



Project Phase II

Topic:

Use Cases

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Use case

Table

Requirement type	Use case name	Use case specification
FR1	Create account system	<ul style="list-style-type: none">Users must be able to create accounts securely.
FR2	Login system	<ul style="list-style-type: none">Users must be able and log in securely.
FR3	Create and manage classes	<ul style="list-style-type: none">Teachers should be able to create and manage classes.
FR4	join classes	<ul style="list-style-type: none">Students must be able to join classes.
FR5	access learning materials	<ul style="list-style-type: none">Students must be able to access learning materials.Learning materials, including documents, videos, and assignments, should be accessible from anywhere with an internet connection. Content should be organized and easy to search.
FR6	provide tools	<ul style="list-style-type: none">The system shall provide tools for teachers to create personalized learning paths

		for each student based on their needs and abilities.
FR7	view learning paths and progress	Student can see the whole learning path designed by teacher and their progress in respective subject
FR8	provide real-time feedback	<ul style="list-style-type: none"> to provide real-time feedback on students' assignments and assessments.
FR9	receive notifications and feedback	<ul style="list-style-type: none"> should receive automated grades and performance reports.
FR10	offer collaborative features,	system shall offer collaborative features, such as discussion boards and group projects.
FR11	interact with each other and teachers	System should be able to interact with each other and teachers through messaging and chat.
FR12	Create and manage classes	Teacher should be create and managing classes.
FR13	create quizzes and assessments	system must allow teachers to create quizzes and assessments
FR14	receive automated grades and performance reports.	Students should receive automated grades and performance reports

To create a diagram that represents the use cases, actors, and their relationships for learnova we will use a Unified Modeling Language (UML) use case diagram.

1. Actors:

- User (General)
- Teacher
- Student
- learnova system

2. Use Cases:

- Create Account System
- Login System
- Create and Manage Classes
- Join Classes
- Access Learning Materials
- Provide Tools
- View Learning Paths and Progress
- Provide Real-Time Feedback
- Receive Notifications and Feedback
- Offer Collaborative Features
- Interact with Others and Teachers
- Create Quizzes and Assessments

3. Connect Actors and Use Cases:

- **User (General) interacts with:**
 - Create Account System
 - Login System
 - Join Classes
 - Access Learning Materials
 - View Learning Paths and Progress
 - Receive Notifications and Feedback
 - Interact with Others and Teachers
- **Teacher interacts with:**
 - Create and Manage Classes
 - Provide Tools
 - Create Quizzes and Assessments
 - Provide Real-Time Feedback
- **Student interacts with:**
 - Join Classes
 - Access Learning Materials
 - View Learning Paths and Progress
 - Receive Notifications and Feedback
 - Offer Collaborative Features
 - Interact with Others and Teachers

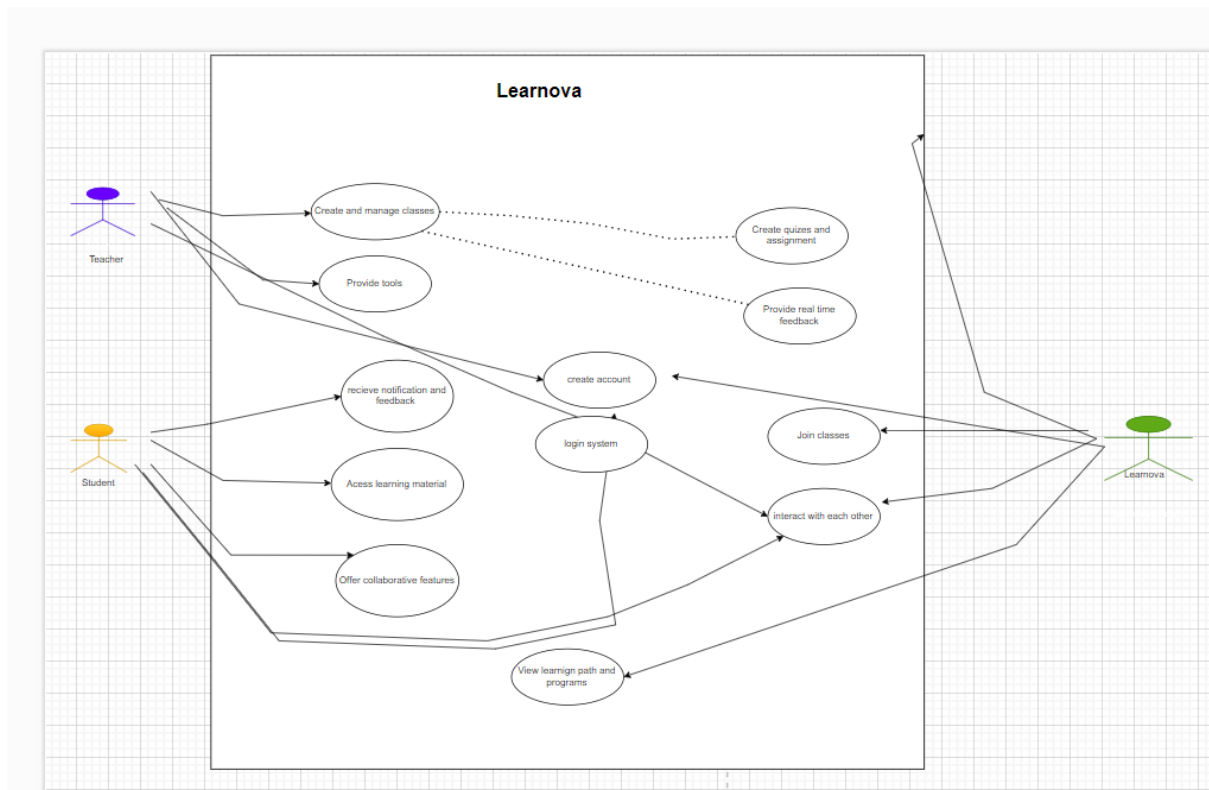
4. System Boundary:

Draw a boundary around all the use cases to represent the system's boundary.

