Practice – 1

```java
public class MethodOverload {
    public static void main(String[] args) {
        System.out.printf("Square of integer 7 is %d%n",square( intValue: 7));
        System.out.printf("Square of double 7.5 is %f%n",square( doubleValue: 7.5));

    }

    public static int square (int intValue){
        System.out.printf("%nCalled square with int argument : %d%n",intValue);
        return intValue*intValue;
    }
    public static double square (double doubleValue){
        System.out.printf("%nCalled square with double argument: %f%n",doubleValue);
        return doubleValue*doubleValue;
    }
}
```

Output

```
Called square with int argument : 7
Square of integer 7 is 49

Called square with double argument: 7.500000
Square of double 7.5 is 56.250000

Process finished with exit code 0
```

Practice – 2

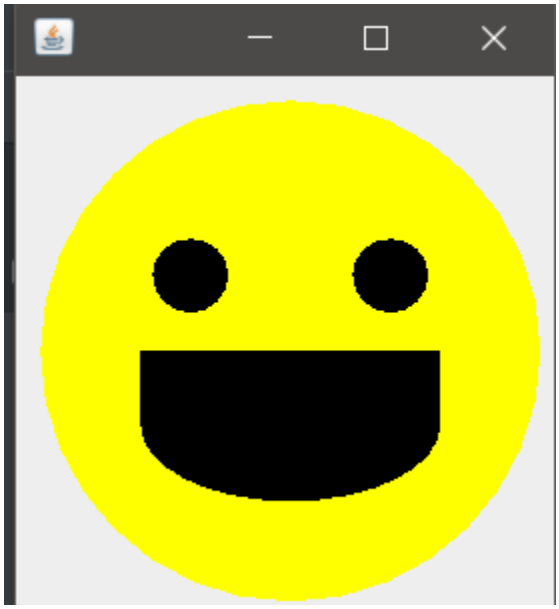
```java
import DrawSmiley.DrawSmiley;
import javax.swing.JFrame;

public class DrawSmileyTest {
    public static void main(String[] args) {
        DrawSmiley panel= new DrawSmiley();
        JFrame application = new JFrame();

        application.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        application.add(panel);
        application.setSize( width: 230, height: 250);
        application.setVisible(true);
    }

}
```

Output



Practice – 3

```java
import java.util.ArrayList;
public class ArrayListCollection {
    public static void main(String[] args){
        ArrayList<String> items = new ArrayList<String>();
        items.add("red");
        items.add( index: 0, element: "yellow ");

        System.out.print("Display list contents with counter-controlled loop: ");
        for(int i = 0; i< items.size();i++)
            System.out.printf("%s", items.get(i));

        display(items, header: "%nDisplay list contents with enhanced for statement: ");
        items.add(" green ");
        items.add("yellow");
        display(items,  header: "List with two new elements: ");

        items.remove( o: "yellow");
        display(items, header: "remove first instance of yellow: ");

        items.remove( index: 1);
        display(items, header: "remove second list element green: ");

        System.out.printf("\"red\"is %s in the list%n",items.contains("red")?"":"not");

        System.out.printf("Size:%s%n",items.size());
    }
```

```java
    public static void display(ArrayList<String> items, String header){
        System.out.printf(header);
        for(String item: items)
            System.out.printf("%s",item);
        System.out.println();
    }
}
```

Output

```
Display list contents with counter-controlled loop: yellow red
Display list contents with enhanced for statement: yellow red
List with two new elements: yellow red green yellow
remove first instance of yellow: yellow red green
remove second list element green: yellow  green
"red"is not in the list
Size:2

Process finished with exit code 0
```

Practice – 5

```
    public static void main(String[] args) {
        new Faculty();
    }
    public Faculty(){
        System.out.println("(4) performs Faculty's tasks");

    }
}
class Employee extends Person{
    public Employee(){
        this( s: "(2) Invoke Employee's overloaded constructor");
        System.out.println("(3) Performs Employee's tasks ");
    }
    public Employee(String s){
        System.out.println(s);
    }
}
class Person{
    public Person(){
        System.out.println("(1) Performs Person's tasks");
    }
}
```

Output

```
(1) Performs Person's tasks
(2) Invoke Employee's overloaded constructor
(3) Performs Employee's tasks
(4) performs Faculty's tasks

Process finished with exit code 0
```

Practice – 6

```
public class Test {

    public static void main(String[] args) {
        A a= new A();
        a.p( i: 10);
        a.p( i: 10.0);

    }
}
class B
{
    public void p(double i){
        System.out.println(i*2);
    }
}
class A extends B{

    public void p(int i) {
        System.out.println(i);
    }
}
```

Output

```
10
20.0

Process finished with exit code 0
```