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1.INTRODUCTION

* 1. BACKGROUND
  2. OBJECTIVE
  3. PURPOSE
  4. SCOPE
  5. APPLICABILITY

1.INTRODUCTION

* 1. BACKGROUND
  2. OBJECTIVE
  3. PURPOSE
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  5. APPLICABILITY

|  |
| --- |
| **1 . Introduction** |

# 1.1 Background

To build a platform like **"Find a Job and Hire Employee,"** it is crucial to select technologies that are reliable, scalable, and efficient. For this project, we have chosen **PHP** as the primary programming language and a relational database (MYSQL) for data storage. This decision is based on the following factors:

#### **Why PHP?**

PHP (Hypertext Preprocessor) is a widely used server-side scripting language that is highly suited for web development. Key reasons for choosing PHP include:

1. **Ease of Use:** PHP has a simple syntax and is easy to learn, making it an excellent choice for developing robust web applications.
2. **Cost-Effective:** As an open-source language, PHP significantly reduces development costs.
3. **Compatibility:** PHP is compatible with a wide range of servers (e.g., Apache) and platforms (e.g., Windows, Linux).
4. **Framework Support:** PHP supports frameworks like Laravel and CodeIgniter which speed up development and ensure code quality.
5. **Community Support:** With a large community of developers, PHP offers access to extensive libraries, documentation, and support.

#### **Why Use a MYSQL ?**

The platform will use a MySQL for managing and storing data. Key reasons for this choice are:

1. **Structured Data Management:** Relational databases efficiently handle structured data, making them ideal for storing user profiles, job listings, and application records.
2. **Integration with PHP:** PHP natively supports relational databases, ensuring seamless interaction and faster development.
3. **Security Features:** Modern relational databases provide built-in features like encryption, user access control, and data integrity checks, ensuring data safety.
4. **Scalability:** Databases like MySQL are designed to handle large volumes of data, which is essential as the platform grows.

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# 1.2 Objective

The main objective of the **"Find a Job and Hire Employee"** project is to create a user-friendly, efficient, and secure platform that bridges the gap between job seekers and employers. The platform aims to streamline the job-seeking and hiring process, saving time and effort for both parties.

#### **Specific Objectives:**

1. **For Job Seekers:**
   * Provide a platform to create profiles, upload resumes, and showcase skills.
   * Enable easy job searching using filters such as location, job type, industry, and experience level.
   * Offer personalized job recommendations based on skills and preferences.
   * Send timely notifications about job openings, application status, and interview schedules.
2. **For Employers:**
   * Allow employers to post job openings with detailed descriptions and requirements.
   * Enable easy searching and filtering of candidates based on qualifications, skills, and experience.
   * Provide tools to manage applications, shortlist candidates.
   * Enhance hiring decisions through profile-matching algorithms and analytics.
3. **For Overall Platform:**
   * Ensure a secure environment for storing and managing user data.
   * Build an intuitive interface for seamless navigation and interaction.
   * Provide scalability to support an increasing number of users over time.
   * Deliver real-time communication features, such as email alerts or chat options, for effective interaction.

By achieving these objectives, the platform will connect the right talent with the right opportunities, making the hiring and job-seeking processes more efficient and rewarding.

# 1.3 Purpose

1. **Enhance Connection:**

To create a digital bridge that connects job seekers and employers seamlessly.

2. **Reduce Inefficiencies:**

To address inefficiencies in traditional hiring methods, such as delays in communication and

lack of visibility into candidate qualifications or job requirements.

**3. Promote Digital Transformation:**

To contribute to the growing trend of digital solutions in recruitment, offering a platform

that is scalable, secure, and adaptable to future needs.

4. **Economic Growth:**

To indirectly contribute to economic growth by making it easier for people to find jobs and

for businesses to fill vacancies quickly.

# 1.4 Scope

#### **1. Features for Job Seekers:**

* **Profile Creation:**  
  Job seekers can create personal profiles, including their educational qualifications, work experience, skills, and preferences.
* **Resume Upload:**  
  Users can upload their resumes in standard formats (e.g., PDF, DOC) for employers to view.
* **Job Search:**  
  Advanced job search functionality with filters for location, salary range, job type (full-time, part-time, freelance), and industry.
* **Job Recommendations:**  
  Personalized job recommendations based on the candidate’s profile, skills, and preferences.
* **Application Tracking:**  
  Allow users to track the status of their applications in real-time (e.g., submitted, shortlisted, interviewed).
* **Notifications:**  
  Automatic email or in-app notifications about new job postings, application updates, or employer messages.

#### **2. Features for Employers:**

* **Job Posting:**  
  Employers can post detailed job openings, specifying qualifications, required skills, job roles, salary range, and location.
* **Candidate Search:**  
  Search and filter potential candidates based on qualifications, experience, and other criteria.
* **Application Management:**  
  View, shortlist, and communicate with candidates efficiently through a centralized dashboard.
* **Notifications:**  
  Employers receive alerts for new applications, shortlisted candidates, or responses from job seekers.
* **Profile Analytics:**  
  Employers can view detailed analytics of candidate profiles for better decision-making.

#### **3. Administrator Features:**

* **User Management:**  
  Admins can manage user accounts (both job seekers and employers), handle registrations, and resolve disputes.
* **Content Moderation:**  
  Review and approve job postings, user profiles, and other content to ensure quality and compliance.
* **Data Security:**  
  Ensure that sensitive user information (e.g., passwords, personal details) is protected using secure encryption methods.
* **Platform Monitoring:**  
  Monitor the activity on the website to prevent misuse, fraud, or spamming.

#### **4. Platform Capabilities:**

* **Scalability:**  
  The platform is designed to handle a growing number of users and job postings without performance issues.
* **Responsiveness:**  
  The website will be responsive, ensuring compatibility across devices, including desktops, laptops, tablets, and smartphones.

# 1.4 Applicability

The **"Find a Job and Hire Employee"** platform is highly applicable across various sectors, industries, and user groups. Its design ensures that it caters to diverse needs, providing value to job seekers, employers, and even the overall economy. Below is a detailed explanation of its applicability:

### **1. For Job Seekers**

The platform is applicable to individuals looking for employment opportunities, regardless of their field or experience level:

* **Fresh Graduates and Students:**

Helps students and recent graduates find internships, entry-level jobs, or part-time work.

* **Experienced Professionals:**

Assists professionals in finding mid-level or senior-level jobs that match their expertise and career goals.

* **Freelancers:**

Provides a marketplace for freelancers to connect with businesses looking for contract-based or project-specific work.

* **Career Changers:**

Supports those transitioning into new industries or roles by offering a wide variety of job options.

### **2. For Employers**

The platform is equally beneficial to organizations of all sizes and types:

* **Small and Medium Enterprises (SMEs):**

Assists SMEs in finding affordable hiring solutions without the need for recruitment agencies.

* **Large Corporations:**

Provides advanced features like candidate filtering and profile matching for large-scale recruitment needs.

* **Startups:**

Helps startups find the right talent quickly and efficiently as they grow.

* **Non-Profit Organizations:**

Enables NGOs to recruit volunteers or employees with relevant experience for their missions.

### **3. For Different Industries**

The platform is designed to cater to a wide range of industries, including:

* **Information Technology (IT):** Software developers, testers, system admins, etc.
* **Healthcare:** Doctors, nurses, technicians, etc.
* **Education:** Teachers, trainers, counselors, etc.
* **Retail:** Sales executives, cashiers, inventory managers, etc.
* **Construction and Manufacturing:** Engineers, laborers, supervisors, etc.
* **Freelance and Creative Jobs:** Graphic designers, content writers, videographers, etc.

2.Requirment and Analysis

2.1 PROBLEM DEFINATION

2.2 REQUIRENMENT SPECIFICATION

2.3 HARDWARE AND SOFTWARE

REQUIRMENT

2.4 PLANNING AND SCHEDULING

2.Requirment and Analysis

**2.1 Problem definition**

The **problem definition** for a job-finding system involves identifying the challenges faced by job seekers and employers in the recruitment process.

