"ONLINE JOB SEARCH SYSTEM"

SYNOPSIS for the "**Final Project**"

Submitted in Partial fulfillment of requirement

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Master Of Science in Computer Science,

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Submitted

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ABSTRACT

The project would help us in effective and systematic record keeping that is storing and retrieving of useful data. Project will be able to give the report so that admin can make decisions on bases of that reports.

It provides the Recruitment of people with all the necessary tools to schedule the interview and applicants to register and apply for jobs and interviewers to view the interview details. It provides the users with all the necessary privileges to access and modify the data intended for them.

It doesn't entirely replace the existing system but it mostly automizes the Recruitment process and all the data used.

PROFILE OF THE PROBLEM

The web-application aims at providing the candidates the ability to register to this application and search for jobs, manage their accounts.

As this is a well designed and easy-to-use communication system, this will certainly give the job portal an edge over the other job portals with outdated and manual communication system, with manpower doing the bulk of data transfer in the form of files and paper documents. With automatic features like getting candidates information, company

information, getting job vacancies this web application turns out to be a very suitable one.

MODULES

1. **Admin Module:** This module is the central module of this application. This module provides user interface for the admin to get all the information about the system and also for configuring the system with any required information.

2. **Registered User Module** : This user module will be providing registered users to manage their profiles . Users can search for jobs, edit, update their data.

3. **Company Module:** This module will provide an online environment to the company to post their jobs, see jobs applications by users, modify settings and download CV of applicants.

TECHNOLOGIES USED

- PHP
- MySQL
- JavaScript

OBJECTIVE OF THE PROJECT

This project is aimed at developing a web-based and central Online job search to build a best interface between The Employer and The Employee. Some features of this system will be creating vacancies, storing Applicants data and finally Hiring of the applicant. Reports may be required to be generated for the use of HR group.

This system automates the manual recruitment process. We believe that once the organization chooses to use this system, it will eventually recognize the value and necessity of this system and understand the problems involved in the manual process.

This document provides details about the entire software requirements specification for the online job search system. The project Online Job search system is aimed at developinga web-based and central Recruitment Process System to build a best interface between TheEmployer and The Employee.

INTRODUCTION

1.1 About Project

Online job search system is a website designed in PHP. It provides the candidates ability to register to this application and search for jobs, manage their accounts. Each candidatewill have their own account with their own home page.

On the other hand companies that are willing to publish the jobs for their company to candidates can register to the job portal and get their own account created and can post jobs to portal's database .

Registered companies can add or remove jobs and these jobs can be seen by various candidates and they can contact the company person for the job. Main aim of this website is to make a good website that can make this job search option easy and accessible to everyone who are interested.

1.2 MODULES

The main stakeholders of this system are:

1. Admin.

2. Job Seekers.

3. Companies

This system enables the Recruiting company to login to the system and create a vacancy and post it on the web. The Recruiting company can associate jobseekers with a vacancy and Schedule the interview by providing their company e-mail or website address.

This system enables the jobseekers to login, to view all the vacancies and to view the applicant and vacancy details. He is also able to search by location, job type and company name.

The Job Seekers can register and create a profile. He/She can search and apply for jobs online. They can also upload their CV if that option has been enabled by the company.

Definitions ,Acronyms and Abbreviations :-

1. Recruiting company : The company who creates vacancies.
2. Job Seekers : The person who sell applies for job.
3. Admin : The authorized person who controls all the network

Requirement Analysis

Systems analysis is the study of sets of interacting entities, including computer systems analysis. This field is closely related to operations research. It is also "an explicit formal inquiry carried out to help someone (referred to as the decision maker) identify a better course of action and make a better decision than he might otherwise have made." Analysis is defined as the procedure by which we break down an intellectual or substantial whole into parts so that we can achieve our end goals.

The development of a computer-based information system includes a systems analysis phase which produces or enhances the **data model** which itself is a precursor to creating or enhancing a **database**. There are a number of different approaches to system analysis. When a computer-based information system is developed, systems analysis would constitute the following steps:

1. The development of a feasibility study, involving determining whether a project is economically, socially, technologically and organizationally feasible.

