I used the ASP.NET core framework to build my web application, and the MVC architecture has allowed me to use objects to represent the data and functionality of the object-oriented design. The model in the architecture has allowed me to create a blueprint of certain objects and using that I was able to create, update, and delete objects. The controller in the architecture has allowed me to handle the user input and coordinate the interactions between the model and the view. The view has allowed me to render the user interface. I was able to use a master page (which can be said as a blueprint) to create different pages. Thus, the use of ASP.NET core MVC made it possible for me to the creation of modular, reusable, and extensible code, which are key principles of object-oriented design

**Project rubrics**

**Completeness –**

**Appropriate Complexity-** I believe the web application I built has included most of the concepts that are taught in the class

**Version Control** – I used GitHub to track different versions of the web app. Saved me multiple times as I had to pull older versions when things didn’t go as I wanted.

**Classes and their components** – Have five classes, of which two of which do not have implementation as things went complex, and time-consuming.

**UML Class Diagrams** –Included

**Inheritance** – I have AppDbContext class that is derived from DbContext. The DbContext class is part of the Entity Framework Core library and provides a default implementation of the DbContext class that is used to interact with a database and the AppDbContext class inherits implementations from the DbContext.

**Encapsulation –** For instance, in the BooksController class, the data and functionality for managing the books in the library are encapsulated together in the Books model class and the AppDbContext (instance of DbContext)

**Abstraction –** For example, the AddBook() action method implements the logic for adding a new book to the library, without having to worry about how the database connection is established or how the book data is saved to the database.

**Polymorphism-**

**Advanced topics –** used MSSMS (Microsoft SQL Server Management Studio) to store and access database. Used entity framework, used ASP.Net core MVC, and Bootstrap.

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