



Assignment

Submitted By:

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BS (SE) Section: A

Submitted To:

Sir Ayub

Dated: 4/24/2020

**Department of Computer Science,
IQRA National University, Peshawar Pakistan**

Department of Computer Science
Semester Assignment Spring 2020

Subject: Object Oriented Programming

Time: 48hrs (9:00 am Monday (20th April) to 9:00 am Wednesday (22nd April))

BS (CS,SE)

Instructor: M.Ayub Khan

There are total **3** questions in this paper.

Max Marks: 30

Note:

At the top of the answer sheet there must be the ID, Name and semester of the concerned Student.

Students must have to provide the output of their respective programs. Students have same answers or programs will be considered fail. Programs in Python or codes should be explained clearly.

As this paper is online so incase of any ambiguity my Whatsapp no. is 034499121116.

**Each question carry equal marks.
Please answer briefly.**

- Q1. What is Class and role of object in a Class, explain in detail with the help of a suitable program ?
- Q2. Write a program about table printing which takes input from the user on the basis of OOP and explain in detail.
- Q3. Write a program about any 2 cars which can calculate the performance of both of them and explain in detail.

Question No:1

Object: Object is an abstract data type which is created by a developer. It can include multiple methods and it also contain other objects. Objects can also be defined as classes. It also provides a structured approach to programming, by defining a data set as accustom object.

Class: Class is Collection of objects. It is a logical entity and it can be defined as a blueprint in which we can create an individual object. Class doesn't consume any space.

Program:

```
public class MyClass {  
    int x= 5;  
  
    public static void main(String[] args) {  
        MyClass myObj = new MyClass();  
        System.out.println(myObj.x);  
    }  
}
```

Question No: 2

```
import java.util.Scanner;
public class Table_Printing
{
    public static void main(String[] args)
    {
        try (Scanner s = new Scanner(System.in)) {
            System.out.print("Enter any number:");
            int n=s.nextInt();
            for(int i=1; i <= 10; i++)
            {
                System.out.println(n+" * "+i+" = "+n*i);
            }
        }
    }
}
```

OUTPUT:

Enter any number:9

```
9 * 1 = 9
9 * 2 = 18
9 * 3 = 27
9 * 4 = 36
9 * 5 = 45
```

9 * 6 = 54
9 * 7 = 63
9 * 8 = 72
9 * 9 = 81
9 * 10 = 90

Question No: 3

```
public class vehicle
{
    public static void main(String[] args) {
        car lamborghini = new car();
        car mercedes = new car();
        lamborghini.car = "Aventador";
        lamborghini.tyre = 4;
        lamborghini.doors = 2;
        lamborghini.engine = 1;
        lamborghini.fuelcapacity = 85;
        lamborghini.fuelconsumption = 16.9;

        mercedes.car = "AMG";
        mercedes.tyre = 4;
        mercedes.doors = 2;
        mercedes.engine = 1;
        mercedes.fuelcapacity = 65;
        mercedes.fuelconsumption = 12.2;
        System.out.println("Name="+lamborghini.car);
        System.out.println("tyre =" +lamborghini.tyre);
        System.out.println("doors =" +lamborghini.doors);
        System.out.println("engine =" +lamborghini.engine);
        System.out.println("fuelcapacity
        =" +lamborghini.fuelcapacity);
        System.out.println("fuelconsumption
        =" +lamborghini.fuelconsumption);
    }
}
```

```

        System.out.println ("Name =" +mercedes.car);
        System.out.println ("tyre =" + mercedes.tyre);
        System.out.println ("doors =" +mercedes.doors);
        System.out.println ("engine =" +mercedes.engine);
        System.out.println ("fuelcapacity
        =" +Mercedes.fuelcapacity);
        System.out.println ("fuelconsumption
        =" +Mercedes.fuelconsumption);

        System.out.println ("Performance of lamborghini");
        lamborghini.Performance ();
        System.out.println ("Performance of Mercedes");
        mercedes. performance();
    }
}
class car
{
    String car;
    int tyre;
    int doors;
    double engine;
    double fuelcapacity;
    double fuelconsumption;
    void Performance()
    {
        double y;
        y= fuelcapacity/fuelconsumption;
        System.out.println("Performance="+y);
    }
}

```

OUTPUT: fuelconsumption =16.9

Name =AMG

tyre =4

doors =2

engine =1.0

fuelcapacity =65.0

fuelconsumption =12.2

Performance of lamborghini

Performance=5.029585798816568

Performance of Mercedes
Performance=5.327868852459017