**Application Evaluation History**

|  |  |
| --- | --- |
| **Comments (by committee)**  **\*include the ones given at scope time both in doc and presentation** | **Action Taken** |
|  |  |
|  |  |

**Supervised by**

**<Supervisor’s Name>**

Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Introduction**

The requirements for creating a batch advisory system are outlined in detail in the Software Requirements Specification (SRS) paper. The course allocation, online application submission, and among other features and functionalities to be implemented in the system, are described in this document.

### **Purpose** The purpose of the batch advisory system is to streamline course allocations for academic advisors and provide students with a convenient platform to submit online applications for academic requests and issues.

**Scope**

By giving batch advisors the resources, they need to effectively assign courses to students and oversee online applications, the student advisory system seeks to expedite academic advising procedures. To guarantee efficient communication between advisors and student, the system will incorporate functions like workflow management, online application submission, course allocation, and notification viewing for students.

**Overall description**

**Product perspective**

The purpose of the stand-alone student advisory system is to improve academic advising procedures in educational establishments. This advanced technology is the next generation, designed to replace antiquated manual procedures with an automated and intuitive alternative. For the management of student records, educational institutions will be able to seamlessly link the system with their current databases and platforms.

**Operating environment**

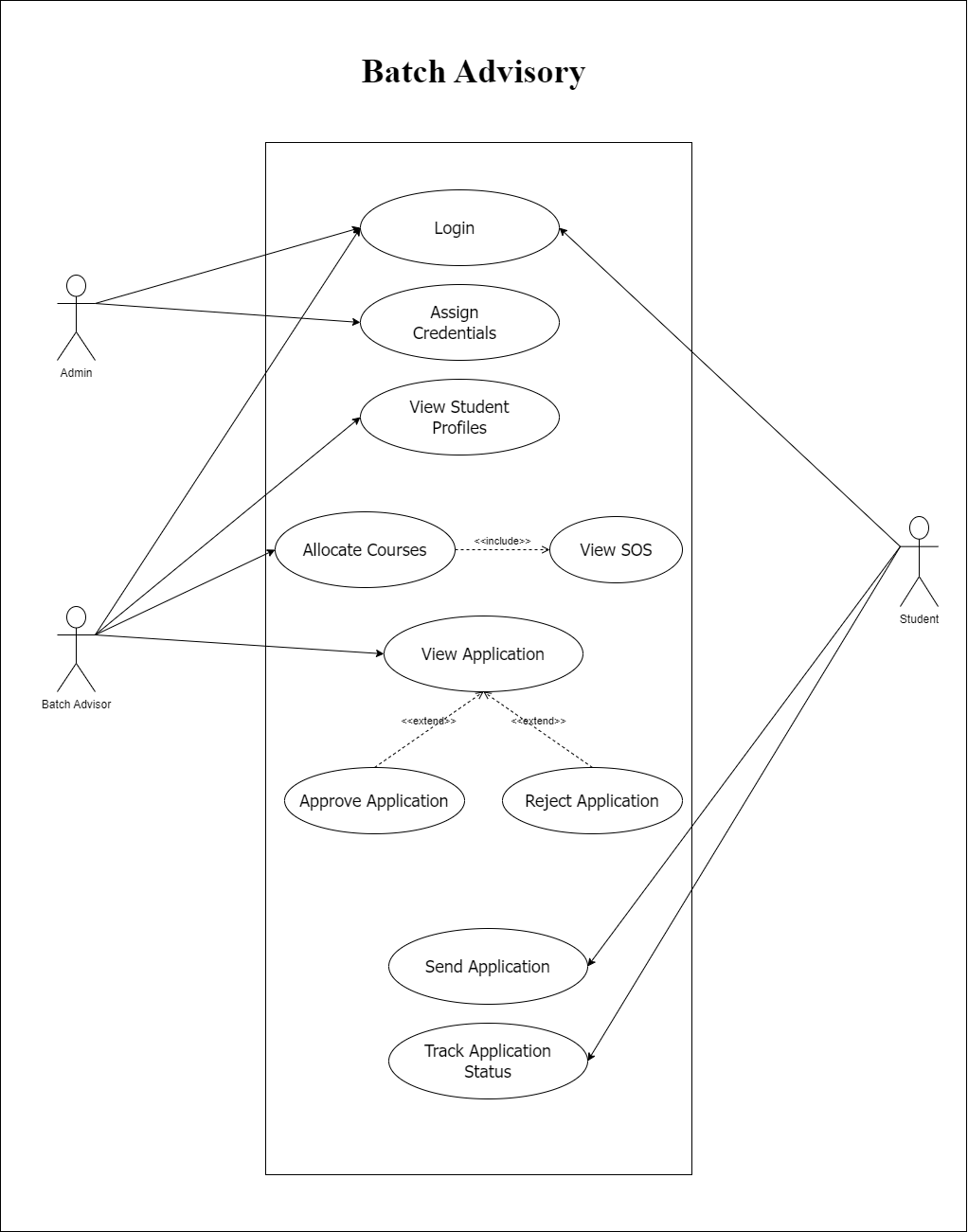
The system shall operate correctly with the following web browsers: Windows Internet Explorer versions 7, 8, and 9; Firefox versions 12 through 26; Google Chrome (all versions); and Apple Safari versions 4.0 through 8.0.

