BLG317E Database Systems
Project Proposal

Group Information

Team EnAi

1. Full Name: Muhammed Abdullah Özdemir -Student ID: 150220340

2. Full Name: Muhammed Furkan Şıhanoğlu - Student ID: 150220301

3. Full Name: Muhammed Hasan Bilal Cebeci -Student ID: 150220339

4. Full Name: Nurettin Macit -Student ID: 150220329

Project Idea

Please provide a brief explanation of your project idea, including how the database will be used and what kind of data will be managed:

Project Description:

Our team will develop a Dynamic Pricing and Inventory Management System for an e-commerce platform. With this project, we'll aim to design a complete database system that can manage product information, track stock levels, and automatically adjust prices based on sales performance and demand.

We started from the idea that in e-commerce systems, product prices and stock data are constantly changing. To handle this, we plan to build a database model that connects multiple entities such as Products, Categories, Orders, Customers, Suppliers, Inventory, Price History, and Users. Each table will support CRUD operations, and the relationships between them will help us analyze patterns like best-selling products, low-stock alerts, and price fluctuations over time.

Our system will include a RESTful API that allows users to interact with the database. Sellers will be able to add new products, update prices, or manage stock. Customers will be able to browse products and view their current prices. We also plan to include a simple dynamic pricing mechanism (for example, increasing prices when stock is low).

The database will play an important role in our system by ensuring that all information is stored, updated and retrieved efficiently. We will make sure our database is properly normalized and the relationships between entities are well-structured. This will help us keep the data consistent, run queries efficiently, and scale the system as it grows.