

King Saud University
College of Computer & Information Science
CSC111 – Lab4 Solution

Exercise 1 Solution:

Add new class in Eclipse called **Calculator**

```
public class Calculator
{
    public int num1;
    public int num2;
    public int sum;
    public int diff;
    public int prod;
    public float quo;
}
```

Save the class file and make sure the class file name is **Calculator.java**

Now, add a new class to test your Calculator class. From Eclipse add new class called **Test_Calc**

```
import java.util.Scanner;

public class Test_Calc
{
    public static void main(String[] args)
    {
        //Creating the scanner to get input from the user
        Scanner s;
        s = new Scanner(System.in);

        //Creating one object of Calculator Class
        Calculator obj;
        obj = new Calculator();

        //read two integer numbers from the user using s
        // s is an object of Class Scanner
        System.out.println("Enter two integers:");
        obj.num1 = s.nextInt();
        obj.num2 = s.nextInt();

        //Now is the calculation
        obj.sum = obj.num1 + obj.num2;
        obj.diff = obj.num1 - obj.num2;
    }
}
```

```
obj.prod = obj.num1 * obj.num2;
obj.quo = obj.num1 / obj.num2;

//Now displaying the output
System.out.println("The sum = " + obj.sum);
System.out.println("The difference = " + obj.diff);
System.out.println("The product = " + obj.prod);
System.out.println("The quotient = " + obj.quo);
    }
}
```

Save the class file and make sure the class file name is **Test_Calc.java**

Exercise 2 Solution:

Add new class in Eclipse called **Distance**

```
public class Distance
{
    public float km;
    public float m;
    public float cm;
}
```

Save the class file and make sure the class file name is **Distance.java**

Now, add a new class to test your Distance class. From Eclipse add new class called **Test_Dist**

```
import java.util.Scanner;

public class Test_Dist
{
    public static void main(String[] args)
    {
        //Creating the scanner to get input from the user
        Scanner s;
        s = new Scanner(System.in);

        //Creating three objects of Distance Class
        Distance dist1, dist2, dist3;
        dist1 = new Distance();
        dist2 = new Distance();
        dist3 = new Distance();

        // read three float numbers
        // representing three values in meter from the user using s
        // s is an object of Class Scanner
        System.out.println("Enter three distances in meter: ");
        dist1.m = s.nextFloat();
        dist2.m = s.nextFloat();
        dist3.m = s.nextFloat();

        //Now is the calculation
        //converting the meter attribute in object dist1
        //to km and cm attributes in the same object dist1
        dist1.km = dist1.m / 1000;
        dist1.cm = dist1.m * 100;

        //converting the meter attribute in object dist2
        //to km and cm attributes in the same object dist2
        dist2.km = dist2.m / 1000;
        dist2.cm = dist2.m * 100;
    }
}
```

```

        //converting the meter attribute in object dist3
        //to km and cm attributes in the same object dist3
        dist3.km = dist3.m / 1000;
        dist3.cm = dist3.m * 100;

        //Now displaying the km, cm and m attributes
        //of each object
        System.out.println("Distance 1 in meters = " + dist1.m);
        System.out.println("Distance 1 in kilometers = " +
dist1.km);
        System.out.println("Distance 1 in centimeters = " +
dist1.cm);

        System.out.println("Distance 2 in meters = " + dist2.m);
        System.out.println("Distance 2 in kilometers = " +
dist2.km);
        System.out.println("Distance 2 in centimeters = " +
dist2.cm);

        System.out.println("Distance 3 in meters = " + dist3.m);
        System.out.println("Distance 3 in kilometers = " +
dist3.km);
        System.out.println("Distance 3 in centimeters = " +
dist3.cm);

        //Calculating the total distances in meter
        float total = dist1.m + dist2.m + dist3.m;

        //Displaying the total
        System.out.println("The total distance = " + total + "
meters");
    }
}

```

Save the class file and make sure the class file name is **Test_Calc.java**