**FEASIBILITY REPORT**

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**TECHNICAL FEASIBILITY:**

Evaluating the technical feasibility is the trickiest part of a feasibility study. This is because, at this point in time, not too many detailed design of the system, making it difficult to access issues like performance, costs on (on account of the kind of technology to be deployed) etc. A number of issues have to be considered while doing a technical

analysis.

1. **Understand the different technologies involved in the proposed system:**

Before commencing the project, we have to be very clear about what are the technologies that are to be required for the development of the new system.

1. **Find out whether the organization currently possesses the required technologies:**
   * Is the required technology available with the organization?
   * If so is the capacity sufficient?

For instance –

“Will the current printer be able to handle the new reports and forms required for the new system?”

**OPERATIONAL FEASIBILITY:**

Proposed projects are beneficial only if they can be turned into information systems that will meet the organizations operating requirements. Simply stated, this test of feasibility asks if the system will work when it is developed and installed. Are there major barriers to Implementation? Here are questions that will help test the operational feasibility of a project:

* Is there sufficient support for the project from management from users? If the current system is well liked and used to the extent that persons will not be able to see reasons for change, there may be resistance.
* Are the current business methods acceptable to the user? If they are not, Users may welcome a change that will bring about a more operational and useful systems.
* Have the user been involved in the planning and development of the project?
* Early involvement reduces the chances of resistance to the system and in
* General and increases the likelihood of successful project.

Since the proposed system was to help reduce the hardships encountered. In the existing manual system, the new system was considered to be operational feasible.

**ECONOMIC FEASIBILITY:**

Economic feasibility attempts 2 weigh the costs of developing and implementing a new system, against the benefits that would accrue from having the new system in place. This feasibility study gives the top management the economic justification for the new system.

A simple economic analysis which gives the actual comparison of costs and benefits are much more meaningful in this case. In addition, this proves to be a useful point of reference to compare actual costs as the project progresses. There could be various types of intangible benefits on account of automation. These could include increased customer satisfaction, improvement in product quality better decision making timeliness of information, expediting activities, improved accuracy of operations, better documentation and record keeping, faster retrieval of information, better employee morale.

**SYSTEM REQUIREMENT SPECIFICATION**

**Project Overview:**

The project entitled ”**Search Engine for job portal in the organization**” automates the search engine job portal for the Organization.This system is one, which helps out the HR personnel in the Recruitment of new candidates to the company and helps them the recruitment process as a whole. For the HR Personnel the options available in the system would be mainly under three broad headings namely:

* Requirements
* Resume Processing
* Online Test Queries
* Message From Users

Search Engine for job portal in the organization is a part of the Human Resource Management System that structures and manages the entire recruitment process. This Search Engine for job portal in the organization will primarily focus on the posting and management of job vacancies. However, this will be the initial step towards achieving the longer-term goal of delivering broader services to support recruitment.

This will provide service to the potential job applicants to search for working opportunities according to their chosen career available in Organization. applicants will, if they choose, be able to make an application online. It is planned that ultimately all vacancies in Organization. Will be posted online and that this site will offer employers the facility both to post their vacancies online and to review and manage the resulting applications efficiently through web with the help of Search Engine for job portal in the organization. Search Engine for job portal in the organization will also allow Job Provider to establish one-to-one relationships with candidates, by keeping in close communication with them through out the application/interview/hiring process, even allowing the candidates to track the progress of their application. In other words, enables the employer to treat candidates like customers.

#### About the Project:

Search Engine for job portal in the organization in an independent module and is a part of the Human Resource Management System **.**Search Engine for job portal in the organization is a feature rich integrated recruitment package, designed for the desktop. It stores the details of jobs and details of the candidate’s in the database. It helps in conducting the online test. It helps for online searching of candidate details by the HR Personnel, using ‘Point and Click’ parameters. Human Resource Department people can access the database to process and search for suitable candidates and view their details with a simple ‘click’ of the mouse button.

This will provide service to the potential job seekers to search for working opportunities according to their chosen career available in Organization. Applicants will, if they choose, be able to make an application online. It is planned that ultimately all vacancies in Organization., will be posted online and that this site will offer employers the facility both to post their vacancies online to review and manage the resulting applications efficiently through web with the help of Search Engine for job portal in the organization. The Search Engine for job portal in the organization will also allow Job Providers to establish one-to-one relationships with candidates, by keeping in close communication with them throughout the application/interview/hiring process, even allowing the candidates to track the progress of their application.

Search Engine for job portal in the organization integrates itself with popular database oracle 9.2i. ORS is delivered via a Java Server Pages with access to the system, using nothing more than a Web browser and Web Server.

This means the Job Provider can avoid lengthy and expensive implementation cycles. The system can be implemented on all platforms, as the Java Technology is being used for the development of the system, which is platform independent.

