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Software Requirement Specification

Name	MATHIVANAN K
Roll No	7376222IT194
Seat No	251
Project ID	15
Problem Statement	NPTEL Course Exemption
Stack Allocation	Python stack

Technical Stack:

FRONT-END: HTML,CSS,JS

BACK-END: PYTHON (DJANGO)

DATABASE: POSTGRESQL

1. Introduction:

a) Problem Statement:

The purpose of this project is to create a web platform that allows students to apply for exemptions from a 12-week NPTEL course. Students can choose to receive academic credits or earn reward points, providing flexibility and incentivizing their learning. This document outlines the detailed description of the NPTEL 12-Week Course Exemption System. It explains the system's purpose, features, interfaces, functionality, operational constraints, and responses to external inputs, aiming to support students' academic and personal growth.

b) Scope of project:

- **User Registration and Authentication:** Develop a secure system for students and administrators to register, log in, and manage their profiles. Include separate authentication processes for students and administrators.
- **Course Exemption Application:** Implement a module for students to apply for course exemptions, specifying their preference for academic credits or reward points.
- **Credit and Reward Management:** Create a system to track and manage the awarded academic credits and reward points.
- **Administrative Interface:** Provide an admin interface for managing student applications, approving exemptions, and overseeing the credit and reward distribution.
- **Subject Exclusion Preference:** Allow students to indicate preferences to avoid studying the same academic subject in future NPTEL courses, enhancing their learning flexibility.
- **Remarks System:** Implement notifications for students regarding application status updates, credit allocations, and reward point distributions.

2. System Overview:

a) Interaction:

1.Student Interaction:

- **Registration and Profile Management:** Students can register, log in, and update their profiles, including selecting their academic and personal preferences.
- **Course Exemption Application:** Students can apply for course exemptions, specifying their preference for academic credits or reward points.
- **Application Status Tracking:** Students can view the status of their exemption applications and receive notifications regarding approvals or rejections.

2. Admin Interaction:

- **Admin Registration and Login:** Administrators can register, log in, and manage their accounts with appropriate access controls.
- **Application Management:** Admins can review, approve, or reject student exemption applications and oversee the distribution of credits and rewards.
- **System Maintenance and Data Management:** Admins can manage user accounts, update system settings, and ensure data security and integrity within the database.

3. Department Interaction:

- **Course History Verification**: Departments can verify if a student has completed the specific course they are requesting an exemption from during their academic tenure.
- **Prerequisite Check**: Departments can check if the student meets any prerequisite requirements for the exemption.

3. Functional requirements:

a) User Registration and Authentication:

- **Student Registration:** The system shall allow students to create an account using their email and a secure password**.**
- **Admin Registration:** The system shall allow administrators to create and manage their accounts with secure access controls.
- **Login and Logout:** The system shall provide a secure login and logout functionality for all users.

b) Course Exemption Application:

- **Apply for Exemption:** The system shall allow students to apply for course exemptions by filling out an application form.
- **Preference Selection:** The system shall allow students to select whether they want academic credits or reward points for their exemption.
- **Application Status:** The system shall provide students with real-time status updates on their exemption applications.

c) Credit and Reward Management:

- **Track Credits:** The system shall track and display the academic credits awarded to each student.
- **Reward Points System:** The system shall manage and display the reward points accumulated by each student.
- **Redeem Rewards:** The system shall provide options for students to redeem their reward points.

d) Administrative Functions:

- **Review Applications:** Admins shall be able to review, approve, or reject course exemption applications.
- **Manage Users:** Admins shall be able to manage user accounts, including resetting passwords and updating profiles.
- **Configure System Settings:** Admins shall have the ability to configure system settings and manage data security.

5. Exemption Application:

a) Application Form:

- **Form Accessibility:** The system shall provide an easily accessible application form for students to apply for exemptions.
- **Required Fields:** The form shall include required fields such as student ID, course details.
- **Validation:** The system shall validate the input to ensure all required fields are filled out correctly before submission.

b) Preference Selection:

- **Credit Option:** The system shall allow students to select the option to receive academic credits for their exemption.
- **Reward Points Option:** The system shall allow students to choose to receive reward points instead of academic credits.
- **Selection Confirmation:** The system shall confirm the student's preference selection before final submission.

c) Supporting Documents:

