ASSIGNMENT
(11 May – 16 May, 2020)

1. A Book Shop Inventory uses a personal computer to maintain the inventory of books. The list includes details such as author, title, price, publisher, stock position etc. Whenever a customer wants a book, the shop Keeper inputs the title and author of the book and the system replies whether it is in list or not. If it is not, an appropriate message is displayed. If book is in the list, then the system displays the book details and asks for the no. of copies. If the requested copies are available, the total cost of books displayed, and otherwise the message "required copies not in stock" is displayed. Use appropriate Data structure of your choice to minimize search time and implement the system.

2. Create a class "Employee" that includes three pieces of information as data members—a first name (type string), a last name (type string) and a monthly salary (type int). Your class should have a constructor that initializes the three data members. Provide a set and a get function for each data member. Create two Employee objects and display each object's yearly salary. Then give each Employee a 10 percent raise and display each Employee's yearly salary again. The class should be able to give the count of all the default objects. Write a test program that demonstrates class Employee capabilities.

3. Define a class named "Document" that contains a member variable of type string named "text" that store any textual content for the document. Create functions named "getText" and "setText" that gets and sets text field. Define a class for "Email" that is derived from "Document" and that includes member variables for the sender, recipient and title of an email message. Implement appropriate get and set functions. The body of the email message should be stored in the inherited variable text. Define a class for "File" that is derived from "Document" and that includes a member variable for the pathname. Implement appropriate get and set function for the pathname. Create several sample objects of type "Email" and "File" in the main function to test the program. Also, write an appropriate function to search a keyword entered by user in Email/File.