### PROBLEM DEFINITION AND FEASIBILITY ANLYSIS

# Problem Definition

## Existing System

The Job Providers carries out their activities through various meetings and presentations. The HR-Manager takes the final decisions and assigns the tasks to HR Senior Facilitators. The HR-Senior Facilitators completes the tasks assigned to them with the help of Junior Facilitators.

In the current scenario, all the information and activities relies either on paperwork or on in broken, distributed and isolated automation such as use of Microsoft Excel Sheets. The problem that arises in such a scenario is that the process is too cumbersome and demanding as well.

## Limitation of the Existing System

* Non-availability of data and when required.
* Exams are conducted manually, it is waste of papers and same questions will be repeated for the more than one candidate.
* Highly inconsistent information across the department along with the overhead of redundant data management across department.
* Duplication of data gathering and maintenance efforts.
* High level of human intervention needed and hence usage of the system depends on the skill of the individual.
* Does not enable Decision Support System.
* No system to keep track of the resumes of the candidates.

## Proposed System

The proposed system “**Search Engine for job portal in the organization**” in JSP and Oracle will include all the features carried out by manual system and also add certain additional features so that the package will form a definite improvement. It is proposed to make the system extremely user-friendly with well-designed screens and limited inputs. It is also proposed to include the list of value boxes and grid structures in the screen to make the data retrieval very easy and convenient.

**Features and Benefits of Proposed System:**

**Search Engine for job portal in the organization** has all the features and functions required for executing a successful recruitment task, providing exceptional case of use for recruitment directors.

The following are the overview of the features and benefits of Search Engine for job portal in the organization

* Database software installed and pre-configures for the immediate use of the system effectively and efficiently.
* Pre-configured and ready to run Jobs database with management module for adding, deleting and modifying apart from valuable search facility.
* Database to store the candidates details securely.
* Customizable authentication to control access to database files using assigned user login and password control.
* Provides authentication to write the online.
* Provides information to the managers so that they can make judgment about particular situations.
* Candidate applications are automatically scored and ranked against job description criterion.
* Reduction in the costs of hiring – there will be between 50 – 60 percent decrease in the cost of hiring.
* Reduction in the time to hire – the result of targeting candidates accurately in an online environment means less ‘Paper; administration and more time ‘face-to-face’ with the candidate.
* Automatic generation of the Login ID and the password for the candidates if selected for online test by the HR personnel.

## Modules

The Online Recruitment System is broadly divided into 4 modules. They are:

* Login Module
* Job Provider Module
* Job Seeker Module
* Online Test Module

**Module Description**

## Login Module

The module is the one, which allows only authorized people to access the Application. Any person who needs an access to the application is needed to login in the first step. The user needs to provide his or her login ID and the password. The password is checked against the one stored in the database. If both the ID and Password are valid then the user is given access to the application, else he/she is denied from it.

## Job Provider Module

For the HR Personnel the options available in the system would be mainly under four broad headings and we can call it as Sub Modules of Job Provider Module.

* Requirements
* Resume Processing
* Online Test Queries
* Message From Users
* Authentication

## Requirements Module

The module would help the HR to maintain the opportunity list available in the company. The different functionality provided were:

## Adding New Requirement

Whenever a new job position would be vacant, the HR can create a new one. The appropriate code for validation of the input details was coded.

## Modifications of the Requirements List

The HR from time to time would need to view/modify the different job positions in the company. The listing is based on different criteria: all the job positions, based on the Skill set required, based on the status of the Application, Based on the experience required or On the Basis of the Last Date of Apply. The HR can know the complete details about a particular opportunity such as, the date on which it was created, the day on which it was modified and the HR who created it. If he/she needs to modify, then the details of it would be displayed as that the fields Description, Qualification, Skill Set, Last date to apply and Experience etc. and the same can be modified.

## Cleaning Up of the Requirement list Data

The requirements with status as ”Processed” would be listed. If the HR chooses to cleanup any of the requirement details, then all the candidate details pertaining to that particular job code would be deleted from the database and the details of the job code would be stored in the backup for future use.

## Resume Processing Module

The module is useful for the maintenance of the resumes obtained for any job position available in the company.

Different functions provided are:

* **Adding a new Resume:**

The function provides provision for the HR to add a new resume to the database. The resume can be obtained in a number of different ways – through post or through web site. The details of the candidate will be stored in the database. The date on which the application was obtained would also be stored so that it can be checked that the application received after the last to apply is lapsed will not be considered for processing.

