

Placement Management Android Application

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Abstract: Placement Management App is an informative and management system, which provides the updated details of the students. The Placement Management App overcomes the difficulty of keeping records of thousands of students. It facilitates excellent interaction between the placement coordinator and students. The user will create the account when user enters into his/her respective page he/she can update the details, and the details are to be approved by the administrator. The purpose of placement management app is to automate the existing manual system. It facilitates excellent interaction between the Placement Coordinator and students. Student record keeping, Curriculum Review and retrieval of eligible students based on company criteria. The app automates the existing manual system, improving efficiency and accuracy in record-keeping. The Application aims to provide a user-friendly experience, ensuring that important data is stored securely and accessible for longer durations. By automating processes and providing real-time updates on placement status, the app helps students and placement Coordinators plan effectively for future career opportunities. Overall, the Placement Management App offers a seamless and efficient solution to enhance the placement process for both students and institutions.

Keywords: android application, placement data, automation, students, record keeping, user interface.

1. Introduction

In 21st century where mobile and information technology has become an integral part of our lives. Computers and information technology has a major influence on the society and the society is becoming more and more dependent on technology. Going on is an era of simplifying almost all complicated works using computers. The last few years have witnessed a tremendous increase in the capabilities and use of computers. The placement management app provides the information of student and their placement details. The placement Coordinator can access the data easily. In student registration we can give personal details, educational qualifications, and upload resume.

Everything that is done in the system is done in person keeping records, the management and all the departments that did this work manually make the work difficult and boring in many times. This difficult task can be made easier by doing

Placement management app helps the colleges to overcome the difficulty in keeping placement records of hundreds and thousands of student's records and searching for particular student data.

The main objective of the placement management system is to reduce manual work and time. It is difficult and time-consuming to collect all the details from each student. Manual processing makes the process slow and other problems such as inconsistency and ambiguity on operations. The proposed system intends user friendly operations which may resolve ambiguity.

By considering all this factors, the applications produced, which performs the desired process simply and effectively.

The Training and Placement Management System aims to organize student and placement details efficiently. It eliminates redundancy and enhances resource utilization. The system fosters user-friendly operations, resolving ambiguity. It facilitates storage of student information and CVs, allowing updates. Notifications about companies are sent, and students can access past placement information seamlessly.

2. Related Work

This paper [1] describes an online training and placement process. The admin of the system can see the user information and will validate it. The admin also generate the student list based on the company criteria and company details are also provided to the all users. Searching and sorting can be done, and reports can be generated. Alumni data can be maintained in our system. This Placement Management System provides two distinct modules for students and placement Coordinators. It enables students to register online and upload their academic and personal details. They will have their portals to update information as necessary and can view recent and upcoming job postings on their dashboard.

Overall, all the process of the training and placement department is done automatically.

The study described in [2] mainly describes the two steps, the first one step is to maintain the list of all students and their related records and another one step is to maintaining the company details like as their vacancies, etc. and based on the company requirements, get shortlisted list of students branch wise, which is the more complex task. This Placement Management System provides two distinct modules for students and placement Coordinator. It enables students to register online and upload their academic and personal details. They will have their portals to update information as necessary and can view recent and upcoming job postings on their dashboard.

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This paper [3] Outlines the Online Training and Placement (OTaP) System, which automates activities of training and placement cell. It provides chance to the student community to use all intelligence together to increase selection ratio and eases out process of creation of management information automatically. OTaP System mainly focuses on the automation of placement cell. This system saves all of the students' personal information as well as their technical skills, which are needed for a CV to be sent to an employer. The system can be used by institutions to manage student information and placement details.

This paper [4] outlines the development of a web-based application on the Windows platform for a college's placement management system. The system efficiently stores and manages students' personal information, academic details, and technical skills in a secure database. This proposed system includes the processes like registration, update, and searching of the student data. There are mainly two users: Training and placement Coordinator (TPC) and student. The admin is the master user. Admin has more number of priorities than the other users. Students can register and can also view or edit their academic or personal details. A list of placed students will also be updated by the administrator. It facilitates collaboration between the college and firms by allowing authenticated access for recruitment processes, streamlining information flow and reducing manual efforts.