2. Conducting fact-finding measures, designed to ascertain the requirements of the system's end-users. These typically span interviews, questionnaires, or visual observations of work on the existing system.

3. Gauging how the end-users would operate the system (in terms of general experience in using computer hardware or software), what the system would be used for etc.

Another view outlines a phased approach to the process. This approach breaks systems analysis into 5 phases:

- Scope definition

- Problem analysis
- Requirements analysis
- Logical design
- Decision analysis

Use case are a widely-used systems analysis modeling tool for identifying and expressing the functional requirements of a system. Each use case is a business scenario or event for which the system must provide a defined response. Use cases evolved out of object-oriented analysis.

2.1 Requirement specification

Information gathering is usually the first phase of the software development project. The purpose of this phase is to identify and document the exact requirements for the system. The user's request identifies the need for a new information system and oninvestigation re-defined the new problem to be based on MIS, which supportsmanagement. The objective is to determine whether the request is valid and feasible beforea recommendation is made to build a new or existing manual system continues.

The major steps are –

- Defining the user requirements.
- Studying the present system to verify the problem.
- Defining the performance expected by the candidate to use requirements.

2.2 S/W and H/W Requirement Specification

2.2.1 Hardware Requirements

- Pentium IV 1.8 GHz and Above

- 1 GB DDRAM or More
- 40 GB HDD
- Printer
- Power Backup
- Internet Connection

2.2.2 Software Requirements

1. PHP 5
2. Database
   - MySQL Database Server 5.1.37
3. Web Server
   - Apache
4. Operating System
   - Windows 7 / Vista / XP sp3 / Linux Fedora 14

2.3 Technologies Used

1. Presentation Layer

1.1 Web Interface

- PHP(Hypertext Pre-Processor)
- HTML (Hypertext Markup Language)
- CSS(Cascading Style Sheet)
- JavaScript

2. Database Layer

- SQL

HTML

HTML is a language for describing web pages.

- HTML stands for **H**yper **T**ext **M**arkup **L**anguage
- HTML is not a programming language, it is a **markup language**
- A markup language is a set of **markup tags**
- HTML uses **markup tags** to describe web pages

HTML markup tags are usually called HTML tags

- HTML tags are keywords surrounded by **angle brackets** like <html>
- HTML tags normally **come in pairs** like and
- The first tag in a pair is the **start tag,** the second tag is the **end tag**
- Start and end tags are also called **opening tags** and **closing tags**.

HTML Documents

- HTML documents **describe web pages**
- HTML documents **contain HTML tags** and plain text
- HTML documents are also **called web pages**

CSS

A few words about CSS

- **CSS** stands for **C**ascading **S**tyle **S**heets
- Styles define **how to display** HTML elements
- Styles are normally stored in **Style Sheets**
- Styles were added to HTML 4.0 **to solve a problem**
- **External Style Sheets** can save you a lot of work
- External Style Sheets are stored in **CSS files**
- Multiple style definitions will **cascade** into one

CSS provides means to customize inbuilt HTML tags

HTML tags were originally designed to define the content of a document. They were supposed to say "This is a header", "This is a paragraph", "This is a table", by using tags like <h1>, <p>, <table>, and so on. The layout of the document was supposed to be taken care of by the browser, without using any formatting tags.

As the two major browsers - Netscape and Internet Explorer - continued to add new HTML tags and attributes (like the <font> tag and the color attribute) to the original HTML specification, it became more and more difficult to create Web sites where the content of HTML documents was clearly separated from the document's presentation layout.

To solve this problem, the World Wide Web Consortium (W3C) - the non profit, standard setting consortium, responsible for standardizing HTML - created STYLES in addition to HTML 4.0.

All major browsers support Cascading Style Sheets.