- **Document Upload:** The system shall provide an option for students to upload supporting documents such as transcripts or letters of recommendation.
- **File Formats:** The system shall accept common file formats like PDF, DOCX, and JPEG for supporting documents.
- **Document Validation:** The system shall validate the uploaded documents to ensure they meet the required criteria.

d) Application Submission:

- **Submit Button:** The system shall provide a clearly marked submit button for students to finalize and submit their exemption application.
- **Submission Confirmation:** The system shall provide a confirmation message .
- **Application ID:** The system shall generate a unique application ID for each submitted application for tracking purposes.

e) Application Tracking:

- **Status Updates:** The system shall allow students to track the status of their exemption application in real-time.
- **Status Notifications:** The system shall dashboard notifications to students when there is a change in the status of their application.

f) Review and Approval:

- **Admin Review:** The system shall allow administrators to review submitted applications, including all attached documents.

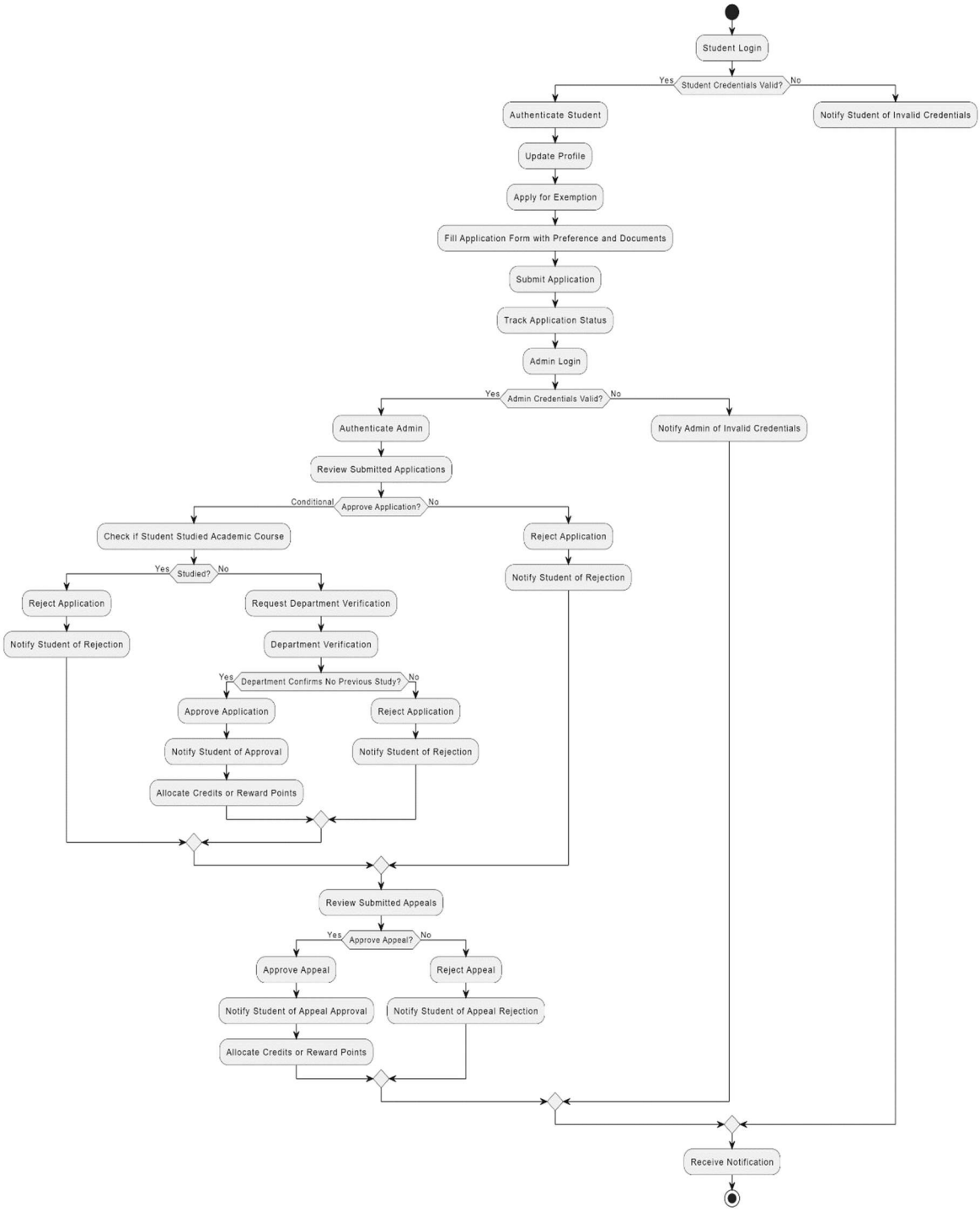
- **Approval/Rejection:** Admins shall have the capability to approve or reject applications based on predefined criteria.