This paper [5] Mainly focuses on comprehensive placement management system streamlines record-keeping for a large number of students in the college, addressing challenges in recruitment eligibility checks and maintaining company visit details. The system optimizes hardware and software resources for efficient management. Featuring distinct logins for TPO, exam cell, and students, the web-based application employs HTML for the front end and PHP with MySQL for the back end, offering common services like password changes, information searches, and communication with administrators. This proposed system aims at reducing human efforts and errors by automating important tasks of TPC such as displaying notices, maintaining information about students, student eligibility, company criteria, training sessions, interview schedule, preparation seminars, etc.

This system can be used for the Training and placement cell of the college to manage the student information with regards to placement students logging should be able to upload their information in the form of a C.V. visitors or company representatives logging in may also access or search any information put up by students. An admin login should be present who can read as well as remove any uploads. Preferably it should be given to the TPO.

This paper [6] deals with an android application system that can be accessed by the student throughout the organization with the proper login provided. This application can also be used by the training and placement Coordinator to maintain all the records of the students as well as the activities related to the training and placement cell. This proposal suggests developing an Android application for the Training and Placement Cell to automate and enhance the placement process in an educational

institute. The app aims to streamline communication by notifying students about upcoming companies, providing a platform for administrators to upload lists of placed students, and allowing students to view recruitment details and request changes to their information. This proposed system is aimed at developing an Android application for training and placement cell.

Maintaining and managing a large amount of data is a difficult task. The project ultimately facilitates faster and more efficient management of placement-related activities within the college campus.

This [7] Paper Provides a simple interface for maintenance of student information. It can be used by educational institutes or colleges to maintain the records of students easily. The creation and management of accurate, up-to-date information regarding a students' academic career is critically important in the university as well as colleges. Student information system deals with all kind of student details, academic related reports, college details, course details, curriculum, batch details, placement details and other resource related details too. It tracks all the details of a student from the day one to the end of the course which can be used for all reporting purpose, tracking of attendance, progress in the course, completed semesters, years, coming semester year curriculum details, exam details, project or any other assignment details, final exam result and all these will be available through a secure, online interface embedded in the college's website. It will also have faculty details, batch execution details, students' details in all aspects, the various academic notifications to the staff and students updated by the college administration. It also facilitate us explore all the activities happening in the college, Different reports and Queries can be generated based on vast options related to students, batch, course, faculty, exams, semesters, certification and even for the entire college. The system is designed to be easy to use and accessible to students, parents, and teachers. It provides a variety of features, including: Student registration and profile management, Attendance tracking, Grade management, Fee management, Exam management, Report generation.

This paper [8] focuses on enhancing employability among commerce and management students through skill training. The study explores the shortage of skills compared to the demand and the role of Commerce and Management Education in addressing this gap. The Placement Cell Management System is a sophisticated online-based software application designed to streamline and enhance the management of student placement information within a college or university. The primary objective of this project is to create a centralized database that stores essential details about students, including academic records and personal information. By developing a user-friendly interface, the Placement Coordinators can efficiently manage and update the information on the university site, making it easily accessible to potential recruiting companies. One of the standout features of this system is its one-time registration capability, which allows students to conveniently upload their personal and educational details in the form of a resume. This not only simplifies the process for students but

also contributes to a more organized and comprehensive database for placement Coordinators. The utilization of PHP for the frontend and MySQL for the backend ensures a robust and scalable architecture, reducing manual workload, minimizing paperwork, and ultimately saving time for both students and administrators. The Placement Cell Management System stands as an effective solution to modernize the placement process, fostering efficiency and collaboration between educational institutions and prospective employers.

This paper [9] is designed to automate and enhance various aspects of the placement process within the college. It offers a user-friendly online registration system, allowing students and Placement Coordinators to easily register and manage their accounts. The system facilitates efficient activation and deactivation of user accounts, ensuring seamless administration. Additionally, it provides personalized features such as online resource provision, enabling students to upload resumes and personalize their profiles. Communication between users is streamlined, and the system incorporates an online feedback mechanism, fostering continuous improvement.