**Design and implementation constraints.**

* The system must be developed using different programming language to integrate seamlessly with existing academic management systems.
* Integration with email services like Gmail for notifications must comply with security and privacy regulations.

**Requirement identifying technique.**

**Use case diagram.**



**Use case description.**

**Table 5 Show the detail use case template.**

|  |  |
| --- | --- |
| **Use Case Name:** | Automate Batch Advisory |
| **Actors:** | * Primary Actor: Advisors and Students * Secondary Actors: Admin and University existing system |
| **Description:** | The use case diagram represents the interactions between advisory and student within the Course Allocation System and the Online Application Submission. |

|  |  |
| --- | --- |
| **Preconditions:** | PRE-1. Batch Advisors, Students, and University Administration actors are registered and authenticated within the system.  PRE-2. The Course must be allocated based on the provided SOS. |
| **Postconditions:** | POST-1. Batch Advisors can successfully view student profiles, allocate courses, and send notifications related to course allocations.  POST-2. Students can use a user-friendly interface to submit applications and track its status.  POST-3. University Administration can track and monitor applications submitted by students. |
| **Normal Flow:** | **Batch Advisor View Student Profiles:**  - Batch Advisor logs into the Course Allocation System.  - Batch Advisor navigates to the "View Student Profiles" use case.  - System displays a list of student profiles.  - Batch Advisor selects a student profile to view.  - System retrieves and displays the student's academic status, including completed courses, grades, and program progress.  **Batch Advisor Allocate Courses:**  - Batch Advisor navigates to the "Allocate Courses."  - Batch Advisor selects individual students or groups based on program requirements and academic status.  - Batch Advisor assigns appropriate courses to selected students.  **Student Use User-Friendly Interface:**  - Student logs into the Online Application Submission System.  - Student navigates to the user-friendly interface for submitting applications.  - System presents options for selecting application categories.  - Student selects the appropriate category (e.g., academic, personal, administrative).  **Student Track and Monitor Applications:**  - Student navigates to the "Track and Monitor Applications" use case.  - System displays a list of submitted applications and their status (e.g., pending, in progress, approved).  - Student selects an application to view detailed information and progress updates. |
| **Alternative Flows:**  **[Alternative**  **Flow 1 – Not in**  **Network]** | **Batch Advisor Allocate Courses:**   * *Alternate Flow 1:* If a student requests a specific course assignment not typically included in their program requirements, the Batch Advisor may need to seek special approval from relevant stakeholders.   **Student Track and Monitor Applications:**   * Alternate Flow 2: If the Student needs to provide additional information or follow-up on a pending application, they may need to initiate direct communication with advisors through the system. |
| **Exceptions:** | 1. *E1:* If a user forgets their password, they will need to contact their administrator. 2. *E2:* If the system encounters technical issues or downtime, Batch Advisors may be unable to access student profiles until the issue is resolved. |

**Functional Requirements**

**Functional Requirements for Course Allocation Module:**

**Functional Requirement 1**

**Identifier**: COURSE\_ALLOC\_001

**Title**: View Student Profiles and Academic Status

**Requirement:** Batch advisors should be able to access student profiles and view their current academic status, including completed courses, grades, and program progress.

