Bangladesh Open University

School of Science & Technology

Bachelor of Science in Computer Science and Engineering

Laboratory Report

Course Title: System Analysis & Design Lab

Course Code: CSE22P5

Lab Report No.: 04

Lab Report Name: Create a sequence diagram of Dhaka Metrorail and the experiences of commuters.

Submitted by

A. B. M. Anowar Hossain

Student Id No.: 20-0-52-801-042

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Dhaka Regional Center

Submitted to

Samrat Kumar Dey

Lecturer

School of Science and Technology

Bangladesh Open University

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Instrument:

- Computer
- EdrawMax Software, etc.

Procedure:

- At first, it is essential to become familiar with the Dhaka Metrorail and the experiences of commuters who use it.
- Now we have to draw a sequence diagram from what we have learned. First, power on the computer.
- When the computer is ready to use, we have to open EdrawMax software.
- After opening EdrawMax software, we have to create the sequence diagram.
- Finally, after drawing the sequence diagram, we have to ensure the sequence diagram is drawn correct.

Dhaka Metrorail:

1. User Purchases One-time Pass: The user interacts with the ticket machine to purchase a one-time pass for their journey.
2. Ticket Machine Dispenses One-time Pass: The ticket machine dispenses the one-time pass to the user.
3. One-time pass holder:
    3.1. User Scans One-time Pass at Entrance Gate: The user scans their one-time pass at the entrance gate of the train station.
    3.2. Entrance Gate Validates One-time Pass: The entrance gate validates the one-time pass with the train controller.
    3.3. Permission Granted: Upon successful validation, the entrance gate grants permission to the user to enter and board the train.
    3.4. User Boards Train: The user boards the train and begins their journey.
    3.5. Journey Loop: This loop represents the user's journey on the train. It's a repetitive process until they reach their destination.

3.6. User Reaches Exit Gate: Once the user reaches their destination, they approach the exit gate.
3.7. User Inserts One-time Pass at Exit Gate: One-time pass holders insert their pass into the exit gate machine for validation.
3.8. Exit Gate Validates One-time Pass: The exit gate validates the one-time pass with the train controller.
3.9. Permission Granted to Exit: Upon successful validation, the exit gate grants permission to the user to exit the train station.

4. Permanent pass holder:
4.1. User Buys Permanent Pass: The user purchases a permanent pass from the counter.
4.2. Counter Dispenses Permanent Pass: The counter dispenses the permanent pass to the user.
4.3. User Scans Permanent Pass at Entrance Gate: The user scans their permanent pass at the entrance gate to board the train.
4.4. Permission Granted: Similar to before, upon successful validation, the entrance gate grants permission to the user to enter and board the train.
4.5. User Boards Train: The user boards the train and starts their journey.
4.6. Journey Loop: The user's journey continues until they reach their destination.
4.7. User Reaches Exit Gate: Once the user reaches their destination, they approach the exit gate.
4.8. User Scans Permanent Pass at Exit Gate: Permanent pass holders scan their pass at the exit gate for validation.
4.9. Exit Gate Validates Permanent Pass: The exit gate validates the permanent pass with the train controller.
4.10. Permission Granted to Exit: Upon successful validation, the exit gate grants permission to the user to exit the train station.

Sequence Diagram: