# User Classes and Characteristics

The system targets multiple categories of users, each with different roles and permissions that align with their needs within the educational platform.

## 1. Student

Description:

The primary user of the platform who uses it to access lessons, complete assignments and exams, and track academic progress.

Characteristics:

• Has basic technical skills to use the application easily.  
• Needs a simple and intuitive user interface (on both web and mobile).  
• Interacts with the Chatbot for learning assistance and exercise generation.  
• Receives performance analytics and personalized feedback on weak points.  
• Gets push notifications for exams, lessons, and updates.  
• Can access videos and study materials

## 2. Teacher / Instructor

Description:

Responsible for managing educational content, creating lessons and exams, and tracking student performance.

Characteristics:

• Has permissions to create and manage courses, lessons, and exams.  
• Can upload educational materials (videos, PDFs, etc.).  
• Receives analytical reports on both individual and group performance.  
• Is notified about students’ common weak areas through AI analysis.  
• Can use the Exam Generator to automatically create exams.  
• May conduct live classes through Live Meet Integration.

## 3. Parent

Description:

Uses the system to monitor their children’s academic progress and communicate with teachers.

Characteristics:

• Has an account linked to one or more students.  
• Can view grades, attendance, and progress reports via the mobile app.  
• Receives notifications about important tasks, homework, or exams.  
• Can contact teachers through the system.  
• Uses a simplified interface focused on viewing information rather than interaction.

## 4. Administrator (Admin)

Description:

Responsible for managing the entire platform, including user control, content moderation, and overall system monitoring.

Characteristics:

• Has full access and permissions across the system.  
• Can add, remove, or edit user accounts and data.  
• Oversees exam operations, permissions, and reports.  
• Accesses a specialized Dashboard to monitor global system performance.  
• Manages system integrity and database synchronization between PostgreSQL and MongoDB.

## 5. AI System / Intelligent Engine

Description:

The intelligent core of the system responsible for analyzing student performance, generating questions, and providing insights.

Characteristics:

• Uses artificial intelligence to evaluate each student’s learning level and detect weak areas.  
• Relies on historical data from the databases to identify global patterns among students.  
• Generates personalized quizzes and exercises based on individual performance.  
• Sends analytical reports to teachers about topics needing reinforcement.  
• Integrates with the Chatbot to assist students in learning and answering queries.

## Summary of Relationships:

|  |  |  |  |
| --- | --- | --- | --- |
| **User Type** | **Main Responsibilities** | **Interface** | **Access Level** |
| Student | View lessons, take exams, track progress | Web & Flutter App | Limited |
| Teacher | Manage content, create exams, analyze performance | Web Dashboard | Medium |
| Parent | Monitor child’s progress, view grades | Flutter App | Limited |
| Admin | Manage system and users | Web Dashboard | Full |
| AI System | Analyze data, generate insights, support automation | Backend | Integrated |