



Course Title: **System Analysis and Design**

Course Code: **CSE3103**

Section: **1**

Submitted To

Raihan Kibria

Lecturer, Dept of CSE

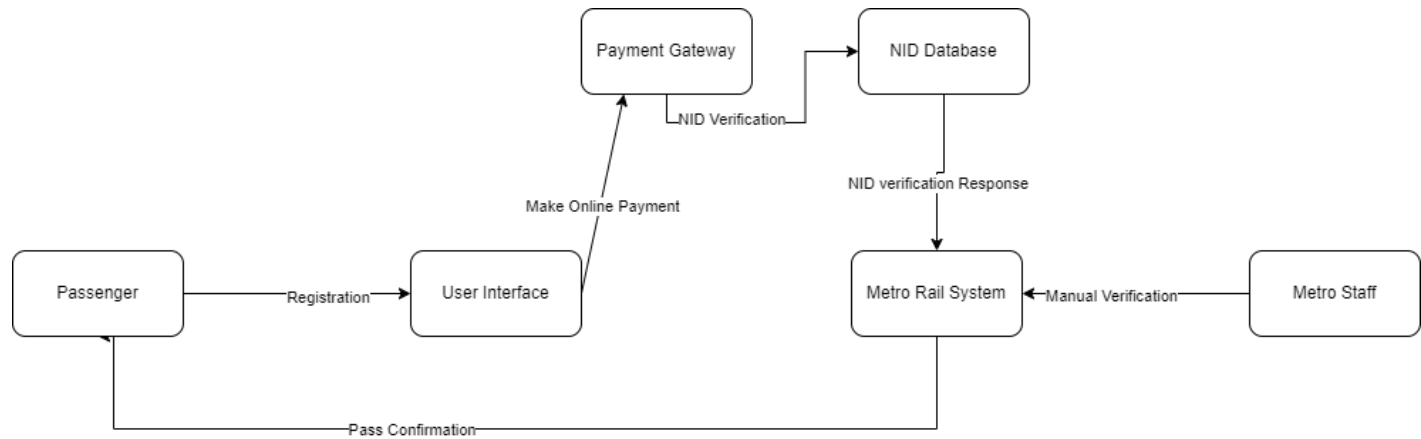
University of Liberal Arts Bangladesh

Submitted By:

MD. Jahidul Haque Junayer [221014071]

