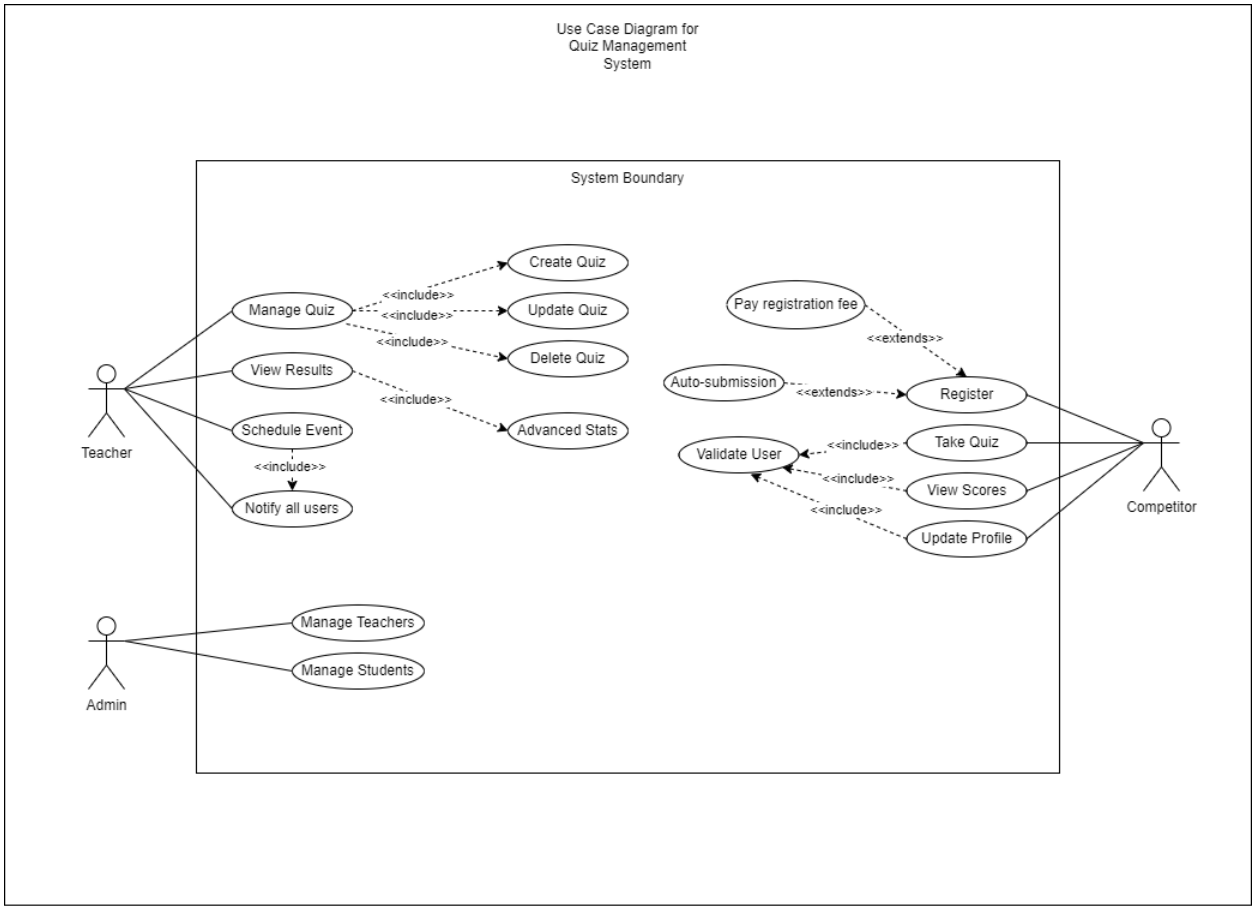
