**PLACEMENT PATTERN EVALUATION**

**1. INTRODUCTION:**

**1.1 OVERVIEW OF THE PROJECT**

The project entitled as “Placement pattern evaluation” is used to evaluate the pattern for placement. The project gathers for questions involved in each pattern, using web scrapping technique. The pattern is finally set as questionnaire to the respective students involved in the placement process, which helps the students to effectively prepare for an interview.

**1.2 OBJECTIVES OF THE PROJECT**

The objectives of the project is to-

* Develop a database of patterns for each company
* Add related questions for each pattern
* Prioritize the most frequently asked question
* Provide the ability for the teachers to view the pattern and teach the students accordingly
* Automate the process by sending the patterns to respective students accordingly.
* Mock exam and tests can be done based on the pattern.

**1.3 THE NEED FOR THE PROJECT**

Placement interview preparation is a difficult task for the students. The “PLACEMENT PATTERN EVALUATION” makes the process simple by reducing the time involved in searching pattern and questions for each company. The students can focus only on the mandatory questions thus helping the students to get placed easily. The project provides solutions for the students by sending an email about the patterns of the various companies to the selected list of candidates.

1.4 OVERVIEW OF EXISTING SYSTEM AND TECHNOLOGIES

In the existing system, the placement company names and the details of the student are available in documents and workbooks. The students gather the patterns and the questions by referring to different websites. This takes more time taken for gathering and analyzing the patterns. The time consumption for this process is comparatively more.

In the proposed system, the pattern of different companies are entered by Admin / Staffs and the related questions are gathered using web scrapping technique, where the website details are uploaded provided by the staffs through the application. This reduces the time for the students, instead of searching the patterns in different websites.

Main technologies associated with the project

* Web programming technologies(SPRING BOOT, JSP, Angular JS)
* MySQL Database
* Jenkins - Devops tool

**1.5 SCOPE OF THE PROJECT**

Main actors of this system

* Students
* Lecturers
* Admin

Main use cases associated:

1. **Admin:**

* Adds the pattern for different companies.
* Adds related questions to each pattern.
* Provides websites for gathering questions for the patterns.

1. **Lectures**

* Views the patterns provided by the admin
* Adds the pattern for different companies.
* Adds related questions to each pattern.
* Provides websites for gathering questions for the patterns.
* Evaluating the students by gathering the mock exam results.

1. **Students**

* Views the pattern of different companies and prepares accordingly
* The patterns and questions are shown to the respective students in the application, so can attend the mock exams through the application.

**2. Feasibility Study**

**2.1 Financial Feasibility**

Being a web application “PLACEMENT PATTERN EVALUATION” will have an associated hosting cost. Since the system doesn’t consist of any multimedia data transfer, bandwidth required for the operation of this application is very low.

The system will follow the freeware software standards. Especially the extra effort associated with placements will be significantly reduced while the effort to search patterns in different web browsers will be eliminated, since the software displays the patterns of various companies involved in the placement.

**2.2 Technical Feasibility**

Project “PLACEMENT PATTERN EVALUATION” is a complete web based application. The main technologies and tools that are associated with the project are

* HTML
* CSS
* JSP
* Angular JS
* Maven
* JS
* Eclipse IDE
* Tomcat 8.5
* SPRING 5
* SPRING BOOT
* MySQL
* JENKINS

Above mentioned technologies are freely available and the technical skills required are manageable. Time limitations of the project development and the ease of implementing using these technologies are synchronized.

For Hosting the website, a web hosting space is needed with a sufficient bandwidth. And need a Devops tool – Jenkins, which supports continuous integration and continuous delivery. Jenkins is a Java-based program ready to run with Operating systems like Windows, Mac OS X, and UNIX. Jenkins requires little maintenance and has built-in GUI tool for easy updates.

**Requirements for Jenkins:**

Minimum hardware requirements:

* 256 MB of RAM
* 1 GB of drive space (although 10 GB is a recommended minimum if running Jenkins as a [Docker](https://jenkins.io/doc/book/installing/#docker) container)

Hardware configuration for a small team:

* 1 GB+ of RAM
* 50 GB+ of drive space

**2.3 Resource and Time feasibility**

Resource feasibility

Resources that are required for the “PLACEMENT PATTERN EVALUATION” project includes,

* Programming device(Laptop)
* Hosting device
* Programming tools(freely available)
* Programming individuals
* Uploading in GIT (Free)
* Devops server for Jenkins

So it’s clear that the project has the required resource feasibility.

**2.4 Risk Feasibility**

**Risk associated with size:**

**Estimated size of the product in lines of codes:**

Being a web application with many numbers of stakeholders, the project will contain significant amount of code lines. As the system doesn’t contain any multimedia aspect, the file sizes and the complete project size will not exceed 500 MB.

**Estimated size of the product in number of programs:**

Though the application supports many students and lecturers, it will be constructed as a single web application with a single login page than having any number of pages for different users. Depending upon the access rights the contents will be shown or hidden.

**Size of database created or used by the product:**

Database size will not exceed the values supported by MYSQL(65526 entries per table). Number of relations and entities are minimized byusing best practices of normalization theories.

**Users of the product:**

* Admin
* Lecturers
* Students

**Effect of this product on organization revenue:**

The project can be implemented either as an individual system. Since it automates some key features associated in college placement process, the users can increase the recruitments.

**Compilers or code generators are available and appropriate for the product:**

JSP and Angular JS, will be used as the main scripting language. All the libraries and interpreters will be freely available.

**Testing tools:**

JUNIT is the main testing tool that will be used. JUNIT is freely available tool that supports automated testing. By default the base version of JUNIT files are automatically created, during the project setup (on SPRING project creation)

**Software Configuration Management and Continuous deployment:**

Configuration Management will be done using GIT initially, that is freely available. Jenkins will be used for continuous deployment and delivery.

**The environment make use of a database or repository:**

This is a database oriented system that will use MYSQL.

**Software tools integrated with one another:**

Main deliverables will be packaged under a single project. All the lecturers and students will have a single login page, available for the application.

**Social/LegalFeasibility:**

The project uses freely available development tools and provides the system as an open source system.

JSP Software libraries that are used in this system are free open source libraries.

Since this new system eliminates the effort to search pattern for each company individually, it will have a great impact in a placementprocess.

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