Write a Java Console application described as the following:

**1**. Declare an abstract class named **Vehicle** including:

+ Protected members: int vehicleId, String vehicleName,

double price, int Quantity, double rate, Date saleDate

+ Methods:

- public abstract void PrintVehicle(): prints vehicle information to

the screen

- public double salePrice(): calculates and returns the selling

price : salePrice = price \* rate

+ Declare setters and getters for data members

**2**. Declare a class named **Mustang** that inherits the **Vehicle** class and adds the private members: String color, int warranty (check: 1 <= warranty <= 3)

+ Declare constructors and setter - getter for the above members

+ Implement methods of Vehicle class to print out all Mustang’s

pieces of information (included sale price )

**3**. Declare an interface **IMustang** including the following methods:

+ void **addMustang** (**Mustang** a) // add new

+ Mustang **findMustang** ByID(int id) // search by ID

+ void **updateMustang** (**Mustang** a) //update

+ void **printMustangList** () ////print the Mustang list in descending order by saleDate if saleDate is equal then ascending by vehicleName

**4**. Declare a **MustangManagement** class that implements **IMustang** interface, this class includes the following components:

+ Declare a collection or array (Array-1D or ArrayList ,...) named

listVehicle to store x vehicles (x inputted from keyboard)

+ Implement methods of the **IMustang** interface

**5**. Declare a Program class, this class has a **Main** method that will print out the menu to perform the functions of adding [2 marks] , finding [2 marks], updating [2 marks], print list [2 marks] the Mustang list to the screen and and export list to file ( Text or Binary) [2 marks] by **IMustang** interface and **MustangManagement** class