**Source:** User requirement

**Rationale**: Advisors need to understand students' academic backgrounds to make appropriate course allocations.

**Priority:** High

**Functional Requirement 2**

**Identifier:** COURSE\_ALLOC\_002

**Title:** Course Assignment Options

**Requirement:** Batch advisors must have options to select and assign appropriate courses to individual students or groups based on their program requirements and academic status.

**Source:** User requirement

**Rationale:** Advisors need flexibility in assigning courses to meet individual student needs and program requirements.

**Priority:** High

**Functional Requirement 3**

**Identifier:** COURSE\_ALLOC\_003

**Title:** Notifications

**Requirement:** The system should send notifications to students and advisors about course allocations and any changes made to their study plans.

**Source:** User requirement

**Rationale:** Keeps students and advisors informed about course assignments and any updates to their academic plans.

**Priority:** Medium

**Functional Requirements for Online Application Submission Module**

**Functional Requirement 1**

**Identifier:** APP\_SUBMISSION\_001

**Title:** Application Categories

**Requirement:** Students should be able to select categories or types of issues (e.g., academic, personal, administrative) to streamline the submission process.

**Source:** User requirement

**Rationale:** Helps categorize and prioritize applications for efficient processing.

**Priority:** Medium

**Functional Requirement 2**

**Identifier:** APP\_SUBMISSION\_002

**Title:** Tracking and Monitoring

**Requirement:** Advisors should have tracking and monitoring functionalities to manage and prioritize pending applications efficiently.

**Source:** User requirement

**Priority:** High

**Table 6 Show Course Allocation Module Requirement**

|  |  |  |
| --- | --- | --- |
| **Identifier** | | Course Allocation Module |
| **Title** |  | View Student Profiles and Academic Status |
| **Requirement** |  | * Batch advisors can view student profiles and their current academic status. * Options for batch advisors to assign appropriate courses to individual students or groups based on their program requirements. * Notifications to students and advisors about course allocations and any changes made to their study plans. |
| **Source** |  | User Requirement |
| **Rationale** |  | * Ensure appropriate course allocation adhering to curriculum guidelines. * Efficiently manage and resolve student issues through online applications. |
| Business Rule |  | * Adherence to curriculum guidelines and prerequisites in course allocation. * Streamlined process following specific workflows in application submission and resolution |
| Dependencies |  | None |

**Non-Functional Requirements**

Developing an online batch advisory system using React.js for the front end and Node.js for the back end, the non-functional requirements to ensure the system's effectiveness, scalability, security, reliability, and usability are:

**Usability**

* **Responsive Design:** Develop a responsive and mobile-friendly user interface using React.js to ensure usability across various devices and screen sizes.
* **Intuitive User Experience:** Design an intuitive user interface with clear navigation, consistent design patterns, and user-friendly workflows to enhance user satisfaction and productivity.

**Performance**

* **Optimized Client-Side Rendering:** Ensure efficient rendering of React components to minimize page load times and enhance user experience.
* **Server-Side Rendering (SSR):** Implement SSR to improve initial page load performance and facilitate search engine optimization (SEO).
* **API Performance:** Optimize API endpoints in Node.js to handle requests efficiently and minimize response times.

### **Scalability:**

* **Horizontal Scaling:** Design the Node.js backend to be horizontally scalable, allowing the system to handle increasing loads by adding more server instances.
* **Database Scalability:** Choose a scalable database solution (e.g., MongoDB, PostgreSQL) and implement sharing or clustering to handle growing data volumes.

