**Discount Coupons Microservice**

**Overview:**

A microservice for an online store’s admin dashboard to create discount coupons for clients to use on items with a specific minimum spent amount. These coupons have names to specify from which sponsor the client got his code.

**Architecture:**

This microservice is made with ASPDontNet version 8 framework as a web API template.

This project has two directories;

FrontEnd, where all the codes for the frontend are stored.

And Services directory where all the codes for the microservices are stored.

Inside the services directory, there is only one microservice called Store.Service.CouponAPI.

**Store.Service.Coupon.API**

**Data-Base.**

Using ORM the coupon structure is stored in a class called “Coupons.cs” inside the models folder.

Using SQLite to store the data.

In the “appsettings.json” using “connectionstrings”, I added the location where the SQLite file will be to create the connection later.

In “Program.cs”, I created the link between the application and the database file using “AddDbContext” and linked it to the default location specified in “appsettings.json”.

Using a Dto class for transferring data among the application. Also, a class called “Dtoresponse” is made to further facilitate the communication when using functions to manipulate the data.

Using Auto mapper extension to to facilitate mapping the data and store it in the database instead of hard coding each entity. A MappingConfig.cs class is added to the application to create the mapping function between Coupons.cs and CouponsDto.cs. the automapper is implemented in the programs.cs flie usinf “IMapper”

In the controller class, you can find the functions for manipulating data. The functions are get() to get all created coupons, get(int id) to get a specific coupon by id, GetByCode(string code) to get a coupon by its code, Post() that create a new coupon, Put() to edit an existing coupon, and Delete() to delete a specific coupon by its id.

To run this application, you can go to the Store.web directory in the terminal and write “dotnet run” This will show you the front end of the application. Note that the front end is very basic you can only see all the created coupons without any other functionality by going to the menu bar and go content management the coupons.

Or you can go to the store.service.couponAPI directory and type on the terminal “dotnet run” it will run on the localhost:5202. Type Swagger and an interface will pop up to try the functions.

**Challenges faced:**

the lack of information in the courses about the dotnet framework so had to learn everything online.

The mapper versions were not compatible and every time I degraded the version the compiler upgrades it automatically causing a crash again but solved.

Just now after submitting the frontend that shows all the created coupons crashed and still haven’t figure out how to fix it. But if you run it from Visual studio it will work fine otherwise if you run it using Microsoft command prompt it will not work when you enter the list but the home page will work fine.

**GitHub link:** https://github.com/aliMahmoud-5/I3332-Project