

## [ .NET Core Advanced] Project Case Study Description

**Course Number:** 6

**Course Name:** .NET Core Advanced

**Project Title:** Products Management API

### **Problem Statement:**

It is a product management API that manages all the activities related products. It provides API methods for CRUD operations on Products. And also provides extra methods to implement different requirements. Need to involve Repository and Service Pattern.

Repositories act as gateways to your data and while services usually implement some business rules on your data before sending the data to be saved in the database via a repository. A service can use more than one repository.

**Note :** Please read and understand the below requirements carefully before implementing the project.

## **Project Requirements:**

1. Implement the project case study using Repository and Service Pattern.
2. Product Details should include ProductId, Name, Category, UnitPrice, Quantity, Description.
3. Use Entity Framework to implement database operations.
4. API should provide all methods for CRUD operations
5. API also provides extra methods for the following requirements:
  - a. Method to returns Products based on Category
  - b. Method to returns Out of Stock Products
  - c. Method to returns Products between the given range of Price.
  - d. Method that returns only Categories names
6. Repository should communicate with Entity Framework classes.
7. Repository provides methods for CRUD.
8. Service should communicate with Repository
9. Service should provide methods for CRUD and custom requirements (Refer. Point-4)
10. Add proper conditions in action methods and return corresponding Http Results like NotFound, BadRequest etc.
11. Develop the controller by communicate with Service class.
12. Add required no. of methods in the API as per the requirements.

13. Use dependency injection to register the Repository and Service classes in Program.cs file.
14. Test all the methods using Postman tool.
15. Implement Security using JWT Authentication concept.
16. Add required controller and action methods for Security.