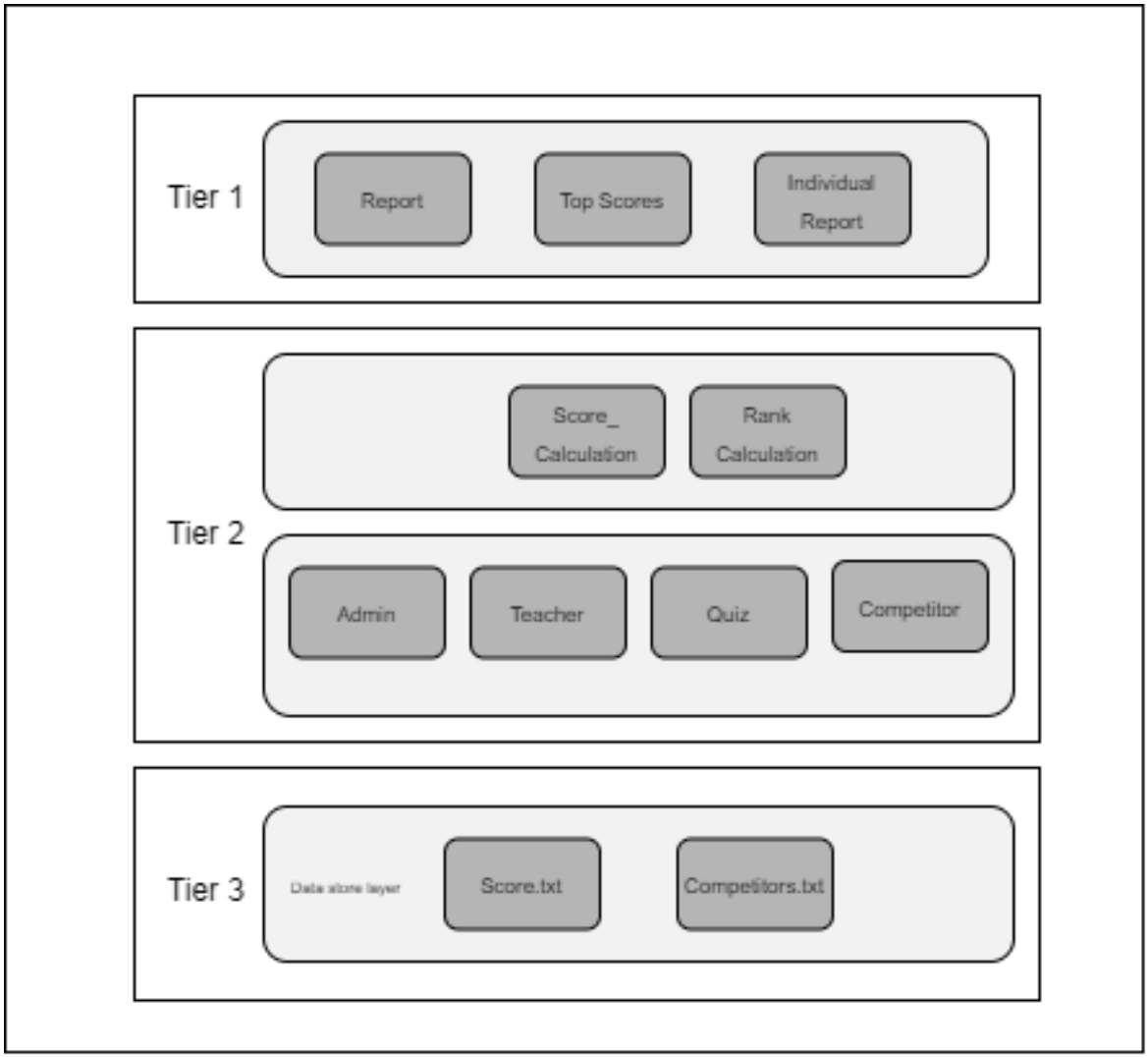
