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“Smart Talent Acquisition and Placement Hub”.

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ABSTRACT :

The Recruitment System is a project which provides a bridge between Student and T&P Department. With the help of this system T&P department inform about Companies, Placement New Jobs, and Other Recruitment activity to Student. Student can inform their activity to T&P department and also update their profile. By using this system TPO can also inform the passed-out students.

Recruitment System aims at providing the Facility to automate and simplify the process of registration and list generation of eligible students for placement. This System provide facility to TPO to do all their Work Regarding Placement like Collecting Student Records, Registering the Suitable Students, to check the number and percentage of placed & unplaced students, and important announcements to other departments. The whole work is automated as well as on intranet.

It provides the facility of maintaining the details of the students. It will reduce the paper work and utilize the maximum capabilities of the Setup and organization as well as it will save time and money, which are spending in making reports and collecting data. It can be accessed throughout the organization and outside as well with proper login provided. This system can be used as an application for college to manage the student information with regards to placement.

This system has scope of improvement/amendments. In future, sector can communicate with each other online. All currently active enquires can also be added in the website to view if online. This application can be modified from time to time as per the changing requirement of the user with lesser cost also the backend of the application can be changed as per the storage requirement of the application and to provide more security level features.

Keywords : Talent Acquisition, Online Placement Portal, Student Profile Management, PHP, MySQL, AJAX, Web Application

1. Introduction

The co-optation Management is a project which provides a bridge between Student and T&P Department. With the help of this system T&P department inform about Companies, Placement New Jobs, and Other Recruitment activity to Student. Student can inform their activity to T&P department and also update their profile. By using this system TPO can also inform the passed-out student's

2. Literature Review

Several studies on Training and Placement Systems highlight the significance of automation, data management, and user accessibility in enhancing campus recruitment processes. Research indicates that many institutions still rely on manual processes, leading to inefficiencies and delays. Various studies have explored the role of AI-driven decision-making, real-time student eligibility tracking, and automated job-matching algorithms in improving placement outcomes.

Existing systems such as CareerConnect and CampusHire have introduced online portals that allow students to register, update their profiles, and apply for job opportunities. Additionally, studies emphasize the importance of secure authentication mechanisms, automated notifications, and data-driven insights for better coordination between students, employers, and placement officers.

This project aims to bridge the gap by providing a scalable and user-friendly Training and Placement System that integrates automated job postings, real-time applicant tracking, and AI-driven resume analysis to streamline the hiring process for both students and recruiters.

3. System Requirements

3.1 Hardware Requirements

The hardware requirements are:

1. Processer - Pentium IV with 1.8 MHz and above

2. RAM - 256 MB RAM minimum (512 MB RAM)
3. Hard Disc - HDD (7 GB and above)
4. Operating System - Windows XP or Above version

3.2 Software Specification

Following software are required for developing Web based application: -
PHP, MySQL, HTML, CSS, JavaScript.

4. Our Research and Implementation

We have developed a Training and Placement System that streamlines the recruitment process for students, recruiters, and administrators. One of the unique features of our system is a chatbot for contacting the placement officer, allowing students and recruiters to receive instant responses to queries related to job opportunities, application status, and interview schedules.

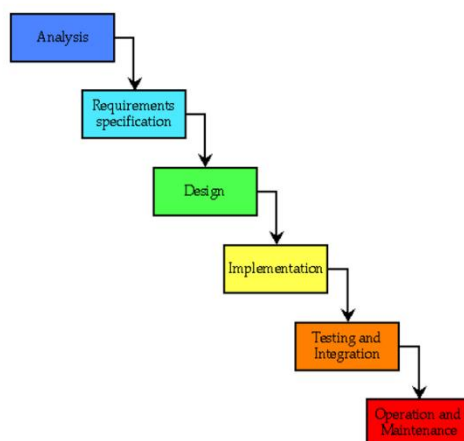
Our platform provides a centralized job application system, enabling students to create detailed profiles, upload resumes, and apply for job opportunities effortlessly. Recruiters can post job openings, filter applications, and track candidate progress in real time.

To enhance user engagement, we have integrated a training module offering mock interviews, skill assessments, and career guidance resources, helping students improve their employability.

