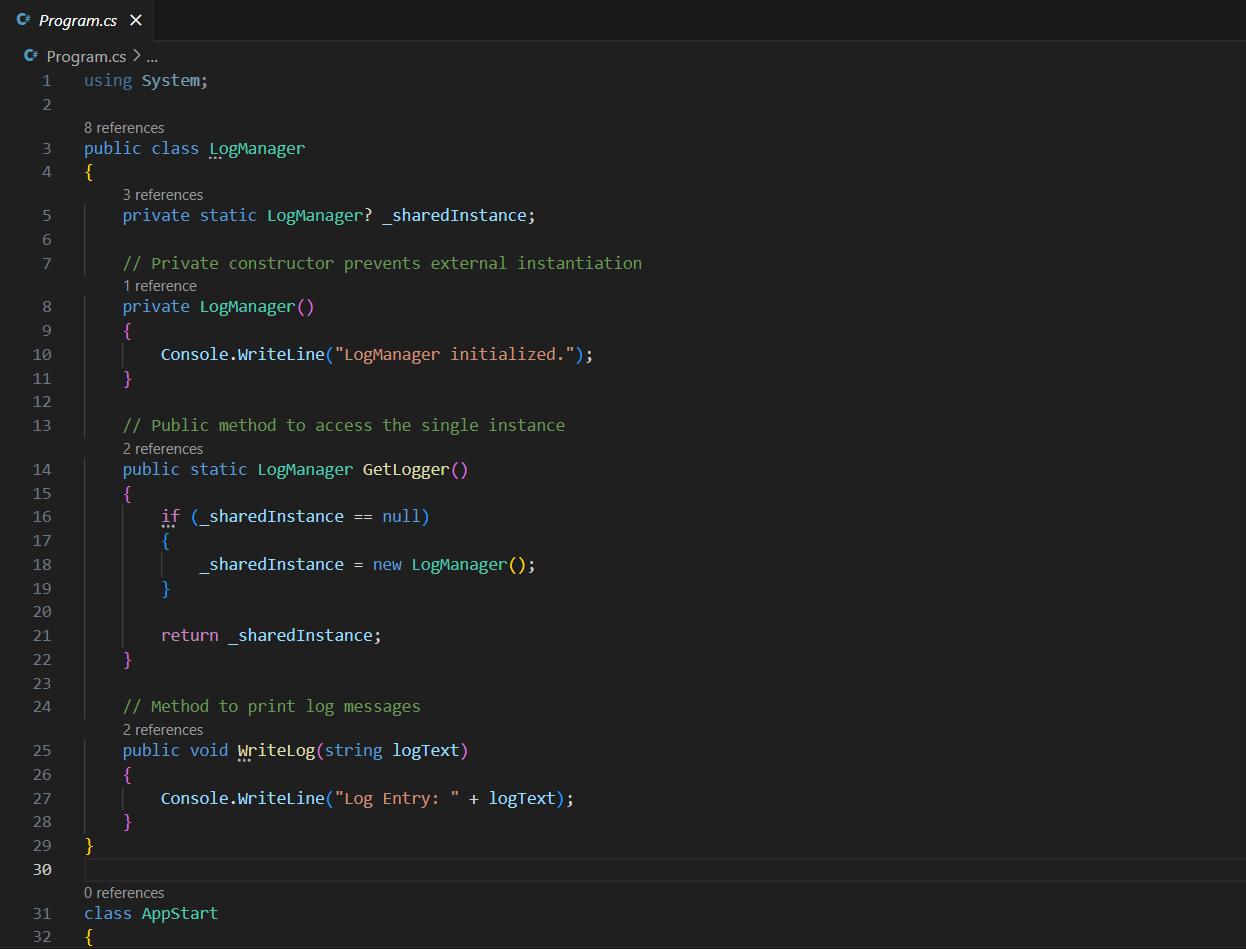
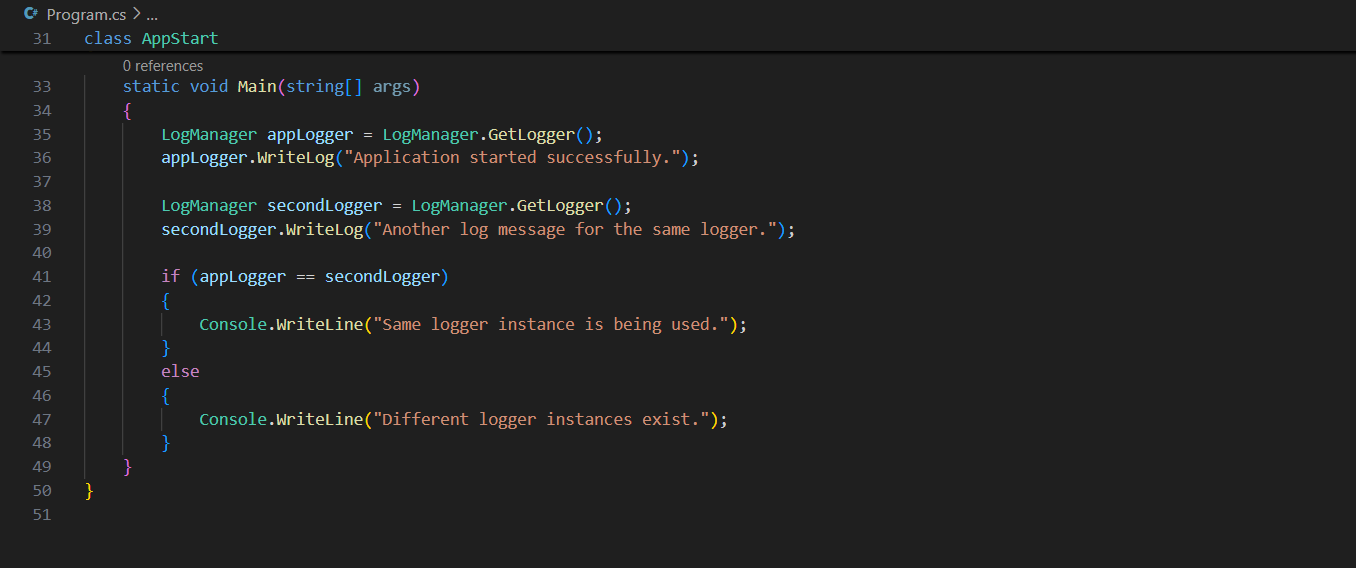
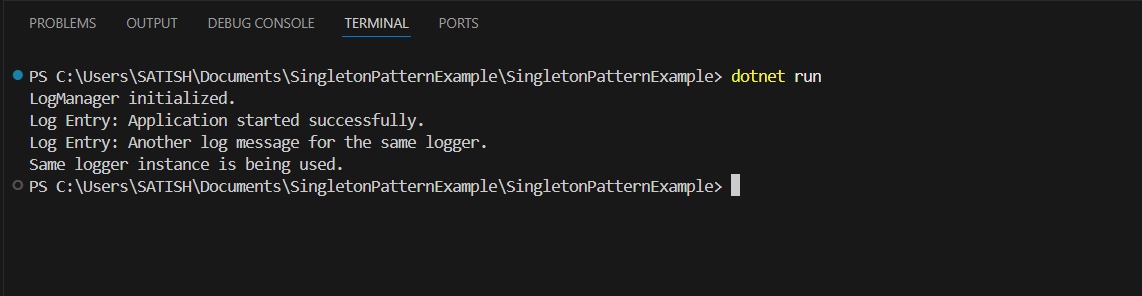
**\*Design Patterns and Principles\***