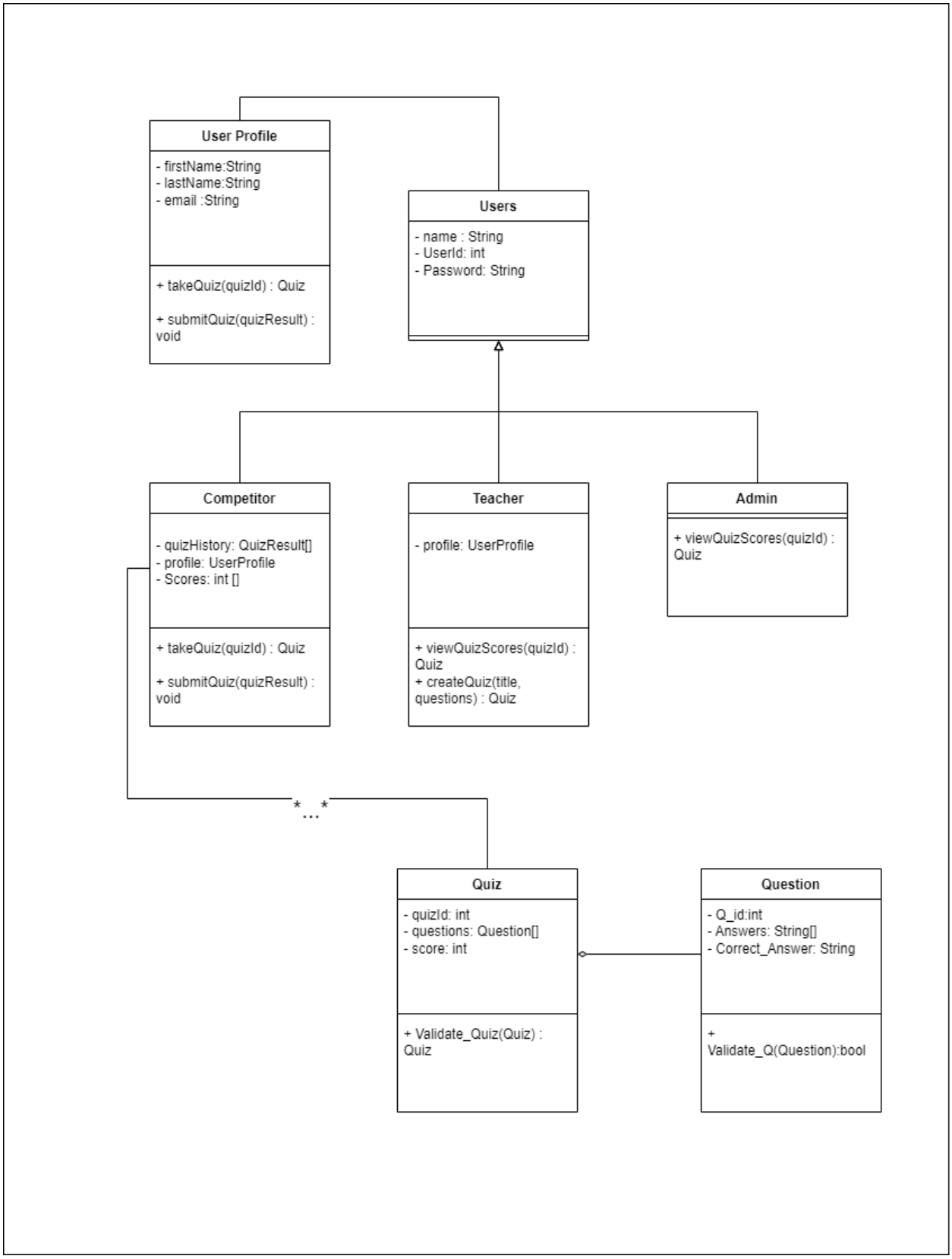
Use Case Diagram



