**Week 5 Assignment: Enhance an API**

Intro

We spend the last few weeks studying the following concepts:

* The repository pattern
* Separation of Concerns
* Interfaces
* Unit Testing
* Entity Framework basics
* Dependency Injection
* Data Annotations
* Fluent API

Now it is time to put what we’ve learned to practice! As a developer, you will likely spend most of your time supporting existing applications. To simulate this experience, we will be building additional features into the OrderTracker app so that it can act as a functional Web API.

Premise

Sammy Mart is a national grocery chain looking to expand its business to online orders and delivery. To do this, it needs a functional Web API so that its web site and phone applications can send requests to it.

Requirements

The Web API should have the ability to do the following:

* Add a new customer
* Remove an existing customer
* Place an order
* Track and order’s status (pending/awaiting pickup/completed/cancelled).
* Display a list of items in the order.
* Add delivery drivers into the system.
* Track which driver is delivering an order.

Your boss would like you to add this functionality to the Unit of Work and create methods to reach them via your Controller. Additionally, each new method should have multiple tests that ensure it works as expected. Your tests should check that the “happy path” works, but also ensure that unexpected workflows are caught and dealt with appropriately.

Before this work can begin, your Models need to be altered to reflect new properties your customers would like to see. The Orders model currently does not track the cost of an order, nor does it keep track of its status or who is making the delivery to the customer. Additionally, the app has no concept of a “Delivery Driver”, so this will likely have to be a new model that gets referenced by Orders.

Corporate plans to conduct manual testing via Swagger UI, so all your new methods should be accessible there. If they sign off on the changes to the app, they will instruct their Front-End and iPhone/Android dev teams to write user-facing apps that will communicate with the Web API.