Exercise 1: Implementing the Singleton Pattern

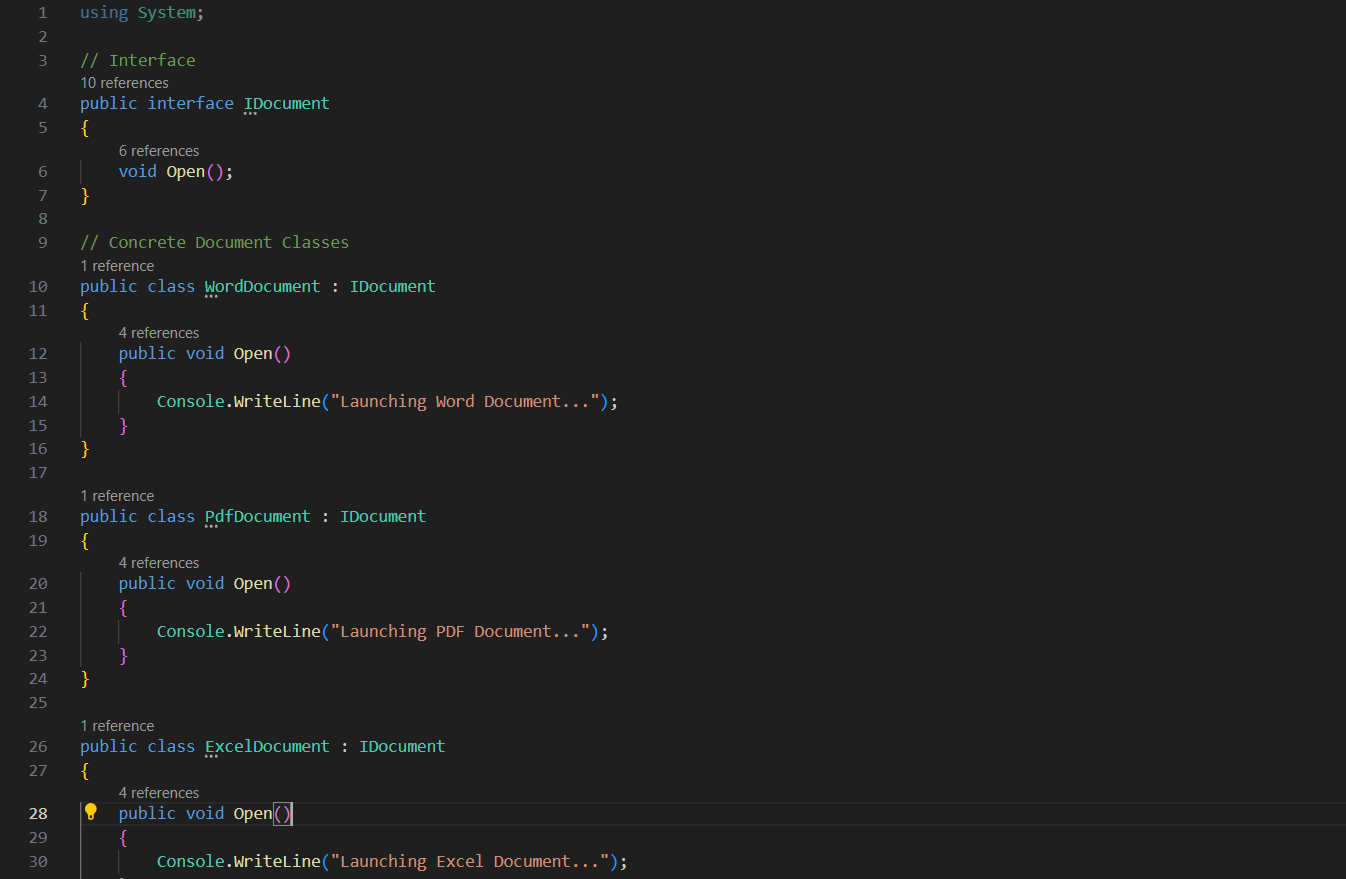
CODE:

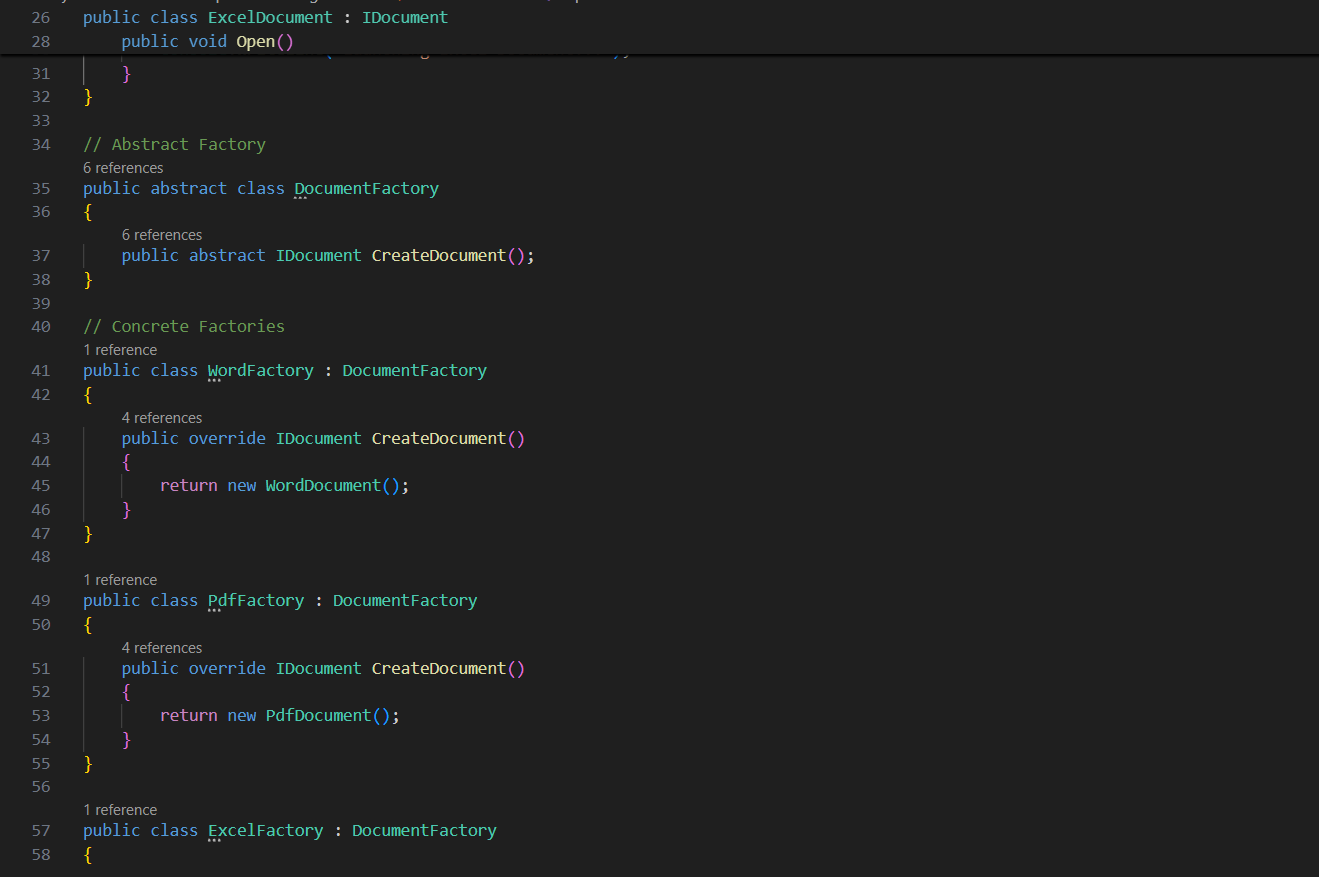


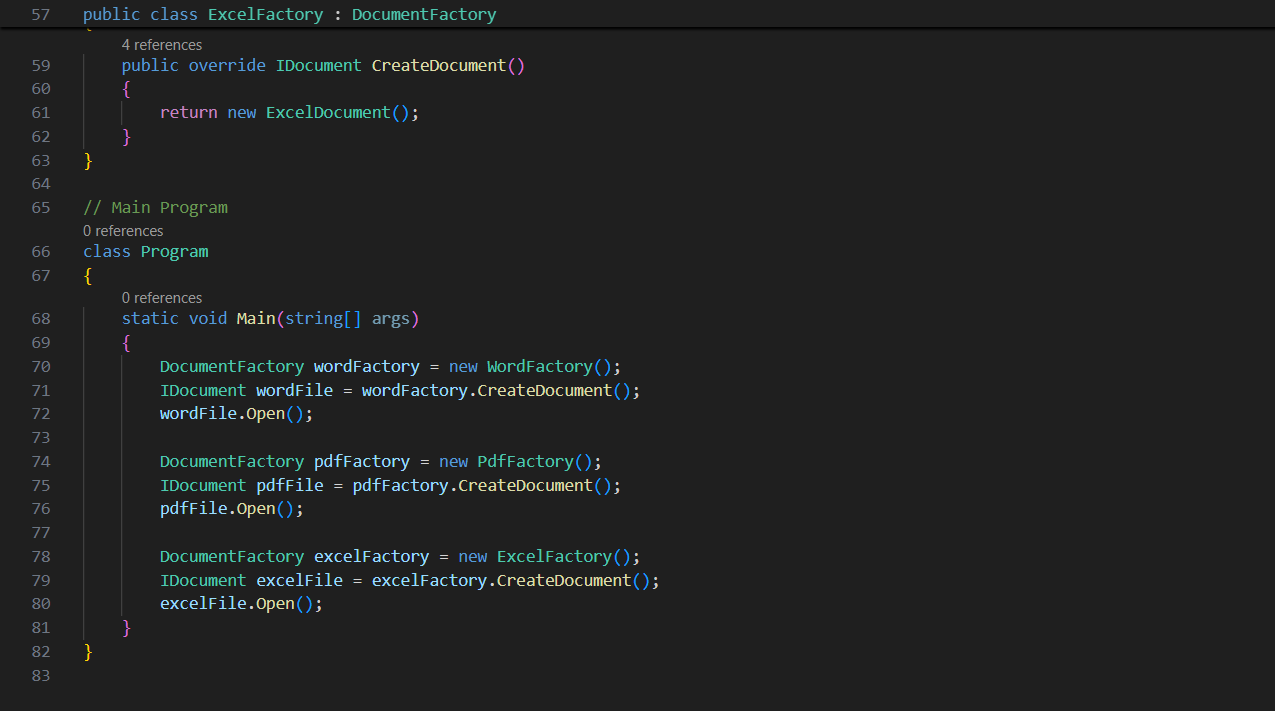
OUTPUT:

Exercise 2: Implementing the Factory Method Pattern

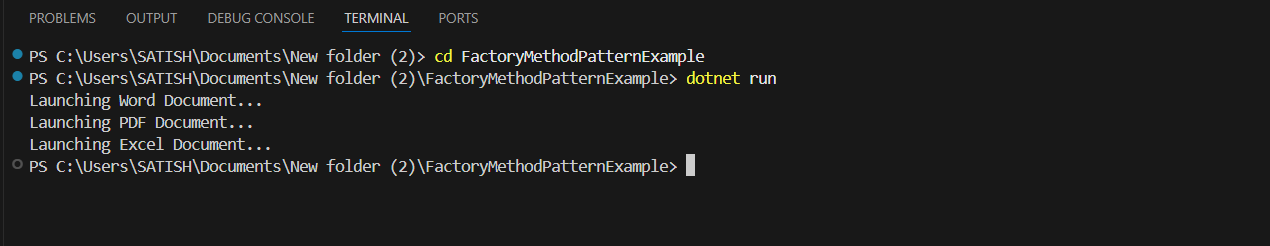
CODE:





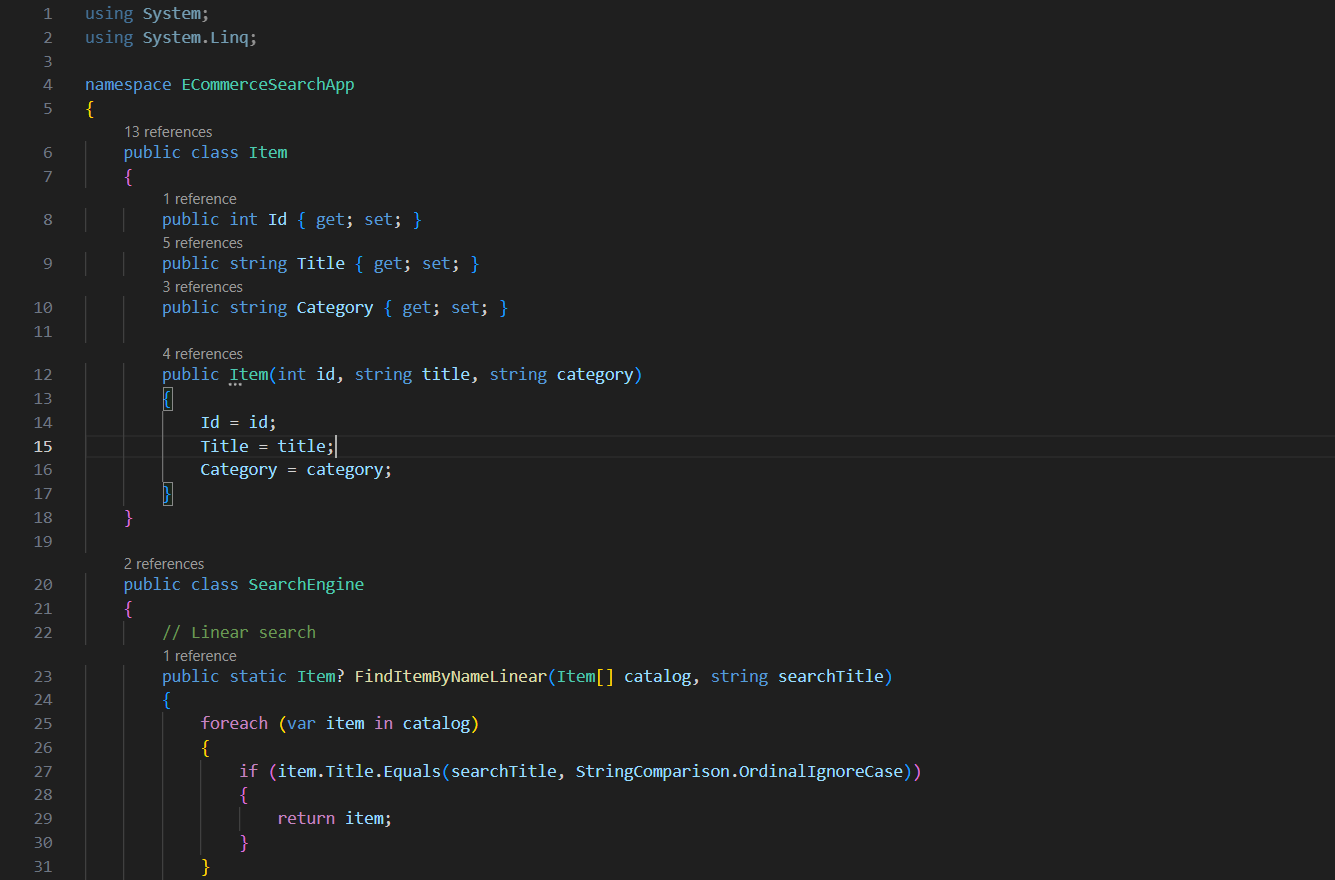


