SPRING 2024 WDM PROJECT

Design and develop a volunteer application for MS graduates in Computer Science.

Given the difficulties of the economy, a lot of students find themselves trap without a job after graduating. In order to protect, our international students the government design a volunteer program. This program runs under each one of the our depts. Professors have to agree to supervise volunteers and to report their performance to the dept. and to inmigration. Once, students find a job, they are released from the portal. Volunteer is a serious task. It requires a supervisor, a task to be research or implement it, 21 hrs of weekly work and a weekly report. It is also a volunteer activity for professors to participate on it.
We will develop an application with very high-level requirements and implementation plan for five members working on this project. We'll be using React for the front end, Laravel and node for the backend. The project will be divided into several phases, each member will have a very specific task to implement. There is a common task for the Team. The integration of all the different tasks, design of the Database and Homepage. You can use any AI API which will help you to develop a professional application. On my side, I will use AI detector to find out about your development.

High-Level Requirements:

1. **User Registration and Authentication (Member 1)**

New graduates can register using their university email address.
Email verification for registration.
Users can log in using their registered credentials.

2. **Dashboard for Graduates (Member 2)**

After logging in, graduates can see their progress.
Access to a calendar showing start date and task deadlines.
Ability to submit weekly reports.

3. **Professor's Dashboard (Member 3)**

Professors can assign tasks to graduates.
Review submitted weekly reports.
Provide feedback on reports.

4. **Task Management (Member 4)**

Graduates can view assigned tasks.
Task details, deadlines, and priorities are displayed.
Graduates can mark tasks as complete.

Weekly Reports (Member 5) and AI Anti-Cheating Mechanism

Graduates can submit weekly reports with a summary of their work.
Include a text input for justifying 21 hours of work.
Upload relevant attachments.
Implement anti-cheating measures to prevent students from using AI agents like ChatGPT to write their reports.
Detect and block any suspicious activities.

Application has a chat. Chat is to be implemented in node. Volunteers can chat among themselves. Volunteers can chat with supervisors.

High-Level Requirements:

User Registration and Authentication:

User Registration: New graduates should be able to register using their university email addresses. This registration process should collect necessary information, such as name, contact details, and graduation date.
Email Verification: After registration, an email verification step is essential to confirm the authenticity of the user's email address.
Login: Registered users should be able to log in using their credentials, granting them access to the application.

Dashboard for Graduates :

Progress Tracking: Graduates should have access to a dashboard displaying their progress in the program. This dashboard should show information such as the number of tasks completed, the total hours worked, and upcoming deadlines.
Calendar: An interactive calendar should be integrated into the dashboard, highlighting their start date and task deadlines. This calendar should provide a visual representation of key dates.
Weekly Reports: Graduates should be able to submit weekly reports detailing their work. This feature should include text input fields for justifying the 21 hours worked and the ability to upload relevant attachments.

Professor's Dashboard :

Task Assignment: Professors should have a dedicated dashboard for assigning tasks to graduates. They should be able to create tasks, set deadlines, and define priorities for each task.
Report Review: Professors should be able to review the weekly reports submitted by graduates. They should have the ability to provide feedback and evaluate the quality of the reports.
Generation of recommendation letters for supervised students

Task Management :

Task View: Graduates need a section in the application where they can view the tasks assigned to them. This section should display task details, deadlines, and priorities.
Task Status Updates: Graduates should be able to mark tasks as complete, updating the task status in real-time. They can also add comments or notes regarding their progress.

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Weekly Reports and AI Anti-Cheating Mechanism

Report Submission: Graduates should be able to submit weekly reports directly through the application. The report should include a summary of their work and accomplishments.
Justification of Hours: Graduates must include a text input field in their weekly reports, providing a detailed justification for the 21 hours worked during the week.
Attachment Upload: The ability to upload attachments, such as project files, documents, or images, is crucial to support their weekly reports.
Implement Anti-Cheating Measures: primary focus is to develop and implement anti-cheating measures, which is essential to prevent students from using AI agents.

Text Analysis: Implement text similarity checks and analysis to detect if reports have been generated by AI agents like ChatGPT.
Suspicious Activity Monitoring: Continuously monitor user activities for patterns that suggest cheating, such as suspiciously uniform report content.
Rate Limiting: Implement rate limiting to prevent automated report submissions, as well as CAPTCHAs to distinguish between humans and bots.
Regular Updates: Regularly update and adapt anti-cheating measures to address evolving cheating techniques.

Anti-Cheating Tips:

The anti-cheating mechanism should be a combination of various techniques, including text analysis, rate limiting, and regular monitoring.

- Regularly update the system to adapt to new cheating techniques.
- Ensure strong encryption and hashing for sensitive data to protect against unauthorized access.

Implementation Plan:

The implementation plan for the volunteer application should be divided into four phases to ensure a structured and organized development process:

Phase 1:

A five page written paper of your understanding of application to be implemented. One page per member. Paper should include schema and ERD.

Phase 2: React implementation of the application.

Phase 3: Laravel/Node Implementation.

Phase 4: Final Presentation: Presentation is face to face. Each member will present its own implementation. You need to have a concise presentation.

Minutes for Development Phases and Schema:

Detailed minutes and documentation should be maintained for each development phase to track progress and identify any issues or challenges.

Database schema should be well-documented, specifying the structure of the database tables, relationships, and data validation rules.

Volunteer Student Weekly Activity Report Form

Student Information

Full Name:	
Student Id:	
Contact Email:	
Contact Phone:	
Major:	
Graduation Date	

Professor/Supervisor Information

Full Name:	**Elizabeth D. Diaz**
Department:	**Computer Science**
Contact Email:	**elizabeth.diaz@uta.edu**
Contact Phone:	**432-230-6721**

Volunteer Assignment Details

Project/Activity Title:	
Brief Description:	
Start Date	
End Date	
Weekly Hours Commitment/ hours/week	**21 at least**
Location:	**Remote**

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Weekly Activity Log

Date	**Activity Description**	**Hours Spent**
/ /		
/ /		
/ /		
/ /		
/ /		
Total		**20**

Student Acknowledgement:

I hereby confirm that I will commit to volunteering for a minimum of 20 hours per week as specified in the above schedule. I understand that I will be supervised by the named professor/supervisor and will maintain regular communication with them regarding my activities.

Student's Signature: _____ Date: ____/____/_____

Professor/Supervisor Acknowledgement:

I hereby confirm my agreement to supervise the above-named student in their volunteer activities and support their commitment of at least 21 hours per week in order to be compliant with Immigration law.
I understand that I will maintain regular communication with the student regarding their activities.

Professor/Supervisor's Signature: _____ Date: ____/____/_____

Submission Instructions:

1) Attach your report.

2) Please submit this form to the elizabeth.diaz@uta.edu for approval and record-keeping. This form must be submitted on a weekly or bi-weekly basis.