Problem Statement

Job seekers often face difficulties finding employment opportunities that align with their skills, preferences, and career goals. Simultaneously, employers struggle to efficiently find and attract the right talent for their roles. This disconnect arises due to a lack of centralized, efficient, and personalized tools for job searching and recruitment.

* Key Challenges for Job Seekers:

1. Overwhelming Volume of Information.
2. Mismatch Between Skills and Job Requirements.
3. Time-Consuming Application Process.

* Key Challenges for Employers:

1. Inefficient Talent Discovery.
2. Costly and Time-Consuming Recruitment.
3. Lack of Candidate Insights.

Feature

Here’s a list of essential features for a **job-finding and employee-hiring website** that serves both job seekers and employers:

1. Job Search and Filtering

* **Keyword Search:** Search for jobs using titles, skills, or company names.
* **Advanced Filters:** Filter jobs by location, salary range, industry, job type (full-time, part-time, freelance, remote), and experience level.
* **Personalized Recommendations:** AI-driven job suggestions based on user profiles and browsing history.

2.Profile and Resume Management

* **Professional Profile:** Build a complete profile with skills, education, experience, and certifications.
* **Resume Upload and Builder:** Upload existing resumes or create new ones using templates.
* **Portfolio Showcase:** Display project work, designs, or other achievements.

3. Notifications and Alerts

* **Job Alerts:** Notifications for new job postings that match user preferences.
* **Application Status Updates:** Real-time updates on the progress of job applications.
* **Interview Invitations:** Alerts for scheduled interviews or employer responses.

4. Application Management

* **One-Click Apply:** Quickly apply to jobs with pre-saved profiles and resumes.
* **Application Tracker:** Monitor the status of submitted applications in one place.
* **Saved Jobs:** Bookmark jobs to review or apply later.

5. Job Posting and Management

* **Customizable Job Listings:** Create detailed job postings with descriptions, requirements, and perks.
* **Multiple Job Categories:** Post jobs for different types of roles (remote, freelance, part-time, full-time).
* **Post Scheduling:** Schedule job postings to go live at a specific time.

6. Candidate Search and Matching

* **Resume Database Access:** Search and filter through a database of candidate profiles.
* **AI-Powered Matching:** Automatically match job openings with qualified candidates based on criteria.
* **Saved Candidate Profiles:** Bookmark promising candidates for future opportunities.

**7.** Collaborative Hiring

* **Team Access:** Allow HR teams to collaborate on candidate evaluations and decision-making.
* **Candidate Feedback:** Share notes and ratings on candidates with the hiring team.

**2.2 Requirement specification of find a job and hire employee management**

**system in php.**

Functional Requirement:-

**1. User Management**

* **Account Registration:**
  + Job seekers and employers can create accounts.
  + Separate registration forms for job seekers and employers.
* **Login and Authentication:**
  + Secure login system using PHP sessions.
  + Options for email/username and password login.
* **Profile Management:**
  + Job seekers can create and update profiles (skills, experience, education).
  + Employers can create company profiles (about, mission, open roles).

### ****2. Job Management****

#### ****For Employers:****

* **Job Posting:**
  + Create, update, and delete job listings.
  + Fields: Job title, description, requirements, location, salary range, job type, and deadline.
* **Manage Applications:**
  + View applications received for a specific job.
  + Shortlist or reject candidates with automated status updates.
* **Job Status:**
  + Mark jobs as "Open," "Closed,".

#### ****For Job Seekers:****

* **Job Search:**
  + Search jobs by keywords, location, salary range, job type, and experience level.
  + Filter and sort results.
* **Application Submission:**
  + Apply for jobs with a single click using an uploaded resume or profile.

**4. Notifications**

* **Job Alerts for Job Seekers:**
  + Notify about new job postings matching their profile via email or in-app alerts.

