

## OOP Assignment - 1

①

```
1/ package pkg01;
class Celsius {
    public double celsius;

    Celsius(double c) {
        celsius = c;
    }

    public double display_fahrenheit() {
        return (9/5 * celsius) + 32;
    }
}

class Fahrenheit {
    private double fahrenheit;

    Fahrenheit(double fahrenheit) {
        this.fahrenheit = fahrenheit;
    }

    public double display_celsius() {
        return (fahrenheit - 32) * 5/9;
    }
}

public class Temperature {

    public static void main(String[] args) {
        Celsius c = new Celsius(20);
    }
}
```

```

② System.out.println(c.display_fahrenheit()+"°F");
    Fahrenheit f = new Fahrenheit(50);
    System.out.println(f.display_celsius()+"°C");
}
}

```

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```

2/ package pk02.car_parking;

class Carpark {
    private int carid, charge;
    private float parkedtime;

    public void setCarid(int carid) {
        this.carid = carid;
    }

    public int getCarid() {
        return carid;
    }

    public void setCharge(int charge) {
        this.charge = charge;
    }

    public int getCharge() {
        return charge;
    }
}

```



```
public void setParked_time(float parktime){ ③  
    this.parktime = parktime;  
}
```

```
public float getParked_time(){  
    return parktime;  
}
```

```
void display(){
```

```
    System.out.println(getCarid());
```

```
    System.out.println(getCharge()+"%");
```

```
    System.out.println(getParked_time());  
}
```

```
}
```

```
public class Car_parking {
```

```
    public static void main(String[] args){
```

```
        Carpark c = new Carpark();
```

```
        c.setCarid(29);
```

```
        c.setCharge(80);
```

```
        c.setParked_time(7.3f);
```

```
        c.display();  
    }
```

```
}
```

```

④ 3/ package pkg03.area_perimeter;

import java.util.Scanner;

class Circle{
    private int r;

    public void read(){
        Scanner input = new Scanner(System.in);
        System.out.print("Enter the radius: ");
        r = input.nextInt();
    }

    public double area(){
        return 3.1416 * r * r;
    }

    public double circumference(){
        return 2 * 3.1416 * r;
    }

    void display_circle(){
        System.out.println(area());
        System.out.println(circumference());
    }
}

class Rectangle{
    private int w, h;

    public void read(){
        Scanner input = new Scanner(System.in);
        System.out.print("Enter width: ");
    }
}

```



⑤

```
w = input.nextInt();  
System.out.print("Enter height:");  
h = input.nextInt();
```

```
} public double area() {  
    return w * h;  
}
```

```
public double p() {  
    return 2 * (w + h);  
}
```

```
void display_rectangle() {  
    System.out.println(area());  
    System.out.println(p());  
}
```

```
}  
class Triangle {  
    private int a, b, h;
```

```
    public void read() {  
        Scanner input = new Scanner(System.in);
```

```
        System.out.print("A is : " + a);
```

```
        a = input.nextInt();
```

```
        System.out.print("B is : " + b);
```

```
        b = input.nextInt();
```

```
        System.out.print("C is : " + h);
```

```
        h = input.nextInt();  
    }
```

⑥

```
public double area() {  
    return 0.5 * b * h;  
}  
public double perimeter() {  
    return a + b + h;  
}  
void display_triangle() {  
    System.out.println(area());  
    System.out.println(perimeter());  
}
```

```
}  
public class Area_perimeter {  
    public static void main(String[] args) {  
        Circle c = new Circle();  
        c.read();  
        c.display_circle();  
  
        Rectangle r = new Rectangle();  
        r.read();  
        r.display_rectangle();  
  
        Triangle t = new Triangle();  
        t.read();  
        t.display_triangle();  
    }  
}
```

41 package pkg04.complex;

7

```
class complex {  
    public double a;  
    public double b;
```

```
    complex (double a, double b) {
```

```
        this.a = a;
```

```
        this.b = b;
```

```
    }
```

```
    complex add (complex c) {
```

```
        return new complex(a+c.a, b+c.b);
```

```
    }  
    complex sub (complex c) {
```

```
        return new complex(a-c.a, b-c.b);
```

```
    }  
    complex mult (complex c) {
```

```
        double x = a*c.b - b*c.a;
```

```
        double y = a*c.a + b*c.b;
```

```
        return new complex(x, y);
```

```
    }  
    void display () {
```

```
        System.out.println(a + " + " + b);
```

```
    }
```

```
}
```

```
public class complexdisplay {
```

```
    public static void main (String[] args) {
```

```
        complex c1 = new complex (7, 2);
```

```
        complex c2 = new complex (4, 5);
```



```

⑧
Complex sum = c1.add(c2);
Complex diff = c1.sub(c2);
Complex mul = c1.mult(c2);

sum.display();
diff.display();
mul.display();
}
}

```

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```

package pkg05.override;

class Animal {
    public void sound() {
        System.out.println("Animal Sound");
    }
}

class Dog extends Animal {
    @Override
    public void sound() {
        System.out.println("Dog Sound: bow bow");
    }
}

public class Overriden {
    public static void main(String[] args) {
        Animal a = new Animal();
        a.sound();
        a = new Dog();
        a.sound();
    }
}

```