



CYPRUS INTERNATIONAL UNIVERSITY

CMPE343

Database Management Systems and Programming I

Instructor: Prof Dr Melike Şah Direkoğlu

Project (15%)

Due Date: Sunday, 22/12/2024

In this project, you are asked to design and implement a database that will store all the necessary information for a specific domain. You can form groups up to 3 students. **Each group will be assigned to a project domain** from one of the following:

- Online Movie Platform
- Sales Management System (any sales item)
- Car Rental Management System
- Bank Management System
- Tourism Management System
- Flight Booking Management System

After designing the database, you will insert, delete and update data.

Your database design should contain at least **6 tables**. You are free to design the database anyway you like, but the following requirements should be considered:

- Design foreign keys to other tables, in order to, visualize and relate information from different tables.
- Write queries to insert, delete or update data from tables.
- Write complex SQL queries that contain joins, function (character, date, numeric and advanced) to illustrate complex querying of the database.

The project will have 3 phases:

DESIGN: The database should be designed and should be demonstrated with ER Diagrams and DDL statements. Foreign keys, primary keys, constraints, default values should also be indicated with relational model.

Use any database that you want (MySQL, Oracle, MSSQL, etc.), to implement your design.

POPULATE DATA: Using DML statements to insert/update/delete data to/from your database. Show the inserted records into your tables.

QUERIES: Write at least 15 SQL queries retrieving, displaying and showing statistical information to help management (use join operations, subqueries, group by, order by, sum, average, count, and other single row functions, etc.)

At the end of this project, you will submit a report that should contain the following items as well as present it in the class on a date to be announced later:

1. Introduction

- An introduction giving brief information and assumptions about the system

2. Database

- ER Diagram,
- Data Definition Language Details (DDL), including all necessary constraints,
- Data Manipulation Language (DML)

3. Queries

- Show your queries and screen shot of the results for each query. Make sure the screen shot is readable.

❖ Group work (max 4 people) is accepted.