

## Group 61

### Project: Online Sales and Marketing System

Name: Hasindu Sathsara

Reg No: 2022s19509

Index No: s16621

#### 1. Analyzing Project Requirements

- I started by breaking down the project's key features, including user registration, product browsing, order placement, and feedback management. My focus was on identifying the main entities like **Users**, **Products**, **Orders**, and **Feedback**, ensuring the system could scale and support multiple roles (admin, buyer, and seller).

#### 2. Designing the ERD

- With a clear understanding of the project structure, I designed the **Entity-Relationship Diagram (ERD)** to capture relationships such as **user-to-orders** and **seller-to-products**. This visual blueprint helped define the relationships and attributes needed for the database.

#### 3. Research and Learning

- To ensure I followed best practices, I consulted resources like **W3Schools** and **MySQL documentation**. This helped me understand key concepts like **foreign keys**, **cascading actions**, and **indexing**, which were essential for maintaining data integrity and optimizing performance.

#### 4. Writing MySQL Queries

- Using the ERD as a guide, I created the necessary **MySQL queries** for tables like **Users**, **Sellers**, **Products**, **Orders**, and **Feedback**. I ensured proper foreign key relationships and implemented **ENUM** fields to keep data consistent.

#### 5. Refining and Optimizing

- After setting up the initial database, I refined it based on feedback and evolving project needs. This included revisiting **foreign key constraints**, adjusting relationships, and optimizing performance with indexing.

#### 6. Testing and Finalization

- Finally, I tested the database to ensure all operations—such as inserting, updating, and deleting records—worked flawlessly.

#### Tools and Resources

- SQL Learning: [w3schools.com/MySQL/default.asp](https://www.w3schools.com/MySQL/default.asp)