

6. Draw a Use case diagram to model for a quiz system. A user can request a quiz for the system. The system picks a set of questions from its database, and composes them together to make a quiz. It rates the user's answers and gives hints if the user requests it. In addition to users, we also have helpers who provide questions and hints. And also, administrators who must certify questions to make sure they are not too trivial, and that they are correct

### **Aim:**

To design a UML Use Case Diagram for a Quiz System, depicting the interactions of users, helpers, and administrators with the system to request quizzes, answer questions, provide hints, and manage question certification.

### **Procedure :**

#### **1. Identify System Components & Actors**

- Define key entities and users: **User (Player), Helper, Administrator, Quiz System.**

#### **2. Develop a Use Case Diagram**

- Identify core functionalities as use cases:
  - **Request Quiz** (User)
  - **Provide Hints** (Helper)
  - **Rate Answers** (System)
  - **Certify Questions** (Administrator)
  - **Create and Approve Questions** (Helper & Admin)

#### **3. Create a Class Diagram**

- Define system classes and their relationships:
  - **Quiz, Question, User, Hint, Score**
  - **Relationships:** User takes a Quiz, Helper provides Questions, Admin certifies Questions.

#### **4. Design a Sequence Diagram**

- Show the step-by-step process for taking a quiz:
  - User requests quiz → System picks questions → User submits answers → System rates answers → Hints provided if requested.

#### **5. Develop an Activity Diagram**

- Illustrate the flow of actions:

## 6. Draw a State Diagram