**WeLearn Website Requirement Specification**

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Course: AIT715 Case Study in Internet Applications

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1. **Introduction**

WeLearn is an overseas education agency that assists Chinese high school students in applying to American colleges. Recently, the company established a MySQL database as its information management system, which is currently hosted on a local computer serving as both the client and server, accessible only by staff.

**1.1 Purpose**

The purpose of this document is to outline the functional and non-functional requirements for the development of the WeLearn Application website. WeLearn is an overseas education agency that helps Chinese students apply to institutions abroad. The website will serve as a comprehensive platform for students, agents, and administrators to manage applications, access resources, and communicate effectively.

**1.2 Scope**

The WeLearn website will provide functionalities for students to search for colleges and programs information and track application status. It will also offer tools for education agents to manage student applications, colleges and programs information, and students’ contracts. Administrators will have capabilities to manage content, oversee user activities, and generate reports.

**1.3 Audience**

This document is intended for the project stakeholders, including web developers, designers, quality assurance teams, project managers, education agents, and administrators of WeLearn.

**1.4 Definitions and Acronyms**

* **User**: Any individual who interacts with the WeLearn website (students, agents, administrators).
* **Student**: An individual seeking to apply to an overseas college through WeLearn.
* **Agent**: An education consultant who assists students in the application process.
* **Administrator**: An individual responsible for managing the website’s content and user activities.

**2. Overall Description**

**2.1 Product Perspective**

WeLearn is a standalone web application that integrates with WeLearn MySQL databases to provide a seamless application experience. It will be built using modern web technologies to ensure scalability, security, and user-friendliness.

**2.2 Product Features**

* **User Registration and Authentication**: Secure registration and login for students, agents, and administrators.
* **College Search and Filtering**: Search engine for colleges based on criteria like location, programs, fees, and rankings.
* **Application Management**: Tools for agents to fill out, update application status, track student applications.
* **Communication Tools**: An email will be sent to the student once his application status or student category is updated.
* **Document Management**: Secure upload and storage of necessary application documents (Students’ ID docs, Transcripts, Diplomas, and Contracts)
* **Reports and Analytics**: Tools for administrators to generate reports in \*.xls and graphs on application status, contract values, and more.
* **Content Management System (CMS)**: Allows administrators to update agents information and assign agent to different student cases on the website.

**2.3 User Classes and Characteristics**

* **Agents**: Primary Users who need a user-friendly interface who require tools for following up (Create, Read, Update, Delete) with their students’ profiles, managing their students’ applications, contracts, and all college and programs information.
* **Students**: Users who can view and update their own profile information and view their own application status, college and programs information.
* **Administrators**: Users who manage the platform; generate reports and graphs; assign agents to different students; have comprehensive access to all functionalities and data for maintenance and oversight.

**2.4 Operating Environment**

* **Web Browsers**: The website will be compatible with modern browsers, including Chrome, Firefox, Safari, and Edge.
* **Devices**: The website will be responsive and accessible on desktops and tablets.
* **Server Environment**: The website will be hosted on AWS EC2 cloud server with high availability and security.

**2.5 Constraints**

* Compliance with international data protection laws (e.g., GDPR).
* Hashing passwords and sensitive user data.
* The student’s record can only be created by agents. The student can only edit his/her own profile information and read his/her own application information. The agent can only have access to his/her own students’ profile information and application information.

**2.6 Assumptions and Dependencies**

* Users have access to the internet and a modern web browser with JavaScript enabled.

**3. Functional Requirements**

**3.1 User Registration and Authentication**

* **FR1**: The system shall allow agents to create a student entry by an email address and password.
* **FR2**: The system shall provide login functionality with email and password.
* **FR3**: The system shall allow users to reset their password via email.

**3.2 College and Programs Search and Filtering**

* **FR5**: The system shall provide a search bar for colleges with filtering options by location, course, fees, rankings, etc.
* **FR6**: The system shall display detailed information about each college, including programs, requirements, and deadlines.

**3.3 Application Management**

* **FR7**: The system shall allow agents to create, update, review information of the student profile, colleges and programs information and application status.
* **FR8**: The system shall enable students to upload and attach necessary documents (e.g., Students’ ID docs, Transcripts, Diplomas).
* **FR9** The system shall allow agents to upload and attach contracts documents.
* **FR10**: The system shall allow students to track the status of their applications.
* **FR11**: The system shall allow administrator to generate reports and graphs about contract amount and application status and numbers of students.
* **FR12**: The system shall allow administrator to assign specific agents to students.

**3.4 Communication Tools**

* **FR10**: The system shall email the student when their application status or client category is updated.
* **FR11**: The system shall allow agents to send mass notifications to their students.

**3.5 Document Management**

* **FR12**: The system shall provide secure document upload and storage.
* **FR13**: The system shall allow users to view and download their respective stored documents.

**3.8 Content Management System (CMS)**

* **FR17**: The system shall provide administrators with tools make an announcement.

**4. Non-Functional Requirements**

**4.1 Performance Requirements**

* **NFR1**: The website shall load within 3 seconds under normal conditions.
* **NFR2**: The website shall handle up to 100 concurrent users without performance degradation.

**4.2 Security Requirements**

* **NFR3**: The website shall use HTTPS to secure all data transmitted between the client and server.
* **NFR4**: The system shall hash sensitive data, such as user passwords.
* **NFR5**: The system shall perform regular security audits to identify and fix vulnerabilities.
* **NFR6**: The system shall comply with OWASP principles

**4.3 Usability Requirements**

* **NFR7**: The website shall have a responsive design to ensure usability on various devices and screen sizes.

**4.4 Code Requirements and Standards**

* NFR9 The system’s code shall follow the DRY(Dont Repeat Yourself) principles
* The system’s code shall also follow SOLID principles

**4.4 Reliability Requirements**

* **NFR8**: The website shall have an uptime of 99.9% per month.
* **NFR9**: The system shall provide automatic backups to prevent data loss.

**4.5 Maintainability Requirements**

* **NFR10**: The website shall be modular, allowing for easy updates and maintenance.
* **NFR11**: The system shall have comprehensive documentation for developers and administrators.

**5. Other Requirements**

**5.1 Legal and Regulatory Requirements**

* **OR1**: The website shall comply with GDPR for data protection.
* **OR2**: The system shall comply with relevant educational and financial regulations in the countries where it operates.

**6. Appendices**

**6.1 Glossary**

* **GDPR**: General Data Protection Regulation
* **WCAG**: Web Content Accessibility Guidelines
* **OWASP**: The Open Worldwide Application Security Project

**6.2 References**

* Design mockups and wireframes (To be provided)