5. Relationships:

- Use "include" relationships for cases like:
 - FR5: Access Learning Materials (Includes: Organize Content)
 - FR6: Provide Tools (Includes: Personalize Learning Paths)
 - FR10: Offer Collaborative Features (Includes: Discussion Boards, Group Projects)
- Use "extend" relationships for cases like:

- FR8: Provide Real-Time Feedback (Extends: Submit Assignments)



Use case specification

Use Case: Create Account System

- Author: Imama
- Priority: High
- Criticality: High
- Source: Stakeholders
- Person Responsible: System Administrator
- Description: This use case involves users creating accounts securely to gain access to the system.
- Triggered Event: User initiates the account creation process.
- Actors: User, System
- Preconditions: None
- Postconditions: User account is successfully created.
- Result: User gains access to the system.

Main Scenario:

- User selects the "Create Account" option.

- User provides required information (e.g., name, email, password).
- System verifies the information.
- System creates a new user account.
- User receives a confirmation email.

Alternative Scenarios:

- If user provides incomplete or invalid information, system prompts for corrections.
- If there are technical issues during account creation, an error message is displayed.

Exception Scenarios:

- If email server is down, confirmation email may not be sent.
- In case of a server error, account creation may fail.

Quality Attributes:

- Security: User data must be stored securely.
- Usability: Account creation process should be user-friendly.

Use Case: Login System

- Author: Noor
- Priority: High
- Criticality: High
- Source: Stakeholders
- Person Responsible: System Administrator
- Description: This use case covers the process of users securely logging into their accounts.
- Triggered Event: User initiates the login process.
- Actors: User, System
- Preconditions: User has a valid account.
- Postconditions: User is successfully authenticated.
- Result: User gains access to the system.

Main Scenario:

- User selects the "Login" option.
- User enters their credentials (username, password).
- System verifies the credentials.
- User is successfully authenticated.

Alternative Scenarios:

- If user enters incorrect credentials, system prompts for re-entry.
- If there are technical issues during login, an error message is displayed.

Exception Scenarios:

- If there's a server error, login may fail.
- If user repeatedly enters incorrect credentials, account may be temporarily locked.

Quality Attributes:

- Security: User login information must be kept secure.
- Usability: Login process should be intuitive and efficient.

Use Case: Create and Manage Classes

- Author: Zainab
- Priority: High
- Criticality: High
- Source: Stakeholders
- Person Responsible: System Administrator
- Description: This use case involves teachers creating and managing classes within the system.
- Triggered Event: Teacher initiates the class creation process.
- Actors: Teacher, System
- Preconditions: Teacher is logged into the system.
- Postconditions: Class is successfully created and managed.
- Result: Teacher can effectively manage the class.

Main Scenario:

- Teacher selects the "Create Class" option.
- Teacher provides class details (e.g., name, subject).
- System verifies the information.
- System creates the class.
- Teacher can further manage the class (add students, assign materials, etc.).

Alternative Scenarios:

- If teacher provides incomplete or invalid information, system prompts for corrections.
- If there are technical issues during class creation, an error message is displayed.

Exception Scenarios:

- If there's a server error, class creation may fail.
- If class creation violates system policies, an error message is displayed.

Quality Attributes:

- Usability: Class creation process should be user-friendly.
- Efficiency: Creating and managing classes should be efficient for teachers.

Use Case: Join Classes

- Author: Noor
- Priority: High
- Criticality: High
- Source: Stakeholders
- Person Responsible: System Administrator
- Description: This use case involves students joining classes within the system.
- Triggered Event: Student initiates the class joining process.
- Actors: Student, System
- Preconditions: Student is logged into the system.
- Postconditions: Student is successfully enrolled in the class.
- Result: Student gains access to class materials.

Main Scenario:

- Student selects the "Join Class" option.
- Student provides the class code or searches for classes.
- System verifies the information.
- Student is successfully enrolled in the class.
- Student gains access to class materials.

Alternative Scenarios:

- If student provides an incorrect class code, system prompts for correction.
- If there are technical issues during class joining, an error message is displayed.

Exception Scenarios:

- If there's a server error, class joining may fail.
- If class joining violates system policies, an error message is displayed.

Quality Attributes:

- Usability: Class joining process should be intuitive for students.
- Efficiency: Joining classes should be a straightforward process.

Use Case: Access Learning Materials

- Author: Imama
- Priority: High
- Criticality: High

- Source: Stakeholders
- Person Responsible: System Administrator
- Description: This use case involves students accessing learning materials within their enrolled classes.
- Triggered Event: Student navigates to a class or specific material.
- Actors: Student, System
- Preconditions: Student is enrolled in at least one class.
- Postconditions: Student successfully accesses the learning material.
- Result: Student can view and interact with the material.

Main Scenario:

- Student navigates to the desired class.
- Student selects the specific learning material (e.g., document, video, assignment).
- System retrieves and displays the material.

Alternative Scenarios:

- If there are technical issues during material access, an error message is displayed.
- If the material is restricted or unavailable, system notifies the student.

Exception Scenarios:

- If there's a server error, material access may fail.
- If material access violates system policies, an error message is displayed.

Quality Attributes:

- Usability: Accessing learning materials should be straightforward for students.
- Performance: Material retrieval should be swift and responsive.