5. System Design and Architecture

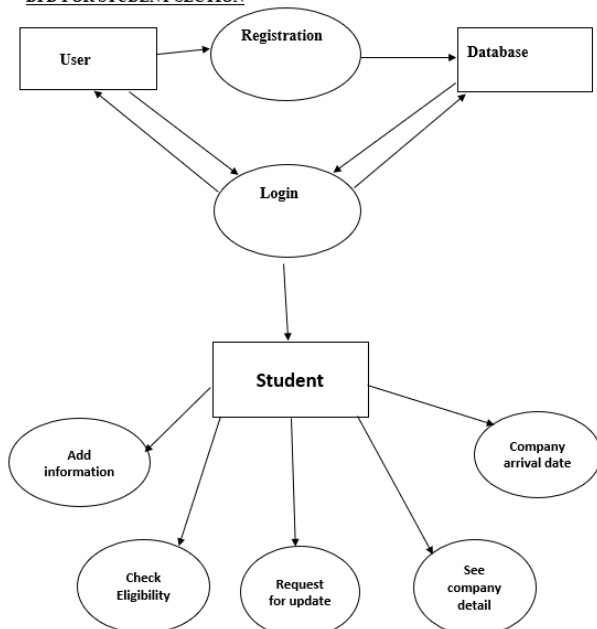
5.1 Methodology

Waterfall model

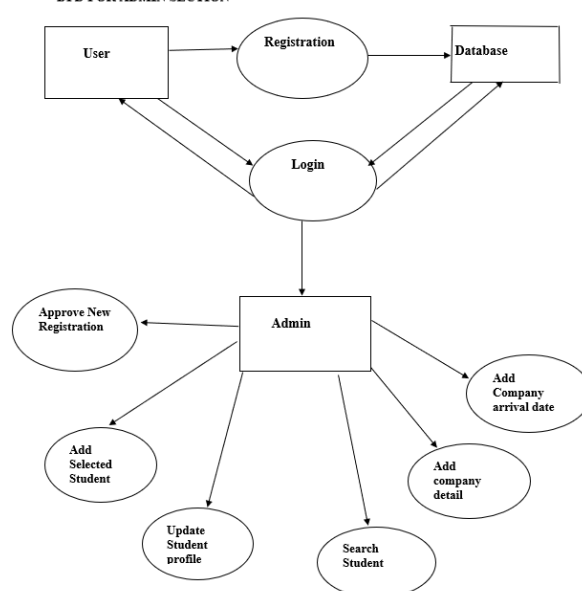


5.2 Data flow diagram

DFD FOR STUDENT SECTION



DFD FOR ADMIN SECTION



5.3 Database Schema

The system's database includes the following tables:

-Selected Student Table

Column Name	Datatype
Id	int
Name	Varchar (50)
Branch	Varchar (50)
Company Name	Varchar (50)
Salary	Varchar (50)
Year	int
Image	text

- Branch wise Selected Table

Column Name	Datatype
Id	int
Name	Varchar (50)
Year	Varchar (50)
Company Name	Varchar (50)
Package	Varchar (50)
Branch	Varchar (50)
Image	Varchar (50)
Comment	text

3.4.3 Company Arrival Detail Table

Column Name	Datatype
Id	int
Company Name	Varchar (50)
Date	Varchar (50)
Time	Varchar (50)
Venue	text
Description	text
Status	Varchar (50)

- Company Detail Table

Column Name	Datatype
Id	int
Company Name	Varchar (50)
Tenth	int
Twelfth	int
Graduation	int
Recruitment Process	Varchar (50)
Links	Varchar (50)
Description	Varchar (50)

- Admin Password Generation Table

Column Name	Datatype
User Name	Varchar (50)
Roll No	Varchar (50)
Email	Varchar (50)
Branch	Varchar (50)
Sem	Varchar (50)
Mobile No	Varchar (50)

Approval	Varchar (50)
Password	Varchar (50)
Name	Varchar (50)

6. Implementation

6.1 Admin Features

- **User and Role Management:** Admins can add, update, or remove users (students, recruiters, and other admins) and define their roles.
- **Job Posting Management:** Admins can review and approve company job postings before they become available to students.
- **Chatbot Monitoring:** The system includes an AI-powered chatbot for placement-related queries, which admins can monitor and update.
- **Student Placement Tracking:** Admins can generate reports on selected students, company-wise hiring trends, and branch-wise placement statistics.
- **Secure Login and Data Encryption:** Admins access the system using secure credentials, ensuring platform security through encrypted authentication.