One of the key administrative functionalities is the validation process conducted by the system admin. The admin has the authority to validate user information, ensuring its accuracy and reliability. Furthermore, the admin can generate student lists based on specific company criteria, providing a valuable tool for tailoring placement opportunities to meet the requirements of potential employers. Overall, the Placement Cell Management System offers a comprehensive and automated solution, optimizing the placement process by centralizing information, improving communication, and empowering administrators with effective tools for validation and customization.

This paper [10] introduces a significant development in the form of a web portal tailored for the Training and Placement Cell within a college setting. The primary objective of this portal is to streamline and automate the recruitment processes, offering a centralized platform for both administrative staff and students. By requiring correct login credentials, the portal ensures secure access and provides a user-friendly interface for various tasks. One of providing effective tools and resources for successful student placements.

3. Proposed Work

The proposed system meant to give more easiness to the users that they can add and retrieve information quickly. There are mainly three types of users they are TPC, Student, and Alumni. The TPC is the master user, he gets the most number of priorities than the other users. The different functions involve the case of a TPC are updating, approval. The TPC can view and approve the various application forms. Students can register and view the details. The TPC can view the details of the students and can approve or reject their applications. The proposed system is intended to avoid all the drawbacks of existing system. It will add some more features than the existing system. The proposed system is a cost effective way of doing the manual processes done in the existing system. Some of the

advantages include:

- Less time-consuming
- More flexibility
- Easy to manage
- More accuracy
- More security
- User friendly
- Based on students offer letter TPO can create the reports of placed students and non-placed students.

A. System Architecture

An architectural diagram is a visual representation that maps out the physical implementation for components of a software system.

Based on the process of the Placement Management Application we have come across the following architecture.

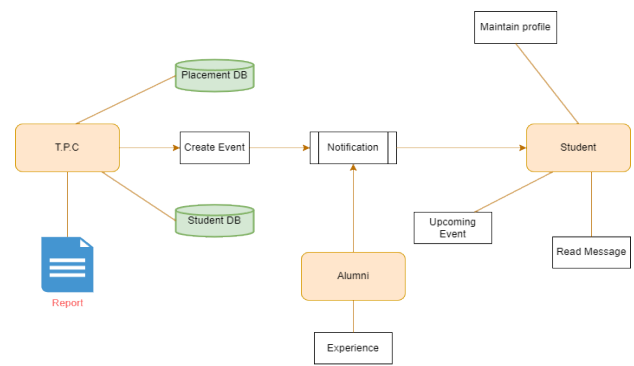


Fig. 1. Architecture diagram

B. Class Diagram

A class diagram is an illustration of the relationships and source code dependencies among classes in the Unified Modeling Language (UML).

Based on number of different scenarios, we have come across the following uses of the Placement Application.

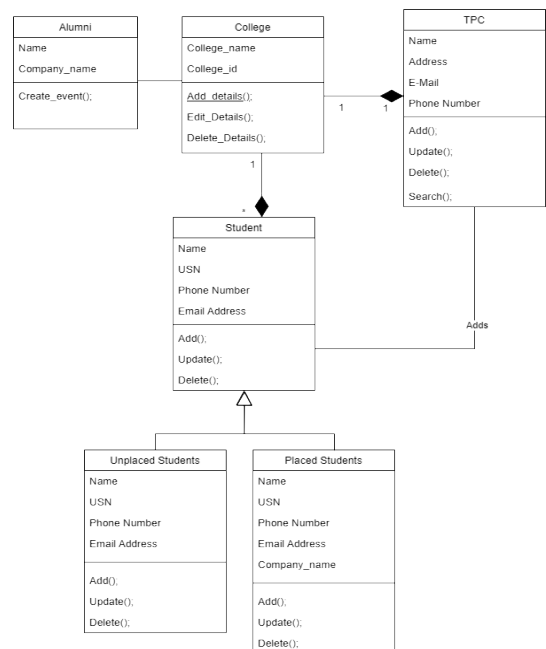


Fig. 2. Class diagram

C. Use Case Diagram

A case diagram at its simplest is a simplest of a user’s interaction with the system and depicting the specifications of a user case. A user case diagram can portray the different types of users of a system and various ways that they interact with the system.