Architecture Model



Class Diagram



Use Case: Take Quiz
Actors: Competitor

Purpose: Competitor takes a quiz to test their knowledge.

Precondition: The competitor has logged in to the quiz application.

Flow of Events:

The use case begins when a Competitor selects a quiz to take.
Competitor answers the quiz questions.
Use Validate Answers.
The system evaluates the answers and calculates the score.
The system displays the quiz score to the Competitor.
Competitors may choose to review the quiz questions and correct answers.
End of the use case.

Postcondition: The quiz result is recorded in the Competitor's quiz history.

Use Case: Create Quiz
Actors: Teacher

Purpose: Teacher creates a new quiz.

Precondition: The teacher has logged in to the quiz application.

Flow of Events:

The use case begins when a Teacher selects to create a new quiz.
Teacher enters the quiz title and selects or creates questions.
Teacher sets options and correct answers for each question.
Teacher saves the quiz.
End of the use case.

Postcondition: The new quiz is added to the system.

Use Case: Edit Quiz
Actors: Teacher

Purpose: Teacher edits an existing quiz.

Precondition: The teacher has logged in to the quiz application.

Flow of Events:

The use case begins when a Teacher selects to edit an existing quiz.
Teacher modifies quiz title, questions, options, or correct answers.
Teacher saves the changes to the quiz.
End of the use case.
Postcondition: The quiz is updated with the edited information.

Use Case: Manage Students
Actors: Admin

Purpose: Admin manages student accounts.

Precondition: The admin is logged in to the quiz application.

Flow of Events:

The use case begins when an Admin selects the option to manage students.
Admin views a list of existing students.
Admin can choose to create a new student account or edit/delete existing ones.
End of the use case.
Postcondition: Student accounts are updated as per admin's actions.

Use Case: Monitor Quiz Data
Actors: Admin

Purpose: Admin monitors quiz scores and user activity.

Precondition: The admin is logged in to the quiz application.

Flow of Events:

The use case begins when an Admin selects the option to monitor quiz data.
Admin views overall quiz statistics, scores, and user activity.
End of the use case.
Postcondition: Admin has monitored quiz data and user activity.

Use Case: Manage Teachers
Actors: Admin

Purpose: Admin manages teacher accounts.

Precondition: The admin is logged in to the quiz application.

Flow of Events:

The use case begins when an Admin selects the option to manage teachers.
Admin views a list of existing teachers.
Admin can choose to create a new teacher account or edit/delete existing ones.
End of the use case.
Postcondition: Teacher accounts are updated as per admin's actions.

Use Case: Submit Quiz
Actors: Competitor

Purpose: Competitor submits a completed quiz.

Precondition: The competitor has taken a quiz and answered all questions.

Flow of Events:

The use case begins when a Competitor completes answering all quiz questions.
Competitor reviews and validates their answers.
Competitor submits the quiz for evaluation.
Use Evaluate Quiz.
The system calculates the final score.
The system displays the quiz score and any feedback to the Competitor.
End of the use case.
Postcondition: The quiz result is recorded in the Competitor's quiz history.

Use Case: View Quiz Scores
Actors: Competitor, Teacher

Purpose: Competitor and teacher view quiz scores.

Precondition: Users are logged in, and there are completed quizzes.

Flow of Events:

The use case begins when a Competitor or Teacher selects the option to view quiz scores.
Competitor/Teacher selects a specific quiz or views overall performance.
The system displays relevant quiz scores and statistics.
End of the use case.
Postcondition: Users have reviewed quiz scores and performance statistics.

Use Case: Update Profile
Actors: Competitor

Purpose: Competitor updates their profile information.

Precondition: Competitor is logged in.

Flow of Events:

The use case begins when a Competitor selects the option to update their profile.
Competitor modifies profile information (e.g., name, email, password).
Use Validate User.
The system updates the Competitor's profile.
End of the use case.
Postcondition: Competitor's profile is updated in the system.

Use Case: Register
Actors: Competitor

Purpose: New competitors register for an account.

Precondition: Competitor is not yet registered.

Flow of Events:

The use case begins when a new Competitor selects the option to register.
Competitor provides required registration information (e.g., username, password, email).
Use Validate User.
The system creates a new Competitor account.
End of the use case.
Postcondition: Competitor is registered and can log in to the system.