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Software Component Design(SWEG5107)

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Online Job Portal Website Documentation

Introduction

Collaboration plays a vital role in modern software development, and platforms like GitHub provide essential tools for teamwork. GitHub enables developers to collaborate effectively, whether working on the same file or different parts of a project. Its version control capabilities allow teams to track changes, manage code efficiently, and resolve conflicts seamlessly. For instance, in our team project, we used GitHub to develop an online job portal system. This system, designed to connect job seekers with employers, leverages GitHub for collaboration, ensuring organized workflows and secure code management.

The primary goal of the project, hosted in the repository [DeazStar/ip_project_job_portal_website](#), is to create a user-friendly platform that simplifies the hiring process and improves user experience. This document outlines the platform's scope, identifies user pain points, and highlights key stakeholders. It also defines the prioritized features and requirements necessary for successful implementation.

Design Approach

The online job portal system is built around a user-centered design approach to ensure intuitive navigation and ease of use for both job seekers and employers. Security is prioritized with encrypted communication and robust user authentication mechanisms to protect sensitive data.

Technologies Used

- **Frontend:** HTML, CSS, and JavaScript are used to create a responsive and dynamic user interface.
- **Backend:** PHP is employed for server-side scripting, providing efficient handling of user interactions and data management.

- **Database:** MySQL is used for managing user data, job postings, applications, and messaging history.
- **Version Control:** Git and GitHub are utilized for version control, enabling collaboration, tracking changes, and secure backup.

Implementation

The platform includes several core features:

- **Advanced Search:** Allows job seekers to filter job listings by category, location, experience, and salary.
- **Job Application Management:** Simplifies the process of applying for jobs and tracking application status.
- **Employer Dashboard:** Enables employers to post jobs, review applicants, and manage communications.
- **Secure Messaging:** Facilitates direct communication between job seekers and employers within the platform.

Using Git and GitHub for Collaboration

Git is a version control system that tracks changes to project files, enabling multiple team members to collaborate efficiently. GitHub, as an online platform for Git repositories, simplifies sharing and managing code.

Key Git Commands:

- **Initialize Repository:** `git init`
- **Add Files:** `git add`
- **Commit Changes:** `git commit -m "message"`
- **Push to GitHub:** `git push`
- **Clone Repository:** `git clone`

- **Pull Updates:** `git pull`
- **Branch Management:** `git branch`, `git checkout`, `git merge`

Benefits of GitHub for the Job Portal Project:

- **Version Control:** Tracks changes to the codebase, allowing easy rollback to previous versions if issues arise.
- **Collaboration:** Enables team members to work on separate branches simultaneously, merging changes seamlessly.
- **Secure Backup:** Stores the project securely in the cloud, ensuring accessibility and reliability.

To integrate the job portal project with GitHub, we initialized a Git repository locally, created a corresponding repository on GitHub, and linked them. Throughout development, changes were committed and pushed regularly, keeping the project up to date and synchronized among team members. This workflow enhanced organization, streamlined collaboration, and provided a reliable platform for managing the project.