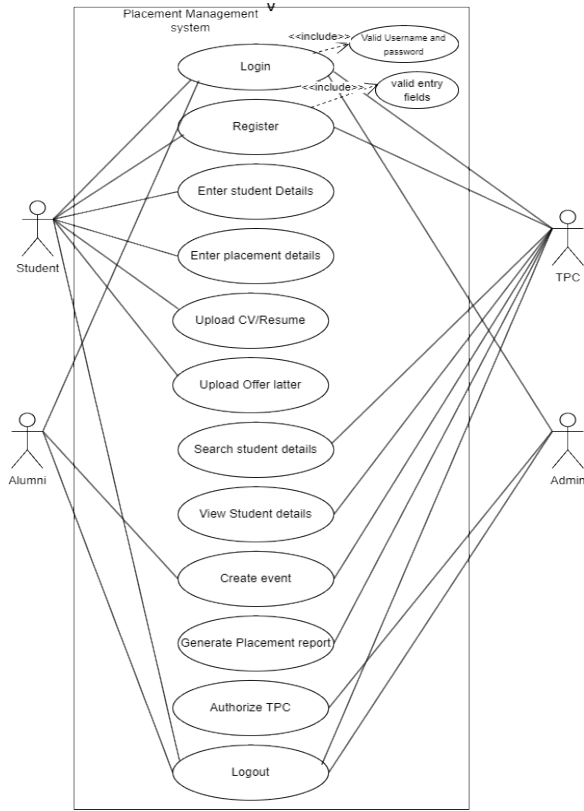


Fig. 3. Use case diagram

D. Sequence Diagram

A Sequence diagram visualizes interactions between objects or components in a system over time, showing message flow and object lifelines. It helps understand the dynamic behavior of a system, facilitating design validation and identifying dependencies.

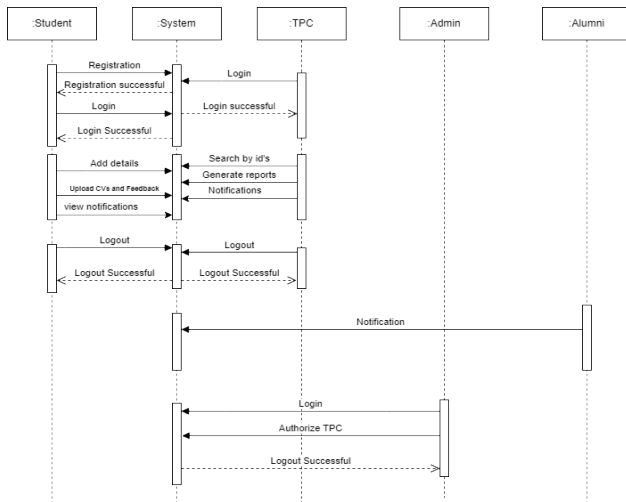


Fig. 4. Sequence diagram

E. Extended Architecture

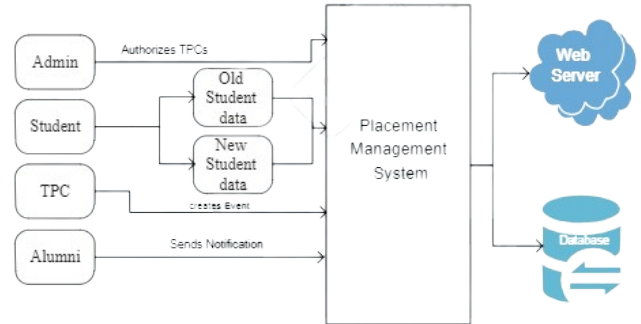


Fig. 5. Block diagram

In the Extended architecture, the following modules and their designs are as follows:

1) Student Module

- The Student Module is responsible for managing student-related functionalities.
- In the frontend (developed using Android Studio and XML), activities and fragments will be created to facilitate student registration, login, and profile management.
- Students will be able to enter their academic details, contact information, and upload relevant documents such as resumes and interview experience letters. This will involve creating appropriate UI components for data entry and file upload.
- Additionally, students will be able to provide placement details including the company name, offer letter details, salary information, and whether it was an on-campus or off-campus placement.