**5. Admin Panel**

* **User Management:**
  + View, edit, or delete user accounts (both job seekers and employers).
* **Content Moderation:**
  + Approve or reject job postings and user profiles to prevent spam or inappropriate content.
* **Analytics Dashboard:**
  + View metrics such as total jobs posted, user registrations, and applications submitted.

Non-Functional Requirement:-

**1. Performance**

* **Response Time:**
  + The system should respond to user requests within 3 seconds under normal load conditions.
* **Scalability:**
  + The system must handle increasing traffic and user registrations, with support for thousands of concurrent users.
* **Job Search Efficiency:**
  + Search results should be displayed within 2 seconds, even with complex filters.

**2. Usability**

* **User-Friendly Interface:**
  + The platform should be intuitive and easy to use for both job seekers and employers, with minimal learning curve.
* **Mobile Compatibility:**
  + The website should be fully responsive and optimized for mobile devices.

**3. Security**

* **Data Protection:**
  + All sensitive user data, such as passwords and personal details, must be encrypted (e.g., password\_hash() for passwords).
* **Secure Communication:**
  + Use HTTPS for secure data transmission between users and the server.
* **Role-Based Access Control (RBAC):**
  + Ensure different permissions for job seekers, employers, and administrators to prevent unauthorized access.

**4. Availability**

* **Uptime:**
  + The system should be available 99.9% of the time, with minimal downtime for maintenance.
* **Backup:**
  + Regular backups of user data and job postings to prevent data loss in case of a system failure.
* **Fault Tolerance:**
  + Ensure the system can handle partial failures without significant disruption to users.

**5. Maintainability**

* **Code Structure:**
  + Write modular, clean, and well-documented PHP code to facilitate maintenance and future updates.
* **Error Logging:**
  + Implement a robust error logging system to track and resolve issues efficiently.

**2.3 Hardware and Software Requirement in php.**

2.3*.*1 Hardware Requirements:

Below are the typical hardware specifications for **development, testing, and production environments**:

1.Processor

* The **hardware processor** ensures that your server has the computational power to execute PHP scripts efficiently. Modern multi-core CPUs with high clock speeds are recommended. The **PHP script processor** (PHP interpreter) executes your PHP code.
* **Processor**: Pentium R processor and above.

2.RAM

* **RAM (Random Access Memory)** plays an important role in ensuring the smooth execution of PHP scripts and applications. The amount of RAM on the server impacts how well PHP can handle large datasets, manage multiple concurrent users, and perform memory-intensive operations such as database queries, image processing, and caching.
* **RAM**: 4 GB And above.

3.Storge

**Storage for a PHP-Based Website** plays a crucial role in the performance, scalability, and reliability of your application.

**Types of Storage in PHP Websites**

1. **File Storage**:
   * This is where your website’s static files, such as images, documents, and user-uploaded content, are stored.
   * PHP allows you to manage file uploads and store them on the server's file system.
2. **Database Storage**:
   * PHP-based websites often rely on a **relational database** like MySQL for dynamic content (e.g., job listings, user profiles, job applications, etc.).
   * The database stores structured data, and PHP scripts interact with the database to fetch or update content.
3. **Cache Storage**:
   * PHP-based websites often use caching mechanisms to store frequently accessed data temporarily in memory, reducing the need to query the database repeatedly and improving performance.

**2.3.2 Software Requirements:**

##### For a **job finding website in PHP**, the software requirements are as follows:.

**1. Web Server**

* **Apache HTTP Server** : These are popular web servers for PHP applications. Apache is widely used and supports .http for URL rewriting and access control.

**2. PHP Version**

* PHP 5.3.10 is recommended for security and performance improvements.

**3. Database**

* **MySQL** : To store job listings, user profiles, applications, and other necessary data.

**4. Front-end Development**

* **HTML**, **CSS**, and **JavaScript** for structuring the website.
* **Bootstrap** : For responsive design.

