

EC5406 Software Group Project

Department of Electrical and Information Engineering

Faculty of Engineering

University of Ruhuna

Sprint Evaluation – Progress Tracker

Tasks Completed Under Sprint 2

1. Backend Development

- Implemented **User Registration and Login** functionality using **FastAPI**
- Integrated **PostgreSQL** as the database
- Applied strong security measures:
 - **12-character password policy**
 - **JWT-based authentication** for secure session handling
- Ensured the registration and login flow follows best security practices

2. System Design

- Created **UML diagrams**
- Designed **ER diagram** for database structure
- Developed **transaction flow diagram** to represent system workflow

3. Machine Learning Preparation

- Data set Link: <https://www.kaggle.com/datasets/valakhorasani/bank-transaction-dataset-for-fraud-detection/data>
- Selected and downloaded a relevant **transaction dataset**
- Started the **data preprocessing phase**, including:
 - Cleaning
 - Formatting
 - Preparing data for model training

4. Simulation Planning

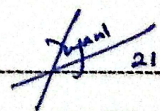
- Create a **user transaction simulator** to generate normal and suspicious transactions for **ML training and fraud detection testing**

To be completed by the evaluator

Remarks: *Divide your work properly. All of you should work equally.
Add use case diagram.*

Ms. Yugani Gamlath

Name of the evaluator

 21.01.2026
Date and Signature