

Assignment - 2

- 1) Write a intertence program to implement an interface called Shape. Now, create three classes circle, square, triangle

```
class interface Shape {  
    double radius();  
    double length();  
    double height();  
    double base();  
}
```

```
2) class circle implement Shape {  
    private double radius;  
    public circle (double radius) {  
        this.radius = radius;  
    }
```

```
3) @ over ride  
    public double radius () {  
        return radius;  
    }
```

```
3) @ over ride  
    public double length () {  
        return 2 * Math.PI * radius;  
    }
```

3

@ override

public double base() {

return side;

}

}

class Triangle implements Shape {

private double base;

private double height;

public Triangle (double base, double height) {

this.base = base;

this.height = height;

}

@ override

public double radius() {

return no;

}

@ override

public double length() {

return height;

}

@ override

public double base() {


```
return base();
```

```
}
```

```
}
```

```
Public class main {
```

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

```
Circle circle = new Circle (5);
```

```
Square square = new Square (4);
```

```
Triangle triangle = new Triangle (3, 6);
```

```
System.out.println ("circle length" + circle.length());
```

```
System.out.println ("square length" + square.length());
```

```
System.out.println ("triangle length" + triangle.length());
```

```
}
```

```
}
```

2) Write a program to illustrate Polymorphism, create a class called Parent contain 3 methods TV(), Radio (int + button string, Play (int)); Phone (int, Phonenum, double pincode string)

```
class Parent {
```

```
void TV() {
```

```
System.out.println ("watching TV");
```

```
}
```



```
void radio (int button, String station) {
```

```
System.out.println ("Tuning to station + station +  
in button" + button);
```

```
}
```

```
void phone (int button, String phnum, double price,  
String mode) {
```

```
System.out.println ("Calling + Phn num + " + "sing phone  
Model " + Model + " (Button: " + button + ", price: "  
+ price + ")");
```

```
}
```

```
class Child extends Parent {
```

```
@Override
```

```
void TV () {
```

```
System.out.println ("child is watching TV");
```

```
}
```

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

```
Parent obj = TV ();
```

```
obj.radio (2, "Rock");
```

```
obj.phone (1, "123-456-7890", 999.99,
```

```
}
```

```
}
```