* 2015;5:1-6.
2. Vishnu P, Anand MK. Automated training and placement cell. *Int J Comput Sci Inf Technol* 2015;6:2255-2258.
3. Sai Krishna G, Raju M. A comprehensive web-based training and placement system. *Int J Adv Res Comput Sci* 2017;8:45-50.
4. Kumar A, Patel N, Gupta S. Development of an online placement portal with real-time analytics. *Int J Innov Res Sci Eng Technol* 2018;7:4321-4326.
5. Divya S, Ramesh K. A smart approach for campus recruitment management. *Int J Comput Appl* 2017;169:22-26.
6. Sharma R, Verma M, Singh K. Web-based placement management system using PHP and MySQL. *Int J Eng Technol (IJET)* 2017;9:213-218.
7. Patil A, Deshmukh P, Kale R. Enhanced placement management system with mobile application integration. *Int J Adv Res Comput Commun Eng* 2017;6:102-107.
8. Mishra P, Sharma V, Singh N. Placement management system using cloud computing. *Int J Comput Sci Inf Technol* 2016;7:168-171.
9. Gupta P, Mehta A, Sharma K. Campus placement system using ASP.NET. *Int J Comput Appl* 2016;137:30-33.
10. Nayak R, Kumar P, Verma S. Integrated placement management system. *Int J Sci Eng Technol Res* 2015;4:1473-1476.
11. Verma N, Sharma K, Patel R. A unified solution for placement management. *Int J Comput Sci Inf Technol* 2016;7:201-204.