Styles sheets define HOW HTML elements are to be displayed, just like the font tag and the color attribute in HTML 3.2. Styles are normally saved in external .css files. External style sheets enable you to change the appearance and layout of all the pages in your Web, just by editing one single CSS document.

JavaScript

JavaScript is used in millions of Web pages to improve the design, validate forms, detect browsers, create cookies, and much more. JavaScript is the most popular scripting language on the internet, and works in all major browsers, such as Internet Explorer, Firefox, and Opera.

A few words about JavaScript

- JavaScript was designed to add interactivity to HTML pages
- JavaScript is a scripting language
- A scripting language is a lightweight programming language
- JavaScript is usually embedded directly into HTML pages

- JavaScript is an interpreted language (means that scripts execute withoutpreliminary compilation)
- Everyone can use JavaScript without purchasing a license

Purpose of using JavaScript

- **JavaScript gives HTML designers a programming tool -** HTML authors are normally not programmers, but JavaScript is a scripting language with a very simple syntax! Almost anyone can put small "snippets" of code into their HTML pages
- **JavaScript can put dynamic text into an HTML page -** A JavaScript statement like this: document.write("<h1>" + name + "</h1>") can write a variable text into an HTML page
- **JavaScript can react to events -** A JavaScript can be set to execute when something happens, like when a page has finished loading or when a user clicks on an HTML element
- **JavaScript can read and write HTML elements -** A JavaScript can read and change the content of an HTML element
- **JavaScript can be used to validate data -** A JavaScript can be used to validate form data before it is submitted to a server. This saves the server from extra processing
- **JavaScript can be used to detect the visitor's browser** - A JavaScript can be used to detect the visitor's browser, and - depending on the browser - load another page specifically designed for that browser
- **JavaScript can be used to create cookies** - A JavaScript can be used to store and retrieve information on the visitor's computer

Where to Put the JavaScript

Scripts in the head section: Scripts to be executed when they are called, or when an event is triggered, go in the head section. When you place a script in the head section, you will ensure that the script is loaded before anyone uses it.

Scripts in the body section: Scripts to be executed when the page loads go in the body section. When you place a script in the body section it generates the content of the page.

Using an External JavaScript: When you might want to run the same JavaScript on several pages, without having to write the same script on every page, then you can write a JavaScript in an external file. Save the external JavaScript file with a .js file extension. Theexternal script cannot contain the <script> tag. To use the external script, point to the J1.js file in the "src" attribute of the <script> tag:

```
<script type="text/javascript" src="J1.js"></script>
```

PHP 5

PHP (recursive acronym for PHP: Hypertext Preprocessor) is a widely-used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML.

Nice, but what does that mean? An example:

Example #1 An introductory example

```
<!DOCTYPE HTML>
<html>
  <head>
    <title>Example</title>
  </head>
  <body>

    <?php
      echo "Hi, I'm a PHP script!";
    ?>

  </body>
</html>
```

Instead of lots of commands to output HTML (as seen in C or Perl), PHP pages contain HTML with embedded code that does "something" (in this case, output "Hi, I'm a PHP

script!"). The PHP code is enclosed in special start and end processing instructions <?php and ?> that allow you to jump into and out of "PHP mode."

What distinguishes PHP from something like client-side JavaScript is that the code is executed on the server, generating HTML which is then sent to the client. The client would receive the results of running that script, but would not know what the underlying code was. You can even configure your web server to process all your HTML files with PHP, and then there's really no way that users can tell what you have up your sleeve.

