

# Development of Web Application to Automate Training & Placement Process

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Abstract- The smooth operation of training and placement operations on campus is the responsibility of the college training and placement cell. Up until now, the training and placement activity's workflow has been slowed down by the manual process of monitoring pupils and shortlisting them in accordance with recruiters' requirements. To solve this problem, we came up with a web application that streamlines all of these operations into one place with the least amount of work. It is a web-based platform that aids in addressing the issues the training and placement cell encountered during campus drives and other activities of a similar nature. Three modules will make up the system: Student, HOD, and T&P cell. Each module's workflow and position on the platform will be distinct. The training and placement cell will post all of the information about the forthcoming campus drive, including the eligibility requirements and the drive details, on the platform. The student's responsibility is to acknowledge the drive notification and have the option to participate in the drive at their discretion. The HOD can keep an eye on impending drives and look for newly arrived and positioned students.

**Keywords** —*T*&*P*, shortcomings, tracking, upcoming drives, time-consuming, modules, criteria.

# I. INTRODUCTION

To overcome the issues with the traditional manual approach, the "Training and Placement Management System" has been created. The difficulties our current system faces are supported by this programme, which aims to eliminate and, in some circumstances, lessen them. Also, this system is created to meet the demands of the business for efficient and successful operation. The programme is kept as simple as possible to reduce data entry errors. Also, it displays an error notice when you enter invalid data. The user doesn't require any formal training to use this system. This alone demonstrates that it is user-friendly. The abovementioned Training and Placement Management System can result in an error-free, secure, dependable, and quick management system. Instead of focusing on record keeping, it can help the user focus on their other activities. As a result, it will aid organisations in making better use of their resources. The information needed for the selection process, such as aptitude, reasoning, etc., as well as many websites for placement exams, can be searched for by students. All users can access information on events occurring at the college and the accomplishments of selected students. So, our project offers the capability of keeping student information and obtaining the requested list of applicants for businesses looking to hire individuals based on a specific query. This project's goal is to develop a workflow that will enable us to accelerate the T&P registration process. Additionally, this system will facilitate procedures like shortlisting and criteria analysis while keeping a list of students who were placed and students who chose to continue their education. By giving the placement cell a virtual means of communication with students, our application will offer a solution to all these issues. To solve this problem, we created a web application that unifies all of these operations into one roof with minimum efforts.

## **II. PROBLEM DESCRIPTION**

Purpose of this project is to create a workflow that will enable us to streamline the T&P registration workflow not only that, but this system will also ease in processes such as shortlisting and criteria analysis while maintaining a list of placed students and students opting for further studies.

## **III. OBJECTIVES**

- Some of the objectives are: Ease the process of Training & Placement
- Schedule forthcoming campus drives and monitor existing ones.
- Facilitate with student data necessary for checking eligibility.

# **IV. LITERATURE SURVEY**

Student Analysis System for Training and Placement An interactive training and placement system which automates the training and placement activities that provides the many opportunities to raise the selection ratio. This system intimates about job openings for the students in various fields, apply to those postings and invite various organizations for hiring the students from the college and track the progress of the students. It can generate the list of shortlisted students as per HR requirements and their different criteria's. A Final Year Management System that provides the complete details of the students in the college by which we can overcome the many problems like managing the records of thousands of students and searching the list of eligibility students from those thousands of records for recruitment purpose, list companies visited to the college for hiring the students. Collecting Useful Data Carrying out regular assessments and collecting student samples of work is a useful way of gathering informative student performance data. This data is helpful when monitoring the progress of individual students across a range of learning areas, as well as tracking their achievement throughout the year. The data can be used to identify where a student is placed in relation to their personal learning goals, the other students in the class, or other targeted benchmarks. Ensuring Achievement for Every Student Monitoring student progress on a regular basis also enables the teacher to analyse a student's current performance level for a specific skill. As a result, teachers can provide students with assistance in achieving their personal academic goals. With information from assessments and samples of work, the teacher can work with the student to establish achievable learning goals and help each student to stay on track. With ongoing monitoring of the students, teachers can establish an achievable. Training and Placement Cell is an integral part of institution. The institute has to provide the complete infrastructure for effective functioning of the cell. The cell is sensitized to function all through the year towards generating placement and training.

# **V. REQUIREMENT ANALYSIS**

When placement management is done manually, difficulties can arise. This system describes how to fix them. Through the Android app, the students will

upload their entire résumé and academic history. The administrator receives all the student data, and I am able to sort the students and notify those who qualify for the drive. Students are also informed in advance about the training and placement. The proposed system includes features for student data registration, updating, and searching. The admin is the principal user. Priorities are higher for the administrator than for the other users. Students can create an account, edit their academic or personal information, or access it. The administrator will monitor the placement of the children.