2) Admin Module

- The Admin Module focuses on administrative tasks such as TPCs authorization.
- In the Separate web application, the admin panel will be created to authorize Training and Placement Coordinators (TPCs) who have specific roles within the system.
- Upon login, admins will be presented with the necessary UI elements to perform authorization tasks.
- Backend logic will handle the authorization process, updating the database to grant TPC privileges to authorized users.

3) TPC Module

- The TPC Module provides functionalities for Training and Placement Coordinators to manage placement-related activities.
- In the frontend, UI components will be developed to allow TPCs to view student details, create events, and generate placement reports.
- TPCs will have access to student data stored in the database, enabling them to view academic records, contact information, and placement details.
- Additionally, TPCs will be able to create events such as job fairs or campus recruitment drives, with relevant details stored in the database.

- The TPC module will also include functionality to generate placement reports and export them to Excel format.

4) Alumni Module

- The Alumni Module facilitates communication between alumni and current students regarding placement opportunities.
- In the frontend, alumni will have access to features allowing them to send future placement offers to registered students.
- UI components will enable alumni to input job opportunities and relevant details, which will be stored in the database.
- Backend logic will handle the processing of alumni submissions and ensure that relevant information is stored correctly for students to access.

This elaboration provides a clearer understanding of how each module will function within the application, both in terms of frontend user interaction and backend processing.

4. Result and Inference

The architecture proposed for the Placement Management App capitalizes on the use of Android Studio for frontend development using XML, Java for backend logic, and MySQL for database management. This architecture facilitates a seamless and efficient user experience while significantly reducing reliance on manual systems. Automation plays a pivotal role across all aspects of the application, enhancing efficiency and accuracy in placement processes.

Through automation, students can effortlessly manage their profiles, academic records, and placement details, reducing the need for manual data entry and paperwork. Administrative tasks, such as user authorization, are streamlined, minimizing manual intervention and potential errors. Training and Placement Coordinators benefit from automated access to student data, event creation, and report generation functionalities, optimizing placement processes. The ability to export placement reports to Excel format further streamlines data analysis and decision-making, reducing the time and effort required for manual reporting. The platform also facilitates automated communication between alumni and current students, enabling seamless sharing of placement opportunities and fostering alumni engagement within the academic community.

Overall, the proposed architecture not only modernizes the placement management process but also significantly enhances efficiency, accuracy, and user satisfaction through the strategic implementation of automation.

5. Future Scope

The development of this project has many new areas of investigation. This project has wide scope to implement it at any University/Institution. Other features such as giving notification to students about the jobs that are available both on and off campus can be included in the upgraded versions. The system cannot provide the SMS integration. Hence, it can be

modified to give the SMS integration. Other features like analytics can be added in future to this portal for tracking the progress of student in specific areas. After analysis this system will notify students of the areas, they are lacking in. Placement Coordinator can easily collect the student's details and approve the details provided by them. As Placement and Training Cell is an online android application, communication with Placement Coordinator is an easy task. Instead of short listing manually, eligible students list can be retrieved automatically in excel sheet.

