



Green University of Bangladesh

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

Develop UML Sequence 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: 02 Dec 2024

Submission Date: 07 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 understand the key components of UML Sequence Diagrams.
- To learn how to model system behaviors using Sequence Diagrams.
- To analyze interactions between system components during runtime.
- To effectively visualize and document system functionality for stakeholders.

2 Procedures

2.1 Purpose of Sequence Diagram

The Sequence Diagram represents the dynamic behavior of a system by illustrating how objects interact with each other through message exchanges. This aids in visualizing and understanding the sequence of actions for each use case.

2.2 Components of the Sequence Diagram

Actors

- **User:** Initiates interactions by logging in, selecting quizzes, and requesting rewards.

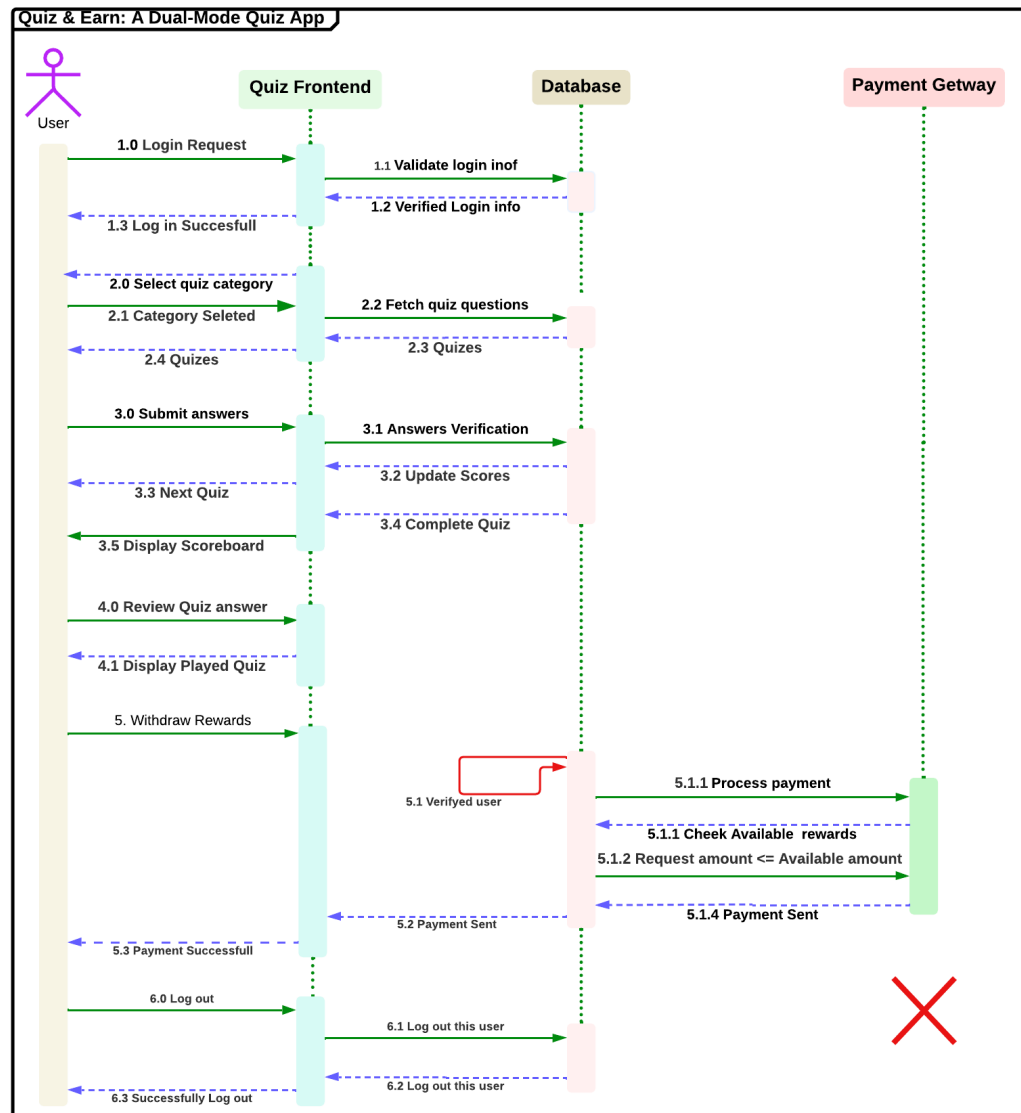
Objects

- **Quiz Frontend:** Handles user interactions like quiz selection and answer submission.
- **Database:** Verifies login credentials, fetches quiz data, and updates scores.
- **Payment Gateway:** Processes reward withdrawal requests.

Messages and Lifelines

The diagram includes messages for login verification, quiz selection, answers submission, reward withdrawal, and logging out. The lifelines visually represent the activity span of each component.

3. Implementation



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

4. Discussion and Conclusion

The Sequence Diagram provides a step-by-step representation of how the **Quiz and Earn: A Dual-Mode Quiz App** functions. By modeling user-system interactions, the diagram highlights:

- The clear flow of messages and events between system components.
- Efficient payment gateway integration for reward withdrawals.
- Enhanced understanding of system requirements, aiding stakeholders and developers.

3 References

1. Course materials from *Integrated Design Project I (CSE-324)*.
2. Online resources and tutorials on *UML Sequence Diagrams*.
3. Documentation guidelines provided by the instructor.