Spring, 24

## Context Diagram



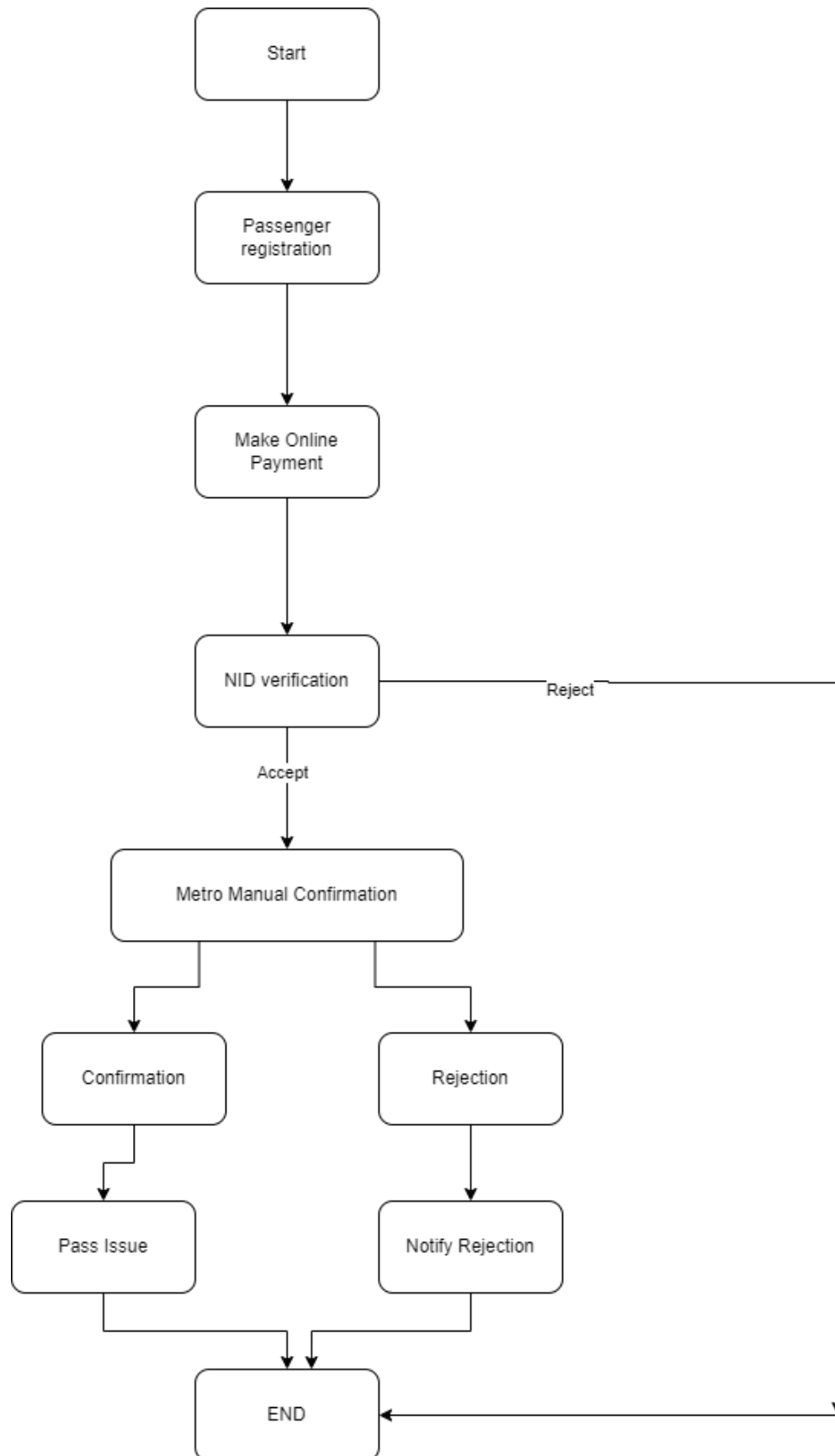
Here passenger is doing registration which taking him to user interface.

User interface enables him to make online payment.

After that it will do automatic NID verification from NID database and send its response to Metro rail system.

If the response is positive, it will be manually verified by metro staff, if not it will cancel the pass confirmation back to user, if yes the pass will be confirmed and returned back to user.

## Activity Diagram



Start: The process begins with the start node.

Passenger Registration: The passenger initiates the registration process by providing their personal information and national ID.

Make Online Payment: After registering, the passenger proceeds to make the payment for the pass online and verifies the payment made by the passenger through the payment gateway to ensure its authenticity.

NID Verification: Simultaneously, the system electronically checks the passenger's identity with the NID database available with the government to validate their identity.

Manual Verification by Metro Staff: As a precautionary measure, a member of the metro rail staff manually checks the records to ensure the accuracy of the verification process. The staff member can either confirm the application or reject it based on their assessment.

Confirm: If the manual verification is successful and the payment is verified, the system confirms the registration.

Issue Pass: Upon confirmation, the system issues the pass to the passenger.

Notify Rejection: If the application is rejected by the staff member, the system notifies the passenger about the rejection.

End: The process ends after the pass is issued or after rejection notification is sent.

## **Functional Requirements:**

User Registration: Allow passengers to register themselves using personal information and national ID.

Online Payment: Enable passengers to make payments online for purchasing passes.

Payment Verification: Verify payments made by passengers through the payment gateway.

Identity Validation: Validate the user's identity by checking with the NID database.

Manual Verification: Allow metro staff to manually verify user records before confirming the application.

Pass Issuance: Issue passes to passengers upon successful verification.

## **Non-Functional Requirements**

Security: Ensure the system securely handles personal information and payment details.

Reliability: The system should reliably process payments and validate user identities.

Scalability: The system should be able to handle a large number of registrations and transactions.

Performance: The system should respond promptly to user actions and queries.

Usability: The user interface should be intuitive and easy to use for both passengers and metro staff.

Accuracy: Ensure accurate validation of user identities and payments to prevent abuse of the system.

Availability: The system should be available for use at all times, with minimal downtime for maintenance.