

Module Design for Resources Planning of Training and Placement in Educational Institutions

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Abstract - *Training & Placement Automation is a web application for automating placement activities.*

For a placement authority it is a tedious job to keep a track of students/jobseekers that fit in company criteria for placement, sort the placed students/jobseekers, and keep a track of activities to be performed for placement drive, communicate with the concerned authorities regarding placement drive arrangements and with the company recruitment personnel. To address this tedious manual job, an automated system that would address all of the above mentioned tasks, automate and optimize the resources used in the same. This system would be run on a LAN or hosted on web server. Through this users (Training & Placement Authority, students/jobseekers) can be assisted and used to monitor and track the placement activities to be performed viz. create new placement drive activities, manage students/jobseekers database, notify them and company recruitment personnel and generate reports.

The automated system would generate customized checklist regarding the activities to be performed by the user for Training and Placement event and automatically notify related departments, students/jobseekers, institution authorities about the requirement for the event or any other details as required. A scheduler can be used to notify the user and/or the concerned authorities so as to pre-schedule the arrangements to be made for the event. Also it can be used to keep a track of the progress on activities to be performed in regards to the event considering holidays or limited working hours. Similarly, taking into consideration the ongoing placement activity, student's/jobseeker's selection in every placement round can be kept track of, students/jobseekers selected in a recruitment event can separately be tracked and list of students/jobseekers excluding the placed students/jobseekers can be maintained for upcoming newer recruitment events. This system will reduce human intervention in data entry hence reduce margin for human error. Also it will help in hosting such events efficiently and help better plan enterprise's/institution's resources. This could also benefit in keeping track of every recruitment process details meticulously and generate reports as desired.

Key Words: *Real world context, Process Control System, Enterprise Resource and Planning System, Real Time System, Interactive Environment.*

1. INTRODUCTION

1.1 Project Idea:

Idea behind project is to automate the process of the Training and Placement Authority and to secure and organize data which provides better and easier reports and statistics. This system would also ensure communication between Training and Placement Authority and jobseekers via in-system messages and notification, email and SMS which makes the information delivery much more reliable. The system would be accessed through network which makes it very much portable and convenient for students/jobseekers as well as Training and Placement Authority.

1.2 Motivation:

Most colleges provide placement opportunities to their students which needs lot of documentation of student records, placement event records, alumnus records, etc. The Training and Placement Office/Officer (TPO) needs to carry out this documentation which may at times be haphazard and redundant. Also the TPO needs to generate reports of the data from the documentation of student's/jobseeker's records maintained which may seem tedious and clumsy at times. TPO also needs to keep a list of their contacts and the associated companies. On placement events TPO also needs to carry out event management activities like arrangement of refreshment for the guests, and other work of similar nature which may be associated with the event.

For this reason, a system that will keep track of students/jobseekers academic and employment records, generate reports from the documentation, event management wizard and a communication system to keep students/jobseekers in constant touch with the TPO for newest updates about placement activities, etc. is of need. Also system would be capable of building student's resume

using the data from system's database in a predefined format to generate hassle-free resume.

Since no system provides the above features at the same place, and considering its usefulness to the college/educational institution or other job offering institution.

2 LITERATURE SURVEY

- i) "College Collaboration Portal with Training and Placement", Authors: Shilpa Hadkar, Snehal Baing, Trupti Harer, Sonam Wankhade, K. T. V. Reddy, and I. T. Department Padmabhushan Vasantdada Patil Pratishthan's College Of Engineering, Sion (East), Mumbai. The project targets documentation of student's placement activities and automation of documentation. But lacks Event Management System's features along with report generation.
- ii) "Design Paper on Online Training and Placement System (OTAP)", Authors: Mr Nilesh T. Rathod, Prof. Seema Shah, Vidyalankar Institute of Technology Wadala, Mumbai. The system provides considerable features of online registration, system security, automated percentage calculation, data sorting and notification services. But lacks Event Management System's features along with report generation.

3 PROBLEM DEFINATION AND SCOPE

3.1 Problem Statement

After literature survey we have identified that training and placement authority of every institute has lot of data and activities to process for synchronization of placement drive, if the data is not processed or handled properly problems like miscommunication, data loss, improper execution of placement process, underutilization of resources and ineffective reporting may happen. Also we have realized after our survey the current system adapted by many of the institutes has very limited functionality and doesn't allow any kind of automation and report generation.

3.1.1 Goals and Objectives

i) Goals:

- To develop a system that offers an automated service to the T.P.O. and the students/jobseekers.
- To save time and avoid complexity of activities needed to be carried out for Training and Placement management.

- To provide a user friendly and stress-free experience to the user.

ii) Objectives: The main objective of our proposed system is to provide a fully automated service of Training and Placement Management, to the T.P.O. of the institute, Placement Consultancy and/or Human resource team as well as to students/jobseekers for carrying out related activities smoothly.

3.2 Statement of Scope

- The proposed system would let students/jobseekers register themselves and create their profile by filling their academic and other professional details which would be used to process and check, number of eligible students/jobseekers according to the job description.
- Operations like sending notifications and registering students/jobseekers for particular placement drives can be performed.
- Number of students/jobseekers can be segregated and filtered in accordance to various parameters mentioned in the job description.
- Major outputs can be statistics, reports and services like analytics, notification delivery via e-mail and/or SMS.
- The proposed system, initially, can be deployed and tested over intranet and smart devices.
- The scope of our system can be expanded by deploying it over Web/Cloud services.
- Also, students/jobseekers can respond to events using SMS service in absence of Network/Web connectivity.
- Passwords will be stored in MD5 hash which is considered to be irreversible.
- Also micro-time based timestamps would be used to hash the session keys and in all unique attribute fields.

3.3 Methodologies of Problem Solving and Efficiency Issues:

As per the problem specified in the problem definition, it is clear that the whole problem is comprised with number of small problems which is needed to be tackled individually. Therefore keeping the whole scenario in mind application of divide and conquer methodology is being used by dividing problem into smaller sub-problems. These sub-problems are divided into basic computational modules which can collectively contribute to the over-all solution. Examples for these module are registration, login, event creation, notification and so on.

Administrative security is tackled by providing access rights and scope to every user type and thus type of user account. This limits the access rights and read/write rights to users to prevent unwanted data inconsistencies.

Every feature of the problem statement is implemented in Model-View-Controller design pattern which keeps database, data and interface separate from each other. This saves duplication of interfaces for different user (types). The Model deals with the database tier, Controller being the business logic and the brain of system manipulates the data flow and computation according to user type and access scope and View simply forms a framework to the system's user interface which gets its data from the respective Controller.

All modules are implemented as Controllers to Models and its Views, thus one View typically has two or more controllers associated with it, one being the authentication controller which is common to almost all other controllers and the other being the module's core utility logic.

3.4 Outcome

- i) Ease of access on Company profile and students/jobseekers details.
- ii) Selection process made easy with search filters.
- iii) Save time and storage space.
- iv) Easy and stress-free event, database manipulation with number of options.
- v) Custom report generation.
- vi) Notification service regarding different events and drives.
- vii) Managing Placement drive made easy for the T.P.O. and other placement authorities.
- viii) Efficient management and utilization of enterprise's/institution's resources.

3.5 Application

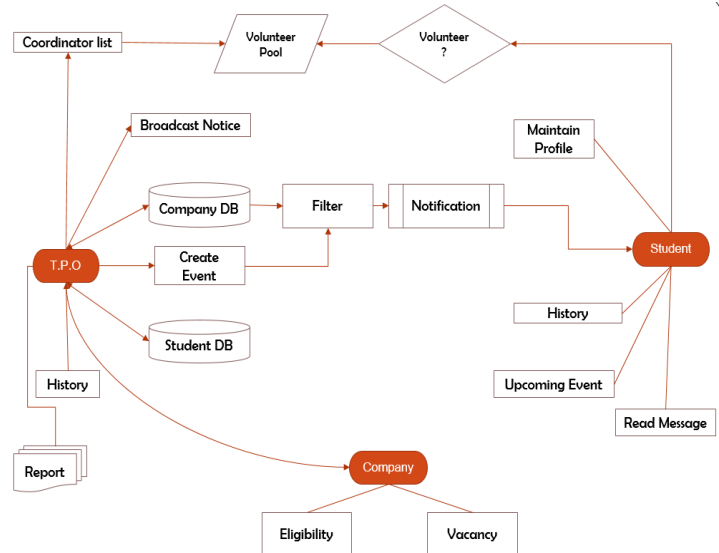
This system could be used in educational institutes, placement consultancy, and Human resource team for Training and Placement Management. It stores the entire history of Placement process (company arrived, day and date of conduction, students/jobseekers placed, etc.) It also stores all the company profiles and student details. Thus, all the history is provided at hand in this system to the privileged user.

4 DETAILED DESIGN

4.1 Introduction

This document specifies the design that is proposed to solve the problem of system. Main design of the proposed system consist dedicated Dashboard for student, staff, T.P.O. and Admin. It will help the T.P.O. and student/jobseekers to communicate efficiently as it can be modified and scaled according to the use. Proposed design has rich user friendly interface.

4.2 Architecture Design



5. CONCLUSIONS

Thus with the proposed system, we can conclude the smooth execution of whole process of communication between training and placement authority and jobseekers. The proposed system is network/web based which makes it portable and accessible to all kinds of smart devices. Job seekers can get SMS and emails notification about the events. The proposed system is designed and being developed for user friendly enterprise resource planning so that every user can get best user experiences out of it with effective reporting. Also an API would be provided for the system to be merged or to be able to interact with other native mobile Application or any other Enterprise Resource Planning system.

REFERENCES

- [1] PHP Solutions: Dynamic Web design Made Easy, by David Powers.
- [2] MySQL in a Nutshell, by Russell Dyer.
- [3] jQuery Cookbook: Solutions & Examples, by Cody Lindley.
- [4] Android Application Development (O'Rielly).
- [5] Laravel 5 Essentials, by Martin Bean.
- [6] Pro PHP MVC, by Chris Pitt.
- [7] JavaScript Step by Step, by Steve Suehring.

[8] Twitter Bootstrap Web Development How-to by David Cochran.

5 BIOGRAPHIES



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