The proposed architecture for the Placement Management App lays a solid foundation for future enhancements and expansions to meet the evolving needs of users and technological advancements. Several avenues for future development and improvement include:

1. Enhanced User Experience: Continuously improving the user interface and experience to make it more intuitive, responsive, and accessible across various devices and screen sizes.
2. Integration with Emerging Technologies: Exploring integration with emerging technologies such as machine learning and artificial intelligence to offer personalized recommendations, predictive analytics for placement trends, and automated matching of students with job opportunities.
3. Mobile App Enhancements: Expanding the functionalities of the mobile application to include features like push notifications, real-time updates, and in-app messaging for seamless communication between stakeholders.
4. Enhanced Alumni Engagement: Developing features to foster stronger alumni engagement, such as alumni networking events, mentorship programs, and alumni-led workshops to provide valuable career guidance and support to current students.
5. Global Reach: Scaling the application to cater to the needs of a global audience by supporting multiple languages, currencies, and regional placement requirements.
6. Continuous Improvement: Embracing a culture of continuous improvement through user feedback, usability testing, and agile development methodologies to iteratively enhance and refine the application based on evolving requirements and user preferences.

By proactively exploring these avenues for future development and innovation, the Placement Management App can stay ahead of the curve, remain relevant in a rapidly changing landscape, and continue to deliver value to its users and stakeholders.

References

- [1] Nilesh Rathod, Seema Shah, Kavita Shirsat, "An Interactive Online Training and Placement System", International Journal of Advanced Research in Computer Science and Software Engineering, vol. 3, no. 12.
- [2] Shilpa Hadkar, Snehal Baing, Trupti Harer, K.T.V. Reddy, "College Collaboration Portal with Training and Placement", IOSR Journal of Computer Engineering, vol. 16, no. 2, pp. 79-81, April 2013.

- [3] S. Shah, Kavita Shirsat, "An Interactive Online Training and Placement System", *International Journal of Advanced Research in Computer Science and Software Engineering*, vol. 3, no. 12.
- [4] Alfiya Banu, Manju Bargavi S. K, "A Research on Placement Management System", *International Journal of Advanced Research in Applied Science and Engineering Technology*, vol. 10, no. 4.
- [5] Charlotte Katwa, Kashmira Sanjana, Pooja Parmar, "Final Year Placement Management System", *An International Journal of Scientific and Technical Advancements*, vol. 2, no. 1, pp. 233-234, 2016.
- [6] K. Anand, Rethesh D, J. Hemalatha "Android application for training and placement cell", *International Journal of Pure and Applied Mathematics*, vol. 119, no. 15, 2018.
- [7] S. R. Bharamagoudar, R. B. Geeta, and S. G. Totad, "Web based student information management system," *International Journal of Advanced Research in Computer and Communication Engineering*, vol. 2, no. 6, 2013.
- [8] Muniraju N, Amutha N, "Placement Cell Management System", *International Journal for progressive research in Science and Research*, vol. 3, no. 3, 2022.
- [9] Spoorthi M S, Kavana V, Koushik S, Veena, "Review on Placement Management System", *An International open access journal*, vol. 9, no. 7, July 2021.
- [10] Ajeena Sunny, Aneena Felix, Angelin Saji, "Placement Management System for Campus Recruitment", *International Journal of Innovative Science and Research Technology*, vol. 5, no. 5, pp. 1705-1710, May 2020.
- [11] Rupali Komatwar, Swapnil Kamble, Mihir Khedekar, Kishor Walzade, "Placement Support System" *International Journal of Advanced Research in Computer and Communication Engineering*, vol. 5, no. 1, January 2016.
- [12] Snehal D. Shriramjwar. Chandure, "A study paper on college collaboration portal with training and Placement," *International Journal of Research in Science& Engineering*.
- [13] Mulla Kajal, Mahadik Awanti, Pandharpatte Bansod Swapnali, "Online Training and Placement System," *International Research Journal of Engineering and Technology*, 2016.
- [14] Anjali V., Jeyalakshmi PR., Anubala R., "Web Based Placement Management System," *International Journal of Computer Science and Information Technologies*, vol. 7, no. 2, pp. 760-763, 2016.
- [15] Sanket R. Rahul S. Ghule, Shubham K. Brahmankar, Chavan, "A Survey On Android App for Training and Placement cell," *IJARIE*, vol. 1, no. 4, 2015.