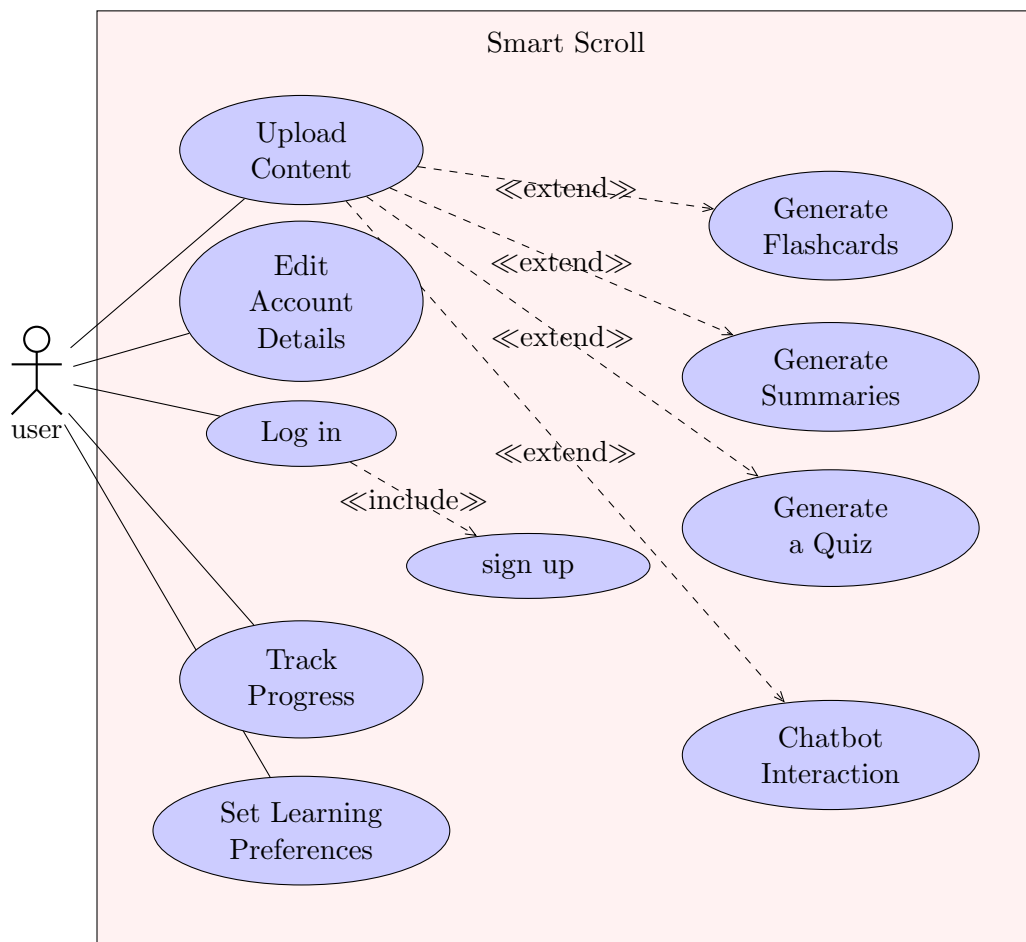# 1   Use Case Diagram

Below is the use case diagram for the AI-Driven Interactive Learning Plat-
form:

Use Case Specifications

1. Upload Content

- **Description:** The user uploads a PDF file to the system. Based on this
  file, the system can generate flashcards, summaries, and quizzes.

- **Precondition:** The user must be logged in to upload content.

- **Input:** A PDF document (content can cover any topic).

- **Postcondition:** Content is available for AI-driven learning activities (flashcards, summaries, quizzes).

- **Actors:** User.

2. Log In

- **Description:** Allows users to log into the system if they have an existing account.

- **Precondition:** User has an existing account.

- **Input:** Email and password.

- **Postcondition:** User is logged into the system.

- **Relationships:**

- **Actors:** User.

3. Sign Up

- **Description:** Allows new users to create an account.

- **Precondition:** User does not have an account.

- **Input:** Email, name, and password.

- **Postcondition:** New account is created, and the user can log in.

- **Actors:** User.

4. Edit Account Details

- **Description:** The user can modify their personal information, such as name, password, and email.

- **Precondition:** User must be logged in.

- **Input:** New name, email, or password.

- **Postcondition:** Updated account details are saved.

- **Actors:** User.

5. Track Progress

- **Description:** Allows users to monitor their progress, including the number of quizzes completed and passed.

- **Precondition:** User must have completed at least one quiz or learning activity.

- **Output:** A progress report showing the number of quizzes attempted, quizzes passed, and other performance metrics.

- **Actors:** User.

6. Set Learning Preferences

- **Description:** The user can choose their preferred type of learning activity, such as quizzes, flashcards, or summaries.

- **Precondition:** User must be logged in.

- **Input:** Selection of learning activity type (quiz, flashcards, summaries).

- **Postcondition:** Preferences are saved and used for future learning sessions.

- **Actors:** User.

7. Generate Flashcards

- **Description:** The system generates flashcards based on the uploaded PDF content.

- **Precondition:** Content must be uploaded.

- **Output:** A set of flashcards related to the uploaded content.

- **Actors:** System.

8. Generate Summaries

- **Description:** The system generates summaries from the uploaded PDF content.

- **Precondition:** Content must be uploaded.

- **Output:** Summaries based on the uploaded content.

- **Actors:** System.

9. Generate a Quiz

- **Description:** The system generates quizzes based on the uploaded PDF content.

- **Precondition:** Content must be uploaded.

- **Output:** A quiz with questions related to the uploaded content.

- **Actors:** System.

10. Chatbot Interaction

- **Description:** The user can interact with a chatbot to ask questions related to the uploaded content. The chatbot provides AI-generated answers.

- **Precondition:** Content must be uploaded, and the user must be logged in.

- **Input:** User's question or query related to the content.

- **Output:** AI-generated answers or clarifications based on the uploaded content.

- **Actors:** User.