# **VI. Functional Requirements**

The proposed application should notify the students who are eligible for the drive. The input must be taken from the Android app and the admin have to get all the information about the students in web application notify them for placements. Functionality The application has been designed in such a way that future enhancements will be simple to implement. The amount of upkeep required for this project is low. The development program is free source and straightforward to install. The application has been designed to be simple to use and install for anyone who is interested. Reliability The system allows the administrator to access both the student's personal and academic information as well as search for suitable students and companies. The system also allows the administrator to insert and delete records.

# VII. FLOW CHART



# Fig. 6.1 Flow Chart

Above we have shown the flow of our project. According to this, All the users need to authenticate themselves first then they'll be redirected to their respective dashboard through which they can perform all the workflows available to them.

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#### VIII. USE CASE DIAGRAM



Fig. 7.1 Use case diagram Use case diagram simply depicts the task, which a user and Admin can perform through our application.

## IX. TOOLS / PLATFORM

#### SOFTWARE REQUIREMENT

1.OS Windows 10

2.IDE – Visual Studio code

3.Language – Next.js, Tailwind CSS, Node.js, TypeScript, Prisma, Blob Storage, MySQL 4. Designing tool – Draw.io

## Typescript

TypeScript is a strongly typed programming language that builds on JavaScript, giving you better tooling at any scale. TypeScript code converts to JavaScript, which runs anywhere JavaScript runs i.e. In browser or on Node.js.

#### **Features:**

- **TypeScript is just JavaScript.** TypeScript starts with JavaScript and ends with JavaScript. Typescript adopts the basic building blocks of your program from JavaScript. Hence, you only need to know JavaScript to use TypeScript. All TypeScript code is converted into its JavaScript equivalent for the purpose of execution.
- **TypeScript supports other JS libraries.** Compiled TypeScript can be consumed from any JavaScript code. TypeScript-generated JavaScript can reuse all the existing JavaScript frameworks, tools, and libraries.
- **TypeScript is portable.** TypeScript is portable across browsers, devices, and operating systems.

#### Next.js

Next.js is a React framework that gives you building blocks to create web applications. By framework, we mean Next.js handles the tooling and configuration needed for React, and provides additional structure, features, and optimizations for your application.

#### Features:

- Next.js enables you to access CSS files from a JavaScript file. This is possible because Next.js extends its features of import.
- Fast refresh is now offered by default for all the projects on the 9.4 version of Next.js or newer. Fast refresh gives developers an immediate suggestion on edits made to your React components.
- The lazy loading feature of Next.js helps you to deliver a better client experience. The client might reject your application if your loading requires over 25 seconds.
- Next.js supports almost every web browser because they know browser compatibility is a headache for any developer. It is very flexible for supporting different kinds of web browsers like Firefox, Microsoft Edge, Opera, Google Chrome, etc.

# Prisma:

Prisma is an open source next-generation ORM. It consists of the following parts:

**Prisma Client**: Auto-generated and type-safe query builder for Node.js & TypeScript.

**Prisma Migrate**: Migration system.

**Prisma Studio**: GUI to view and edit data in your database.

#### **Features:**

#### • The Prisma schema

The Prisma schema allows developers to define their application models in an intuitive data modelling language. It also contains the connection to a database and defines a generator.

Functions of Prisma models

The data model is a collection of models. A model has two major functions:

- 1. Represent a table in relational databases or a collection in MongoDB.
- Provide the foundation for the queries in the Prisma Client API.

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## Fig 8.1 - Student Login Screen

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# Fig 8.2 - Student Login Screen

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## Fig 8.6 – Update drive Screen.

It shows the updates of the drive and the criteria of the company.

# Fig 8.3 – T&P Login Screen

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Û	Pranay Kharabe	CSE	pranayk.cseb19@sbjit.edu.in	1800800249	null	null	80.21 %
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**Fig 8.5.1 – Figure show the Shortlist students.** Shows the necessary details and also show the status of the selected student.



Fig 8.5.2 – Figure show the Dashboard of Update drive.

Shows the details of the company of the drive.

#### XI. CONCLUSION

We have **designed** a mobile application and completed its partial development by applying engineering **knowledge** which provides an approach for Training and placement activity. It would assist the students in placement activities and always alert or give reminders to the student for the upcoming drives which solve the social problem. The application is reduced as much as possible to avoid errors while entering the data. It also provides error message while entering invalid data. No formal knowledge is needed for the user to use this system. Thus, by this all it proves it is user-friendly. Training and Placement Management System, as described above, can lead to error free, secure, reliable, and fast management system. We have modern tools like visual studio code to implement the project. We the importance of **individual** understood and during and **team**work project development management. While presenting our project in various seminar we have enhance our communication skills and displayed **professional ethics** which will result in **lifelong learning**.

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