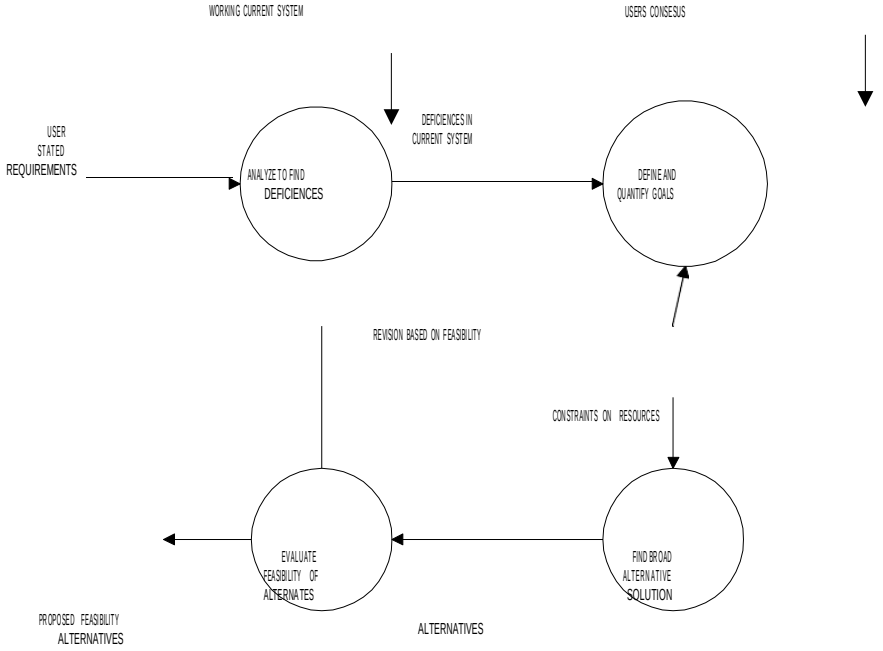
The best things in using PHP are that it is extremely simple for a newcomer, but offers many advanced features for a professional programmer. Don't be afraid reading the longlist of PHP's features. You can jump in, in a short time, and start writing simple scripts in afew hours.

CHAPTER 3

Feasibility Study

Feasibility study is the process of determination of whether or not a project is worth doing. Feasibility studies are undertaken within tight time constraints and normally culminate in a written and oral feasibility report. The contents and recommendations of thisfeasibility study helped us as a sound basis for deciding how to precede the project. It helped in taking decisions such as which software to use, hardware combinations, etc.

The following is the process diagram for feasibility analysis. In the diagram, the feasibility analysis starts with the user set of requirements. With this, the existing system is also observed. The next step is to check for the deficiencies in the existing system. By evaluating the above points a fresh idea is conceived to define and quantify the required goals. Besides that, a set of alternatives and their feasibility is also considered in case of any failure in the proposed system. Thus, feasibility study is an important part in software development.



PROCESS DIAGRAM FOR FEASIBILITY ANALYSIS

In the SDLC (Systems Development Life Cycle) of our project we maintained a number of feasibility checkpoints between the two phases of the SDLC.

These checkpoints indicate that the management decision to be made after a phase is complete. The feasibility checkpoints in our project were as follows:

(i) Survey phase checkpoint
(ii) Study phase checkpoint
(iii) Selection phase checkpoint
(iv) Acquisition phase checkpoint
(v) Design phase checkpoint

3.1 Technical Feasibility

Technical feasibility determines whether the work for the project can be done with the existing equipment, software technology and available personnel. Technical feasibility is concerned with specifying equipment and software that will satisfy the user requirement.

This project is feasible on technical remarks also, as the proposed system is more beneficiary in terms of having a sound proof system with new technical components installed on the system. The proposed system can run on any machines supporting **Windows** and **Internet** services and works on the best software and hardware that had been used while designing the system so it would be feasible in all technical terms of feasibility. The technologies such as PHP, JavaScript and the compatible H/Ws are so familiar with the today's knowledge based industry that anyone can easily be compatible tothe proposed environment.

Technical Feasibility Addresses Three Major Issues: -

(a) Is the proposed Technology or Solution Practical?

The technologies used are matured enough so that they can be applied to our problems. The practicality of the solution we have developed is proved with the use of the technologies we have chosen. The technologies such as PHP, JavaScript and the compatible H/Ws are so familiar with the today's knowledge based industry that anyone can easily be compatible to the proposed environment.

(b) Do we currently posses the necessary technology?