**5.Editor**

**Visual Studio Code (VS Code)**

* **Description**: A lightweight and powerful code editor by Microsoft, with excellent support for PHP development through extensions.

2.4 Planning and Scheduling.

Planning

The process of planning a job-finding website involves careful planning from defining the project goals to develop the website.

**1. Define the Purpose and Goals**

* **Target Audience**: Identify who will be using your platform (job seekers, employers etc.).
* **Core Features**: Define the core functionalities you want to offer:
  + Job listings
  + Resume uploads
  + Employer profiles
  + Job search filters (location, type, salary, etc.)
  + Notifications
  + Admin panel for managing users, jobs, and applications.

**2. Create a User Flow**

* **User Flow**: Map out how users will interact with your site. For example, a job seeker will:
* Sign up/Sign in.
* Create a profile and upload a resume.
* Search for jobs.
* Apply for jobs.
* Receive job notifications.

**3. Plan the Site Architecture**

* **Site Structure**: Organize the site into logical sections:
  + **Home Page**: Overview of the site, navigation to jobs, login, and sign-up.
  + **Job Listings**: Display jobs, categories, and search filters.
  + **Job Details**: Detailed description of each job posting.
  + **Employer Profile**: Section for employers to manage job postings.
  + **User Dashboard**: For job seekers to view applications, save jobs, etc.
  + **Admin Panel**: For managing users, jobs, applications, and settings.

**4. Design the Website**

* **UI/UX Design**: Create a user-friendly and responsive design.
* **Color Scheme**: Choose colors that align with your brand and provide a pleasant user experience.
* **Typography**: Choose legible fonts for both headers and body text.
* **Logo and Branding**: Design a memorable logo and develop branding guidelines.

**5. Define User Roles and Permissions**

* **Job Seekers**:
  + Create and manage profiles.
  + Search and apply for jobs.
  + Upload resumes.
  + Receive job notifications.
* **Employers**:
  + Post job listings.
* **Admin**:
  + Manage users (job seekers and employers).
  + Approve/disapprove job postings.
  + Monitor activity and reports.

**6. Develop and Build the Website**

* **Back-End Development**:
  + **PHP** for processing job applications, managing user data, and handling interactions with the database.
  + **MySQL** to store job listings, user profiles, applications, etc.
* **Front-End Development**:
  + **HTML**, **CSS** for building the interface.
  + **Responsive Design**: Ensure the site looks great on all screen sizes using frameworks like **Bootstrap** , **CSS**.
* **Search Functionality**: Optimize job search with filters such as:
  + Job type (full-time, part-time, etc.)
  + Location .
  + Salary range.

Planning:

|  |  |  |  |
| --- | --- | --- | --- |
| Step | Description | Key Action | Output |
| 1. Goal Setting | Define the objective(s) to be achieved. | Identify specific, measurable, achievable goals | Clearly defined goals. |
| 2. Analysis | Assess current situations and resources. | Conduct relevant  data | Understanding of current state. |
| 3. Resource Allocation | Assign resources (time, money, people) to strategies. | Prepare budgets, assign tasks, allocate manpower. | Resource plan. |
| 4. Plan Development | Create a detailed action plan outlining steps and timelines. | Break strategies into actionable tasks. | action plan. |
| 5. Implementation | Execute the action plan. | Follow the steps, monitor activities. | Execution of planned actions. |
| 6. Monitoring and Evaluation | Track progress, measure performance, and identify deviations. | Collect feedback, evaluate outcomes. | Reports and performance reviews. |
| 7. Adjustments | Revise plans or strategies based on feedback or changing circumstances. | Make necessary modifications to improve outcomes. | Updated plan. |

Scheduling

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Month | Week1 | Week2 | Week3 | Week4 |
| December | Searching project  Definition | Select project definition | Defining activities project ruff work | Defining  Activities  project |
| January | A case study | Activity list | Activities design  project | Milestones |
| February | Coding | Testing | Implement | The activity sequencing process |
| March | Creating the chart | Creating the network diagram | Creating the diagrams | Solve the path & complete project |