



Green University of Bangladesh

*Department of Computer Science and Engineering (CSE)
Semester: (Fall, Year: 2024), B.Sc. in CSE (Day)*

Developing Use Case Diagram

Exprement Name: Develop UML Sequence and Communication Diagram

*Course Title: Integrated Design Project I
Course Code: CSE-324 , Section: 213-D1*

Students Details

Name	ID
Arman Hossain	221002624
Jannatul Ferdous	221902002
Afnan Khan Shopnil	221002570

Lab Date: 25 Nov 2024

Submission Date: 02 Dec 2024

Course Teacher's Name: Rusmita Halim Chaity

[For teachers use only: **Don't write anything inside this box**]

Lab Report Status

Marks:

Signature:

Comments:

Date:

1 Objective

- To Learn Key Components of Use Case Diagram
- To Learn UML Use Case Diagram
- To Learn Lucidchart and UML Tool Usage
- To Learn About System Requirements Analysis
- To Learn About User and System Interaction

2 Procedures

2.1 Actors

An actor in a UML diagram represents an external entity interacting with the system. For this system, three types of actors are identified:

- **Online User:** Represents users logged into the system who can participate in quizzes, log in, manage accounts, and perform various operations such as changing passwords, withdrawing cash, and viewing leaderboard.
- **Guest User:** Represents users without accounts, allowing them limited interaction such as playing quizzes.
- **Quiz Management:** Represents administrative personnel who manage quiz data by adding, deleting, or updating quizzes, as well as overseeing notifications and system backups.

2.2 Use Cases

Each use case represents a system function or interaction initiated by an actor. The system supports multiple use cases, which are visualized as ovals in the diagram:

- **Log In:** Ensures access for registered users through user credential verification.
- **Quiz Participation:** Allows online users to engage in quizzes and tournaments.
- **Scoreboard and Leaderboard:** Displays user achievements and rankings.
- **Notification:** Updates users on system changes or alerts.
- **Withdraw Cash:** Enables users to redeem rewards from quizzes.
- **Data Backup:** Maintains system reliability by saving essential data.
- **Quiz Management:** Administers quiz content and system updates.

Sub-use cases like Number or Email OTP Verification and User & Password Checking are included in primary use cases where required.

3 Implementation



UML Use Case Diagram for Quiz and Earn: A Dual-Mode Quiz App

4 Discussion and Conclusion

UML Use Case Diagram for the *Quiz and Earn* system. The diagram clearly represents the system's functionalities, actors, and their interactions, offering a comprehensive overview for developers and stakeholders. The Use Case Diagram simplifies the communication of system requirements and interactions, ensuring better collaboration during development and improved understanding of system scope. This exercise emphasized the value of visual modeling in software design.

5 References