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<b>Subject</b>	<b>OOP</b>
<b>Assignment</b>	<b>Lab Assignment</b>
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**Submitted to:**

<b>Moderator</b>	<b>Ms, Sajida Kalsoom</b>
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## Lab Task 2

**Time is an intangible concept. Analyze the concept and identify the data members and methods that should be included in Time class.**

```
class time {  
  
    int Hours;  
    int mins;  
    int secs;  
  
    public void displayTime() {  
        System.out.println(Hours + ":" + mins + ":" + secs);  
    }  
}  
  
public class labtask2 {  
    public static void main(String[] args) {  
  
        time t1 = new time();  
        t1.Hours = 12;  
        t1.mins = 15;  
        t1.secs = 17;  
        t1.displayTime();  
    }  
}
```

```
}  
}
```

## Lab Task 3

**Car is an object that helps us in transportation. Analyze the concept and identify the data members and methods that should be included in Car class.**

```
class Cars {  
  
    String model;  
    int CC;  
    String Company;  
    String condition;  
    int milage;  
  
    public void repairTime(int mile) {  
  
        if (mile > 1000) {  
            System.out.println("Please repair your Car");  
        }  
    }  
}
```

```

    }

}

public int fairCalculation(int dis) {
    System.out.print("model of the car " + model + " having cc" + CC + " of engine has fair of ");

    if (dis <= 20) {
        return 180;

    }
    if (dis <= 60 && dis > 20) {
        return 350;

    } else {
        return 0;
    }

}

}

public class labtask3 {
    public static void main(String[] args) {

        Cars c1 = new Cars();
    }
}

```

```
c1.model = "F2016";  
c1.CC = 660;  
c1.Company = "Honda";  
  
int a = c1.fairCalculation(20);  
System.out.println(a);  
  
c1.milage = 1001;  
c1.repairTime(1001);  
  
}  
  
}
```

## Lab Task 1

**A Student is an object in a university management System. Analyze the concept and identify the data members that a Student class should have. Also analyze the behavior of student in a university management System and identify the methods that should be included in Student class.**

```
class Student {  
  
    String name;  
    String gender;
```

```

String Registration;
String age;
String currentCourse;
int currentSemester;
double cgpa;
public char grade;

public void Display() {

    System.out.println("Student Name is:\n" + name + "\nand Registration Number is\n" +
Registration
        + "\nand CGPA of the Student is " + cgpa);

}

void currentfee(String Name, int fee) {
    this.name = Name;
    if (fee == 16000) {
        System.out.println(name + "Fee has been Submitted");

    }

}

}

public class Labtask1 {

```

```
public static void main(String[] args) {  
  
    Student c1 = new Student();  
    c1.name = "Habib";  
    c1.cgpa = 3.7;  
    c1.Registration = "Fa23-BCS-114";  
    c1.currentCourse = "Computer Science";  
    c1.grade = 'A';  
    c1.Display();  
    courseResult c2 = new courseResult();  
    c2.studentName = "Ahmed";  
    c2.Registration = "Fa23-BCS-116";  
    c2.Cgpa = 3.9;  
    c2.courseName = "Maths";  
    c2.grade = 'A';  
    c2.Display();  
}  
  
}
```

## Lab Task 4

Rectangle is an object that represents a specific shape. Analyze the concept and identify the data members and methods that should be included in Rectangle class.

```
import java.util.Scanner;

// start of Class
class rectangle {
    double length;
    double width;

    double area(double len, double width) {
        double area = len * width;
        return area;
    }

    double perimeter(double len, double width) {
        double perimeter = 2 * (len + width);
        return perimeter;
    }
}

// End of Class
```



```
public class LabTask4 {  
  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);  
        rectangle r1 = new rectangle();  
        System.out.println("Enter the length of the Rectangle");  
        double length = sc.nextDouble();  
        r1.length = length;  
        System.out.println("Enter the width of the Rectangle");  
        double width = sc.nextDouble();  
        r1.width = width;  
        double ar = r1.area(length, width);  
        System.out.println(ar);  
        double peri = r1.perimeter(length, width);  
        System.out.println(peri);  
    }  
}
```