We first make sure that whether the required technologies are available to us or nor. If they are available then we must ask if we have the capacity. For instance, "Will our current Printer be able to handle the new reports and forms required of a new system?

(c) Do we possess the necessary Technical Expertise and is the Schedule reasonable?

This consideration of technical feasibility is often forgotten during feasibility analysis. We may have the technology, but that doesn't mean we have the skills required to properly apply that technology.

As far as our project is concerned we have the necessary expertise so that the proposed solution can be made feasible.

3.2 Economical Feasibility

Economical feasibility determines whether there are sufficient benefits in creating to make the cost acceptable, or is the cost of the system too high. As this signifies cost benefit analysis and savings. On the behalf of the cost-benefit analysis, the proposed system is feasible and is economical regarding its pre-assumed cost for making a system.

During the economical feasibility test we maintained the balance between the Operational and Economical feasibilities, as the two were the conflicting. For example the solution that provides the best operational impact for the end-users may also be the most expensive and, therefore, the least economically feasible.

We classified the costs of Online job portal according to the phase in which they occur. As we know that the system development costs are usually one-time costs that will not recur after the project has been completed. For calculating the Development costs we evaluated certain cost categories viz.

(i) Personnel costs
(ii) Computer usage
(iii) Training
(iv) Supply and equipment's costs
(v) Cost of any new computer equipment's and software.

In order to test whether the Proposed System is cost-effective or not we evaluated it through three techniques viz.

- **Payback analysis**
- **Return on Investment**:
- **Net Present value**
  - **Cost-based study**: It is important to identify cost and benefit factors, which can be categorized as follows: 1. Development costs; and 2. Operating costs. This is ananalysis of the costs to be incurred in the system and the benefits derivable out of the system.

- **Time-based study**: This is an analysis of the time required to achieve a return on investments. The future value of a project is also a factor.

3.3 Behavioral feasibility

People are inherently resistant to change and computers have been known to facilitate change. There is always some reluctance among the users against the introduction of new system but they were told that this system would eliminate the unnecessary overhead of database migration and conversion, which presently had to be carried out on daily basis to facilitate transactions between the different departments. The objective this feasibility phase is to take the operational staff into confidence. As the success of a good system depends upon the willingness of the operating staff, they were taken into full confidence that the new proposed system would make their jobs easier, relieve them from the unnecessary overheads and reduce the possibility of errors creeping into the system.

SYSTEM DESIGN

4.1 Introduction

After the analysis phase we have with us the details of the existing system and the requirements of the user for the new system. This phase diverts focus from the problem domain to the solution domain. It acts as a bridge between the requirement phase and its solution. The design phase focuses on the detailed implementation of the system recommended in the feasibility study.

Systems design is the process or art of defining the architecture, components, modules, interfaces, and data for a system to satisfy specified requirements. There is some overlap with the disciplines of systems analysis, systems architecture and systems engineering.

Object-oriented analysis and design (OOAD) methods are becoming the most widely used methods for computer system design. The UML has become the standard language used in Object-oriented analysis and design. It is widely used for modeling software systems and is increasingly used for high designing non-software systems and organizations.

The External Design

External design consists of conceiving, planning out and specifying the externally observable characteristics of the software product. These characteristics include user displays or user interface forms and the report formats, external data sources and the functional characteristics, performance requirements etc. External design begins during the analysis phase and continues into the design phase.

Logical design

The logical design of a system pertains to an abstract representation of the data flows, inputs and outputs of the system. This is often conducted via modelling, which involves a simplistic (and sometimes graphical) representation of an actual system. In the context of systems design, modelling can undertake the following forms, including:

- Data flow diagrams
- Entity Life Histories
- Entity Relationship Diagrams

Physical design

The physical design relates to the actual input and output processes of the system. This is laid down in terms of how data is input into a system, how it is verified/authenticated, how it is processed, and how it is displayed as output.