6.2 User Features

- **Registration and Login:** Students and recruiters can register and securely log in to the platform.
- **Profile Management:** Students can update their profiles, upload resumes, and track applications. Recruiters can view student profiles and filter applications.
- **Job Application and Tracking:** Students can apply for job opportunities, check their application status, and receive real-time notifications.
- **Chatbot Assistance:** Users can interact with an AI chatbot for quick responses regarding job postings, interview schedules, and eligibility criteria.
- **Training and Mock Tests:** The platform provides skill-based training modules, mock interview scheduling, and career guidance.

7. Testing and Validation

7.1 Testing Approach

- **Unit Testing:** Each module (registration, job application, chatbot response, admin dashboard) was tested individually to ensure proper functionality.
- **Integration Testing:** The system was tested as a whole, verifying smooth interactions between different components, including database queries, job applications, and training resources.
- **User Acceptance Testing (UAT):** Feedback was collected from test users (students, recruiters, and placement officers) to refine the chatbot's response accuracy and optimize job application workflows.

7.2 Error Handling and Maintenance

- **Error Detection:** Implemented debugging tools to identify and resolve authentication failures, chatbot misinterpretations, and data inconsistencies.
- **Database Backup and Recovery:** Regular automated backups of student records, job postings, and placement reports ensure data integrity and quick recovery in case of system failures.
- **Security Enhancements:** Role-based access control (RBAC), encrypted authentication, and SQL injection prevention techniques were implemented to protect user data.

8. Results and Discussion

The system successfully demonstrated key functionalities such as user registration, real-time job tracking, and chatbot assistance. The integration of Microsoft SQL Server 2008 for secure and efficient data management allowed smooth operation, while ASP.NET and C# ensured a dynamic and interactive frontend.

The use of the Waterfall Model for development provided a structured approach, ensuring all phases, from requirement analysis to testing, were executed efficiently. AJAX-based interactions minimized page reloads, enhancing the user experience with real-time job status updates and chatbot responses. Key challenges included database query optimization for faster job filtering and chatbot training for accurate responses.

Overall, the system proved to be a scalable and user-friendly solution for managing training and placement activities, improving student employability and recruiter engagement.

9. Conclusion and Future Scope

9.1 Conclusion of the Placement Management System:

Presently we designed our Placement Cell to be very User Friendly. Many features are enhanced to the present Placement Cell. With this Placement Cell most of the PMS's time is saved. The features of the system can be further enhanced in many ways. The documentation that has enclosed can enable even a person with minimum knowledge to understand it well.

PERFORMANCE: Placement Cell which is developed in JSP technology is a versatile product and is platform independent. The features provided by the Placement Cell makes it one of an interactive online platforms for Placements.

- Saving time and cost of papers.
- It will be beneficial for students as well as PMS.
- Students can easily interact with PMS.
- PMS can easily inform to the passed-out student.

9.2 Future Scope:

Students can maintain their information and can update it. Notifications are sent to students about the companies. Students can access previous information about placement. This system has scope of improvement / amendments. In future, sector can communicate with each other online. All currently active enquires can also be added in the website to view if online. This application can be modified from time to time as per the changing requirement of the user with lesser cost also the backend of the application can be changed as per the storage requirement of the application and to provide more security level features.

This project covers a large vary of data of all the students which may be stored with in the format of CVs and are classified according to various streams. Various companies can access the data of students and they can maintain and update their information. Notifications are sent to students regarding the companies. Students can access previous regarding concerning.

1. View Student Profile
2. Company Page
3. View recruitment Schedule View selected List of students

10. Previous Research Paper

"Exploring the Impact of Training and Placement Cell on Career Transition to Employment"

Year : 2024

Authors: Dr. Niyaz Panakaje, S. M. Riha Parvin, Arun Bhagwath, Harinakshi Suvama, et al.

Summary: This study assesses the effectiveness of training and placement cell activities on students' transition to employment through career preparedness. Conducted among higher education students in South India, the research highlights that active participation in training and placement activities significantly enhances career preparedness and facilitates smoother transitions to employment.

Link

: https://www.researchgate.net/publication/384176624_EXPLORING_THE_IMPACT_OF_TRAINING_AND_PLACEMENT_CELL_ON_CAREER_TRANSITION_TO_EMPLOYMENT?utm_source=chatgpt.com

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