### **Security:**

* **Authentication and Authorization:** Implement secure authentication and authorization mechanisms for both the frontend and backend to protect user data and system resources.
* **Data Sanitization:** Validate and sanitize user inputs on the client and server sides to prevent injection attacks such as XSS and SQL injection.

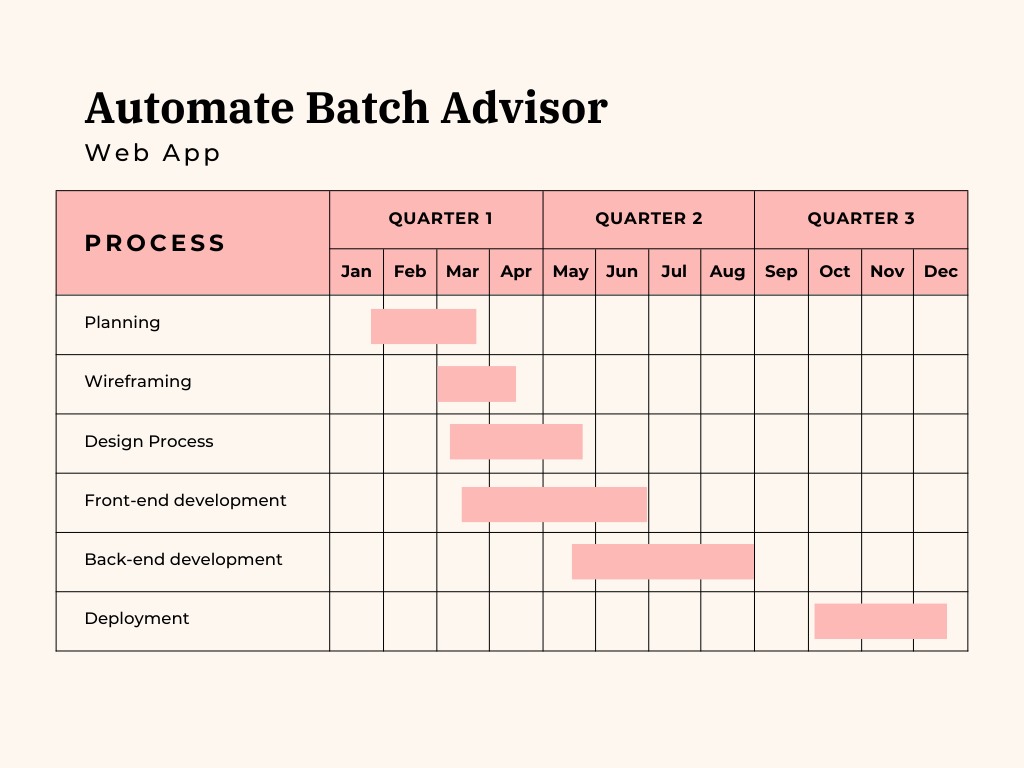
### **Reliability:**

* **Error Handling**: Implement robust error handling mechanisms in both the frontend and backend to gracefully handle exceptions and provide meaningful error messages to users.
* **Logging and Monitoring**: Set up logging and monitoring tools to track system performance, detect errors, and troubleshoot issues proactively.

### **Maintainability:**

* **Modular Architecture**: Design the application with a modular architecture to facilitate code organization, reusability, and maintainability.
* **Documentation**: Provide comprehensive documentation for the frontend and backend codebases, including APIs, dependencies, and deployment instructions, to assist developers in understanding and maintaining the system.

# **Giant Chart**



**References**

*BU College of General Studies*. (n.d.). Retrieved from BU College of General Studies: https://www.bu.edu/cgs/resources-for-current-students/academic-advising/student-advisor-responsibilities/

*Depul Edu*. (n.d.). Retrieved from https://offices.depaul.edu/university-registrar/about/Documents/TRAINING%20MATERIALS/Advising%20Support/Batch%20Advisor%20Process.pdf

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