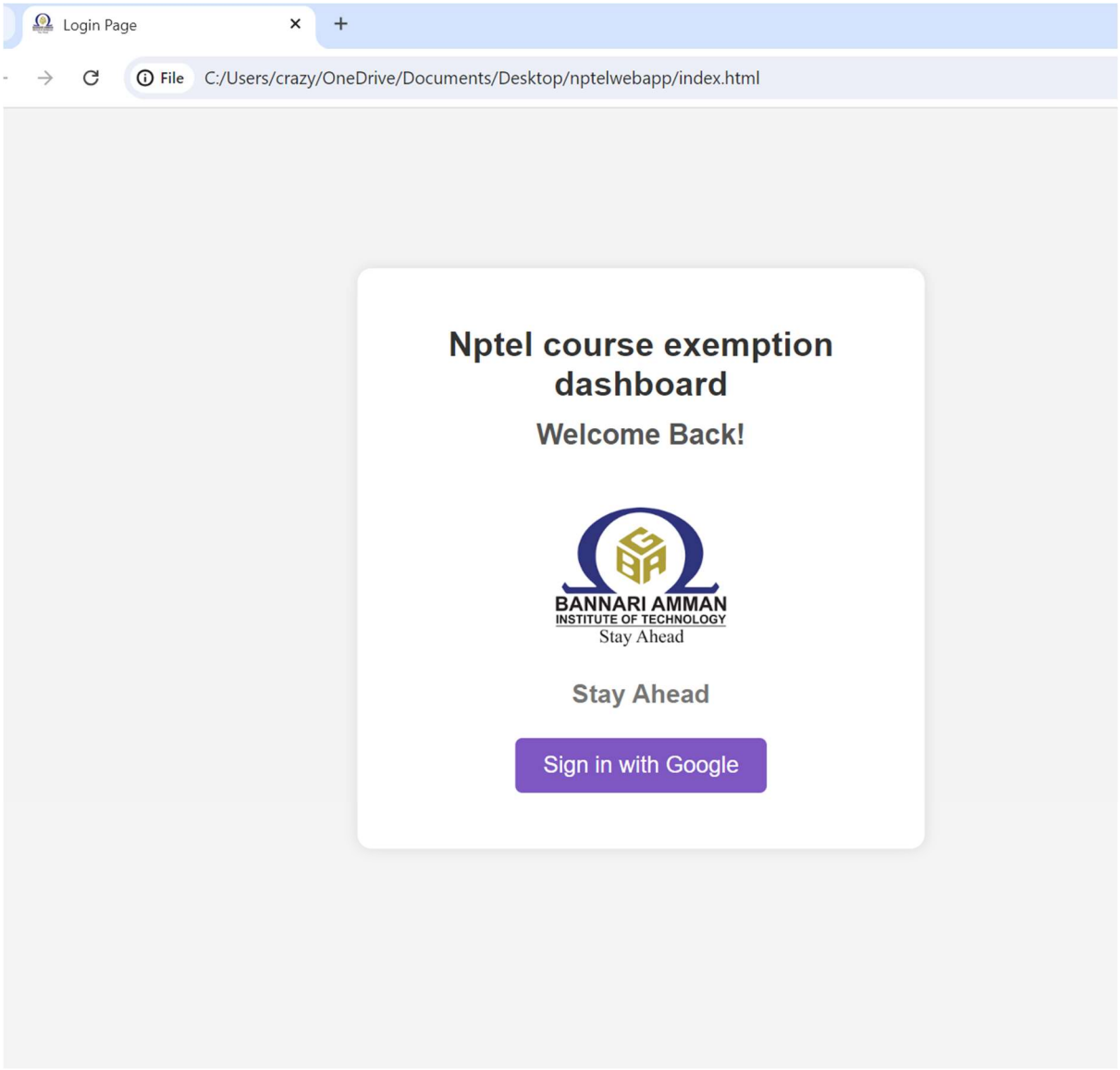
g) Appeal Process:

- **Appeal Submission:** The system shall allow students to submit an appeal if their exemption application is rejected.

7. FLOWCHART:

NPTEL Course Exemption System Flowchart

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