Physical design, in this context, does not refer to the tangible physical design of an information system. To use an analogy, a personal computer's physical design involves input via a keyboard, processing within the CPU, and output via a monitor, printer, etc. It would not concern the actual layout of the tangible hardware, which for a PC would be a monitor, CPU, motherboard, hard drive, modems, video/graphics cards, USB slots, etc.

Design Methodology: Rapid Application Development (RAD)

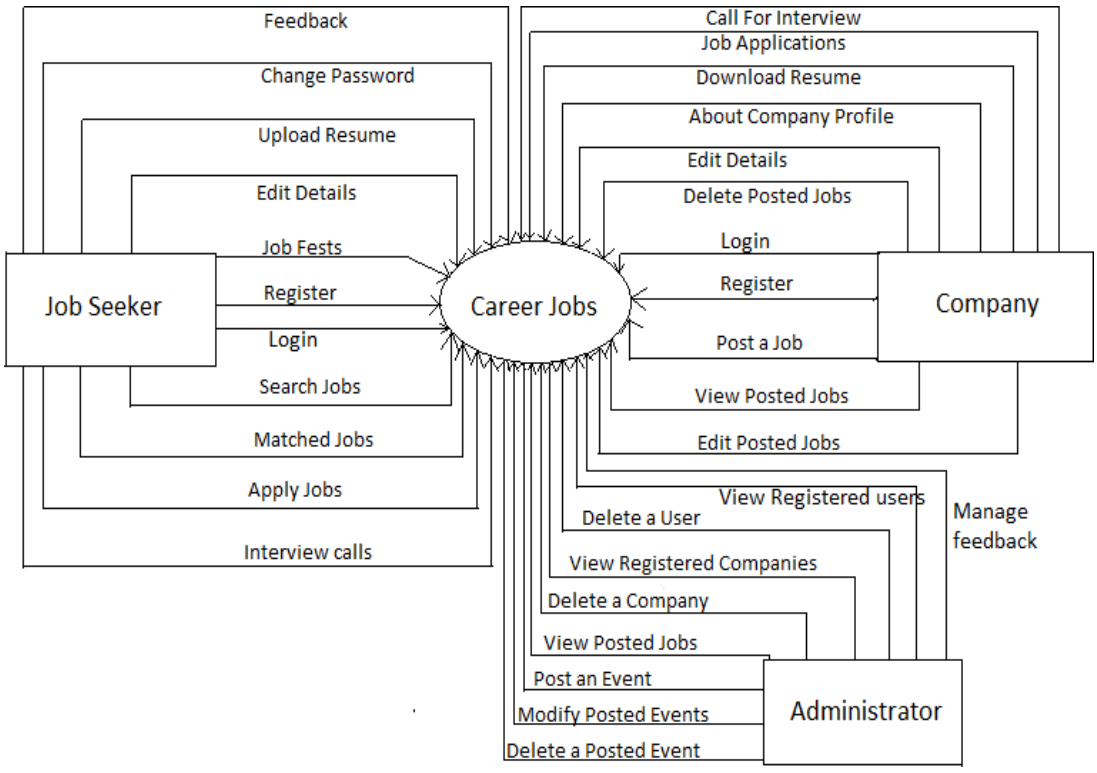
Rapid Application Development (RAD) is a methodology in which a systems designer produces prototypes for an end-user. The end-user reviews the prototype, and offers feedback on its suitability. This process is repeated until the end-user is satisfiedwith the final system. It is widely used for modeling software systems and is increasingly used for high designing non-software systems and organizations.

4.2 Module Description

- To develop a powerful online programming environment for php scripting.
- To manage all details of all users.
- To manage programs on server made by users.
- To provide support to users, so that users could share their problems with other users.
- To allow users to share their PHP scripts with other users.

4.3. DFD'S & ER Diagram

Level 0(Context-Level)



Level 1(User)

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6 Roger S. Pressman (1997) "Software Engineering, A Practitioner's Approach" Tata McGraw-Hill Publishing Company Limited.

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The following Links were searched and exploited extensively for the project development and implementation.

1 http://java.sun.com/products/jsp

2 http://www.roseindia.com