C# Assignment

Assignment:1

Write a C# program which satisfies below requirements

1. Create a class called Employee
   * It has three private properties called Id, Name, DepartmentName
   * Its constructor should accept all of these three properties while creating object.
   * It should have three methods which individually returns above properties (i.e. GetId(), GetName(), GetDepartmentName())
2. Create a Program who accepts details from user
   * It should ask user for Id, Name, DepartmentName
   * After getting details from user create object of Employee class with provided details.
   * After creating object print all three properties one by one using above created methods.
3. Create an event in Employee Class which is fired when any of the class’ method is being called and outputs message (i.e. “GetName() method called”)]
4. Create 3 overloaded methods which allows updating any of the Employee property (Id, Name, DepartmentName)

Assignment:2

Write a program that covers the concept of Abstract class, Inheritance, and polymorphism.

1. There will be an abstract class of Employee which have multiple properties such as Id, Name, Designation, Experience, Annual salary, joining date.
2. Create a new class for HR and Developer.
3. The Salary calculation for HR and Developer will be different. Formula of salary will be as followed.
4. HR and Employee will both get basic salary, but HR will get additional amount (1000\*exp years) & Dev will get additional amount (2000\*exp years)

Output: Create a new object for HR and Developer and print the Salary of HR and developer.      Suppose that

HR have 8000/-RS as basic salary and having 4 year exp.

Developer have 8000/-RS basic salary and having 5 year exp.

Assignment:3

Write a program to manage an Inventory system which takes input of products along with its details.

1. Products will contain the following details.
   * Name
   * Price
   * Quantity
   * Type
2. Input: List of products as follows.
   * lettuce, 10.5 RS, 50, Leafy green
   * cabbage, 20 RS, 100, Cruciferous
   * pumpkin, 30 RS, 30, Marrow
   * cauliflower, 10 RS, 25, Cruciferous
   * zucchini, 20.5 RS, 50, Marrow
   * yam, 30 RS, 50, Root
   * spinach, 10 RS, 100, Leafy green
   * broccoli, 20.2 RS, 75, Cruciferous
   * garlic, 30 RS, 20, Leafy green
   * silverbeet, 10 RS, 50, Marrow

OUTPUT:

* Print the total number of product in the list.
* Add a new product (Potato,10RS, 50, Root). And print the list of all products and a total number of products(integer).
* Print all the products of which have the type **Leafy green.**
* As all the garlic are sold out, Remove Garlic from the list and print the total number of products which are left on the list.
* If user add 50 cabbages in the inventory, print the final quantity of cabbage in the inventory.
* If user purchases 1kg lettuce, 2 kg zucchini, 1 kg broccoli the what is the round figure that user need to pay?

 Assignment:4

English Dictionary Operation

1. Input: Create an array of 5 words. **Boat, house, cat, river, cupboard**
2. Output:
   * Print the plurals of all words.
   * Replace the 2nd word, with its synonym and print.
   * **Add a new word to the array list and print the length of the list.**
   * **Print the list of words which contains the length of characters as 7.**
   * **Print the word on 3rd position.**
   * **Print all the words in ascending order.**
   * **Print the reverse of an array.**

Assignment:5

Prime minister Dictionary

1. Input: List down prime minister of Make a dictionary with year and details of prime minister
   * Atal Bihari Vajpayee, 1998
   * Narendra Modi, 2014
   * Manmohan Singh, 2004
2. Output:
   * Find the Prime minister of 2004.
   * Add current prime minister in the dictionary.
   * Sort the dictionary by year.