* **View or Modification of the applicant’s list:**

The HR from time to time would need to view/modify the list of candidates applied for a job position in the company. The listing is based on different criteria: All candidates, Based on the Job Code for which the candidate has applied or Based on the Skill Set of the candidate, Based on Experience or Based on the Status of the application of candidate. The HR can view the details of a candidate to know the contact details or the mode through which the candidate has applied for that position. Provisions are provided where the HR can directly send mail to the candidate by just clicking the mail ID of the contact person. If needed to modify, then the details of the candidate would be displayed so that the fields of Candidate Name, Address, Mail ID, Skill Set, Qualification, and Experience etc. would be displayed and the same can be modified. If the HR pts to change the status for the candidate application, then he/she can provide an appropriate status and save the changes made. The details of the overall operation carried out during status change are stated in the function: Updating the application status below:

* **Processing of the applications for different jobs:**

Once the last date of apply for any job position that was vacant is elapsed, the status of the job position would be made as ‘Invalid’. When the HR wants to process the applications, a list of all job codes for which the Lat date to apply has been over with the status as ‘Invalid’ and status not as ‘Processed’ will be listed. The HR when chooses to process for a particular job code, the system will list in the following basis:

1. It would check that the candidate has applied before the last date to apply.
2. It would check that the resume is not from the same candidate who is in the wait-for-list and for the same job position.
3. It would check the resume satisfies the experience requirement for that job.
4. The resume, which satisfies above three, would be examined further for percentage of marks obtained.
5. If all above four were satisfied, the resume would be checked for the skill set. If it suffices at least 60% of the minimum skill for the position, then it would be considered as an eligible application for shortlist.

All the applications that are eligible would be listed along with the status so that the HR can change it as needed. The updating of status is described as below:

* **Updating the application Status:**

When status of application of a candidate is to be updated, the HR can update it to any of the following – Test Scheduled, Interview Rejected or Application Rejected. In case of Application Rejected, the reason for the rejection is to be specified. For Test or Interview Scheduled, the date, time and place of the schedule ahs to be stated along with the Group ID is to be stated. Before this the login ID and the Password for the candidate is generated.

* **Cleaning up the database from unwanted Resumes:**

The list of resumes, which has been in the ‘Wait For’ list, would be selected and displayed. If the HR opts to clean these resumes, then he can select them and clean the database. Once the resume of a candidate has been cleaned up, he can apply to the position again, i.e. after 6 months once he has applied. The details pertaining to theses candidates would be deleted from the database and hence the database cleaned from unwanted information.

## Online Test Queries Module

Regarding the Online Test Questions the HR will have the following options:

**Adding New Questions:** The HR can add the new questions for online test.

**View or Modifications of Questions:** The HR can view or modify a particular question whichever he/she wants to view or modify.

**Deletion of Questions:** For every 6 months old questions will be deleted and new questions will be added.

## Authentication Module

The module would help the HR to maintain the Authentication List available in the company. The different functionality provided were:

**Adding New Authentication:** Whenever HR Manager wants to create a new authentication the HR can create a new one. The appropriate code for validation of the input details was coded.

**Modification of the Authentication List:**  HR can view or modify the existing Authentication.

## Job Seeker Module

This module is an interface to the candidates to the Organization., web site to apply for the vacant positions. The candidate can directly apply for any of the jobs or can view their application status. The different functions made available for the candidate’s convenience are:

For the Job Seeker the options available in the system would be mainly under some broad headings and we can call it as Sub Modules of Job Seeker Module.

* In Box
* Post Resume
* Update Resume
* View All Jobs
* Update Personal Information
* Change Password Information
* Feedback
* Faq’s
* Logout

**In Box**

The list of all information about the online test. Whether he was accepted or rejected for online test. If he accepted for online test then he can write the online test and every information stored on Inbox sent by the Job Provider.

**Post Resume**

The Search Engine for job portal in the organization will provide to the Job Seeker can post his resume to the HR Persons for further processing.

**Update Resume**

The **Search** Engine for job portal in the organization will provide to the Job Seeker can update his resume for further processing.

**View All Jobs**

Job Seekers can view all Jobs existing in the Organizations and can apply for particular jobs also.

**Update Personal Information**

The Search Engine for job portal in the organization provides to Job Seekers can Update his personals and as well as Password also.

**Change Password Information**

The Search Engine for job portal in the organization provides to Job Seekers can change his Password details.

**Feedback**

The Search Engine for job portal in the organization provides to users can send feedback to Job providers.

**FAQ’S**

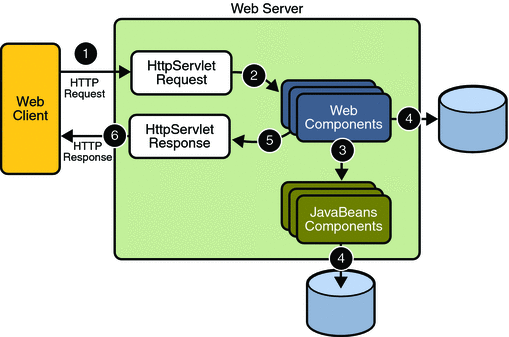
The Search Engine for job portal in the organization also provides the various FAQ’s regarding technical skills and other sections i.e. documentation on some advanced technologies like J2EE., .Net etc.

## Online Test Module

This module helps the HR to conduct the online test for the selected candidates. Here the HR will provide separate login and password for each candidate. This module will fetch questions randomly from the database and displays to the candidate. The time limit to write the test maintained automatically. The result will be displayed immediately after clicking on the submit button.

**PROCESS FLOW**

**ARCHITECTURE DIAGRAM**



1. **THE PRESENTATION LAYER**

Also called as the client layer comprises of components that are dedicated to presenting the data to the user. For example: Windows/Web Forms and buttons, edit boxes, Text boxes, labels, grids, etc.

1. **THE BUSINESS RULES LAYER**

This layer encapsulates the Business rules or the business logic of the encapsulations. To have a separate layer for business logic is of a great advantage. This is because any changes in Business Rules can be easily handled in this layer. As long as the interface between the layers remains the same, any changes to the functionality/processing logic in this layer can be made without impacting the others. A lot of client-server apps failed to implement successfully as changing the business logic was a painful process

1. **THE DATA ACCESS LAYER**

This layer comprises of components that help in accessing the Database. If used in the right way, this layer provides a level of abstraction for the database structures. Simply put changes made to the database, tables, etc do not affect the rest of the application because of the Data Access layer. The different application layers send the data requests to this layer and receive the response from this layer.

1. **THE DATABASE LAYER**

This layer comprises of the Database Components such as DB Files, Tables, Views, etc. The Actual database could be created using SQL Server, Oracle, Flat files, etc.   
In an n-tier application, the entire application can be implemented in such a way that it is independent of the actual Database. For instance, you could change the Database Location with minimal changes to Data Access Layer. The rest of the Application should remain unaffected.

**SDLC METHODOLOGIES**

This document play a vital role in the development of life cycle (SDLC) as it describes the complete requirement of the system. It means for use by developers and will be the basic during testing phase. Any changes made to the requirements in the future will have to go through formal change approval process.

SPIRAL MODEL was defined by Barry Boehm in his 1988 article, “A spiral Model of Software Development and Enhancement. This model was not the first model to discuss iterative development, but it was the first model to explain why the iteration models.

As originally envisioned, the iterations were typically 6 months to 2 years long. Each phase starts with a design goal and ends with a client reviewing the progress thus far. Analysis and engineering efforts are applied at each phase of the project, with an eye toward the end goal of the project.

The steps for Spiral Model can be generalized as follows:

* The new system requirements are defined in as much details as possible. This usually involves interviewing a number of users representing all the external or internal users and other aspects of the existing system.
* A preliminary design is created for the new system.
* A first prototype of the new system is constructed from the preliminary design. This is usually a scaled-down system, and represents an approximation of the characteristics of the final product.
* A second prototype is evolved by a fourfold procedure:

1. Evaluating the first prototype in terms of its strengths, weakness, and risks.
2. Defining the requirements of the second prototype.
3. Planning an designing the second prototype.
4. Constructing and testing the second prototype.

* At the customer option, the entire project can be aborted if the risk is deemed too great. Risk factors might involved development cost overruns, operating-cost miscalculation, or any other factor that could, in the customer’s judgment, result in a less-than-satisfactory final product.
* The existing prototype is evaluated in the same manner as was the previous prototype, and if necessary, another prototype is developed from it according to the fourfold procedure outlined above.
* The preceding steps are iterated until the customer is satisfied that the refined prototype represents the final product desired.
* The final system is constructed, based on the refined prototype.
* The final system is thoroughly evaluated and tested. Routine maintenance is carried on a continuing basis to prevent large scale failures and to minimize down time.

**The following diagram shows how a spiral model acts like:**



**Fig 1.0-Spiral Model**

**ADVANTAGES**

* Estimates(i.e. budget, schedule etc .) become more relistic as work progresses, because important issues discoved earlier.
* It is more able to cope with the changes that are software development generally entails.
* Software engineers can get their hands in and start woring on the core of a project earlier.

**SOFTWARE REQUIREMENT AND**

**HARDWARE REQUIREMENT**

**SOFTWARE REQUIREMENTS**

Operating System : Windows XP/2003 or Linux

User Interface : HTML, CSS

Client-side Scripting : JavaScript

Programming Language : Java

Web Applications : JDBC, Servlets, JSP

IDE/Workbench : My Eclipse 6.0

Database : Oracle 10g

Server Deployment : Tomcat 5.x

**HARDWARE REQUIREMENTS**

Processor : Pentium IV

Hard Disk : 40GB

RAM : 512MB or more