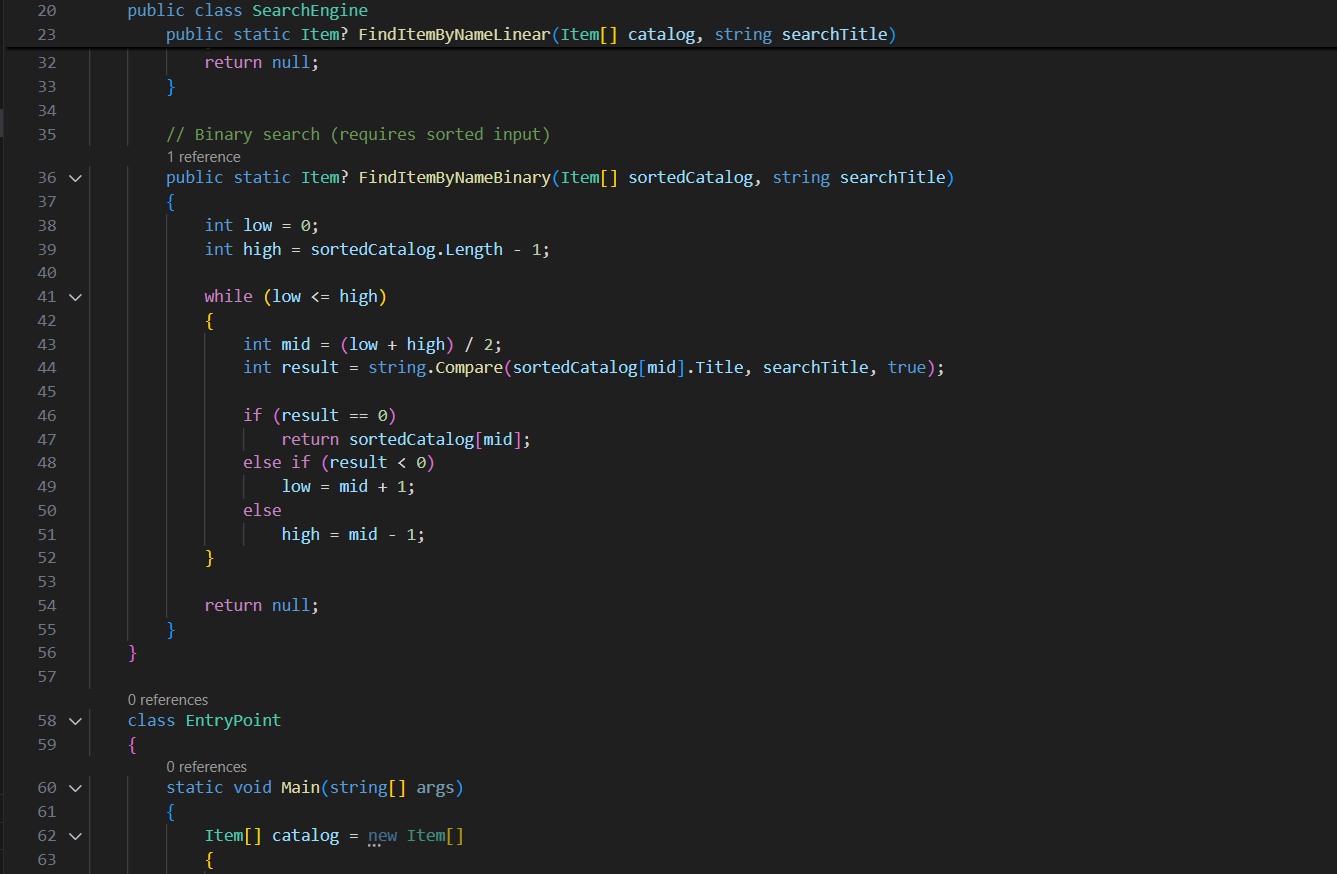
OUTPUT:

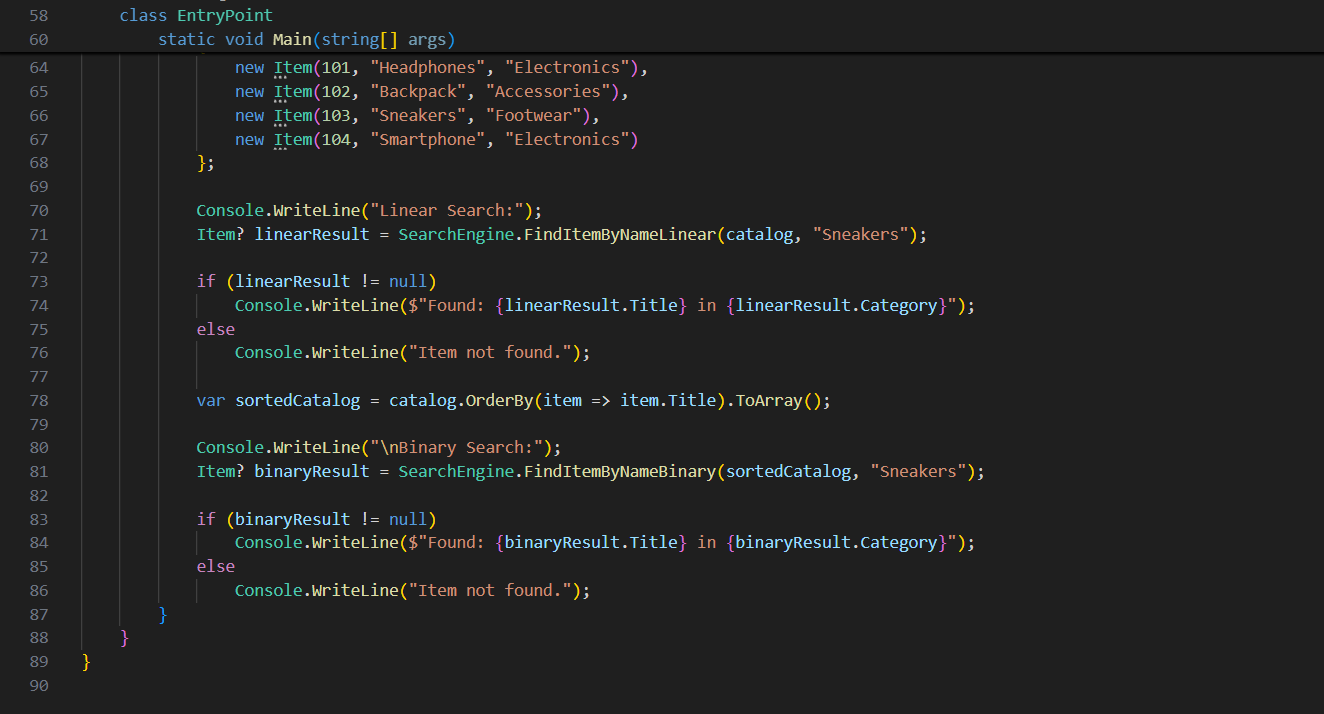


\***Algorithms\_Data Structures**\*

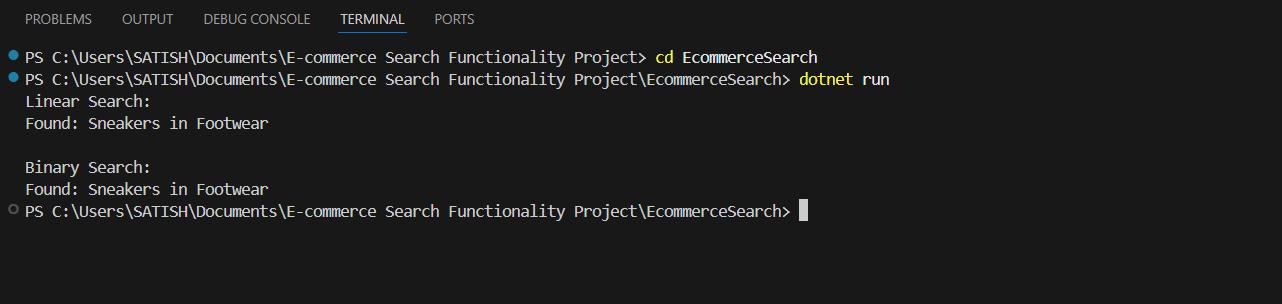
Exercise 2: E-commerce Platform Search Function

CODE:

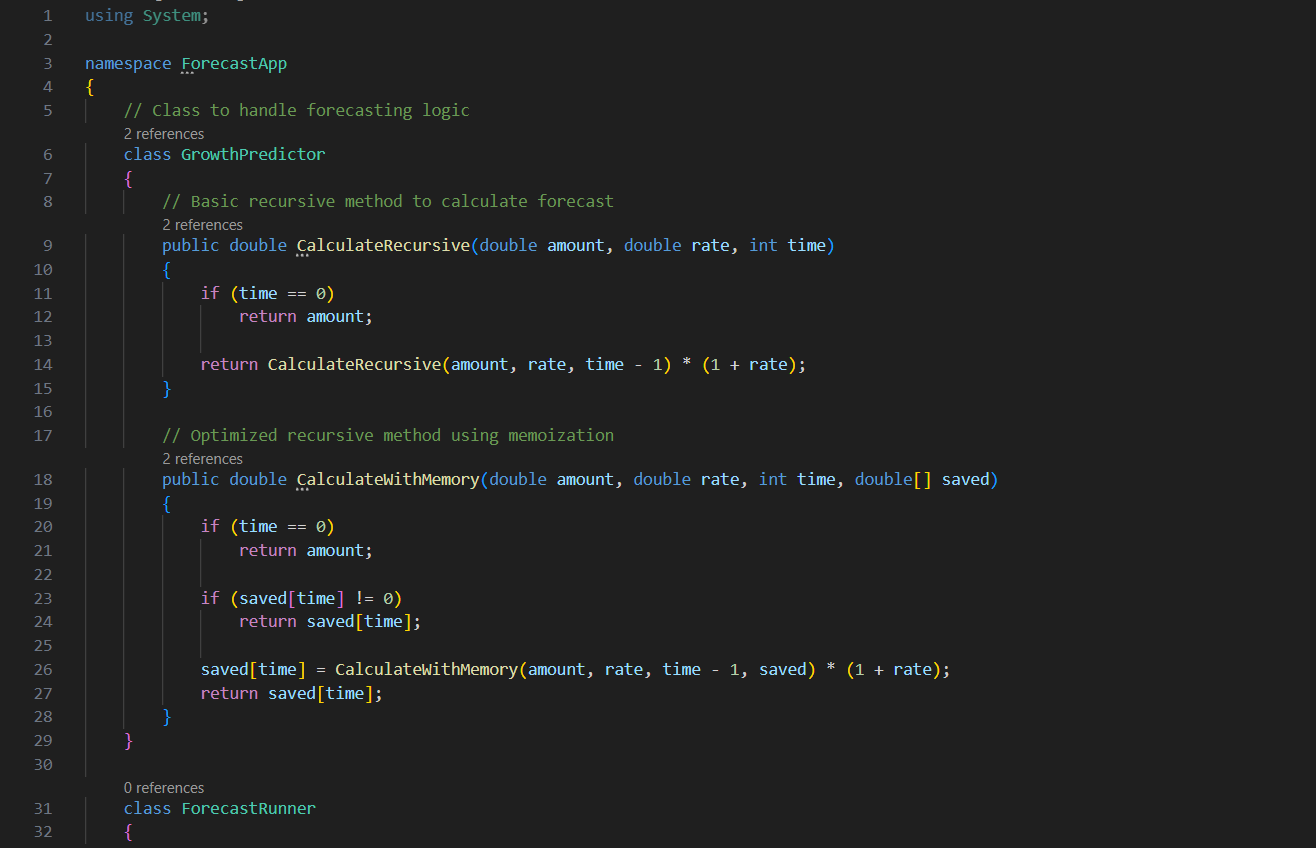


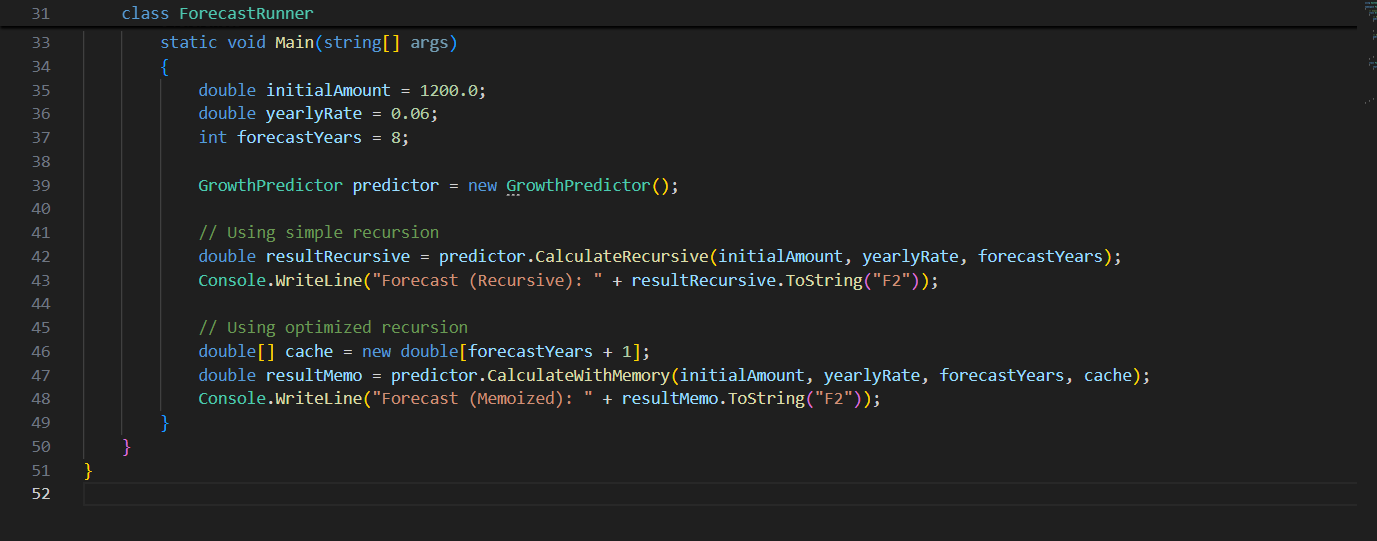


OUTPUT:



Exercise 7: Financial Forecasting

CODE:



OUTPUT:

