**CS 353 Spring 2023**

**Brief Description of Project Topics**

The following is the list of project topics. The descriptions give you a basic idea about what to design, but **you are EXPECTED to come up with additions regarding your context.** There needs to be at least one addition that brings new functionality to your system different than the ones that are already given in the description (Hint: try to come up with a new entity and its relations). You are free to get creative and add as many functionalities as you like. Note that you are also EXPECTED to implement <u>different</u> entity and relation types that you learn in the class. If you are unsure what to add to the project, you are **highly ENCOURAGED** to discuss your project topic with your TA. All projects will be web-based systems. You can use any environment or programming language you want for the project.

1) **Online Ticket Purchasing App for Transportation**
   For this project, you will implement the database for an application where the users can plan trips, and purchase or reserve tickets for different transportation methods, such as airplanes, buses, and trains. The users can be companies, travelers, an admin, etc. Various transportation companies can register their fares and timetables. The database should support restrictions (e.g., age) and search filters such as date, time, city, and type of transport. The app should have a basic ticket purchasing system; there is no need to consider the third-party side, but a simple balance reduction mechanism is enough. The admin should be able to create system reports, like finding the most popular transport types in a month based on people's preferences.

2) **Online Pharmacy: Medicine Delivery System**
   For this project, you will implement the database of an online pharmacy delivery system where the users can view and order medicines. The users can be pharmacists, patients, doctors, etc. The pharmacists can register new drugs to the systems by specifying the details (e.g., what it is used for, dosages for age groups, side effects, etc.). Some restrictions are necessary for your database, such as some medicines should not be sold without uploaded prescriptions. Doctors should also be able to prescribe medications for a specific patient. The database should support search filters such as drug name, age group, etc. The app should have a basic purchase system; there is no need to consider the third-party side, but a simple balance reduction mechanism is enough. Pharmacists should be able to create system reports, like finding the names and amounts of medicines sold within a time frame.

3) **Professional Career Network (e.g., Linkedin)**

For this project, you will implement the database of a social network where users can find jobs and internships, connect with people with the same career paths and create career-related posts. The application users can be employees / regular users, recruiters, career experts, an admin, etc. The recruiters can share job opportunities of their companies by giving details (e.g., location, profession, job requirements, due date, etc.). Users can find and view job openings and apply using search filters such as location, profession, etc. The admin should be able to create system reports, like finding the highest number of job applications in a region, given a time frame.

4) **Room / Flat Rental Application (e.g., Airbnb)**

For this project, you will implement the database of a booking application where the users can rent rooms or entire houses for some time and review the places they have stayed. The application users can be homeowners, travelers, an admin, etc. The homeowners can put their rooms or houses up for rent by specifying details such as the type of accommodation, available dates, location features, restrictions, etc. The users can find and book a place and pay the price using search filters, such as location, flat type, etc. The app should have a basic purchase system; there is no need to consider the third-party side, but a simple balance reduction mechanism is enough. The admin should be able to create system reports, like finding the most popular rental houses within a region.

5) **Food Delivery Application (e.g., Yemeksepeti)**

For this project, you will implement the database of a food delivery application where the users can order food online and make reviews on the deliveries. The application's users can be restaurant owners, customers, an admin, etc. The restaurants can put their menus with their own price tags. Customers can find and order food using search filters, such as food name, type, ingredients, etc. The app should have a basic purchase system; there is no need to consider the third-party side, but a simple balance reduction mechanism is enough. The admin should be able to create system reports, like finding the most popular restaurants within a region according to the number of orders they receive.