

King Saud University  
College of Computer and Information Systems, Department of Computer Science  
CSC 111: Java Programming-I, Semester I - 2014  
Java – Switch Statement - Lab

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[Exercise 1]

Write a java program that prints the following menu:

- 1- Print my Name.
- 2- Print my Student ID.
- 3- Print my Department name.

Then, reads an integer, which represent the user's choice from the menu. Finally, prints the answer to the user. Make sure that you print an appropriate error message if the user typed anything other than 1, 2 or 3.

Example:

Choose from the menu:-

- 1- Print my Name.
- 2- Print my Student ID.
- 3- Print my Department name.

=====

Answer: 2

My Student ID is 4330000000

[Answer 1]

```
import java.util.Scanner;
public class Menu_1 {

    public static void main(String[] args) {
        Scanner in = new Scanner(System.in);
        System.out.println("Choose from the menu:-");
        System.out.println("1- Print my Name.");
        System.out.println("2- Print my Student ID.");
        System.out.println("3- Print my Department name.");
        System.out.println("=====");
        System.out.print("Answer: ");

        switch (in.nextInt()){
            case 1: System.out.println("My Name is Marwan.");break;
            case 2: System.out.println("My Student ID is 4330000000");break;
            case 3: System.out.println("My Department name is Computer
Science.");break;
            default: System.out.println("ERROR: bad input.");break;
        }
    }
}
```

## [Exercise 2]

Write a java program that reads the width and length of a rectangle in kilometers. The program should use the Rectangle class.

After that, the program should print the following menu:

- 1- Rectangle's Area in Square kilometer
- 2- Rectangle's Perimeter in kilometer
- 3- Rectangle's Area in Square Miles
- 4- Rectangle's Perimeter in Miles

Read the user's choice, and print the results.

### Example:

Enter the Rectangle's width in kilometer:

10

Enter the Rectangle's length in kilometer:

20

Choose from the menu:-

- 1- Rectangle's Area in Square kilometer
- 2- 2- Rectangle's Perimeter in kilometer
- 3- 3- Rectangle's Area in Square Miles
- 4- 4- Rectangle's Perimeter in Miles

=====

Answer: 3

Rectangle Area in Square Miles = 77.2203839282

Rectangle
+ widthKM : double + lengthKM : double + widthM : double + lengthM : double

## [Answer 2]

```
public class Rectangle {  
    public double widthKM;  
    public double lengthKM;  
    public double widthMiles;  
    public double lengthMiles;  
}  
  
import java.util.Scanner;  
public class Menu_2 {  
  
    public static void main(String[] args) {  
        Scanner in = new Scanner(System.in);  
        Rectangle r = new Rectangle();  
    }  
}
```

```

System.out.println("Enter the Rectangle's width in kilometer: ");
r.widthKM = in.nextDouble();
System.out.println("Enter the Rectangle's length in kilometer: ");
r.lengthKM = in.nextDouble();

r.lengthMiles = r.lengthKM * 0.621371;
r.widthMiles = r.widthKM * 0.621371;

System.out.println("Choose from the menu:-");
System.out.println("1- Rectangle's Area in Square kilometer");
System.out.println("2- Rectangle's Perimeter in kilometer");
System.out.println("3- Rectangle's Area in Square Miles");
System.out.println("4- Rectangle's Perimeter in Miles");
System.out.println("=====");
System.out.print("Answer: ");

switch (in.nextInt()) {
case 1:
    double AreaInKM = r.lengthKM * r.widthKM;
    System.out.println("Rectangle Area in Square kilometer = " +
AreaInKM);
    break;
case 2:
    double PerimeterInKM = 2 * (r.lengthKM + r.widthKM);
    System.out.println("Rectangle Perimeter in kilometer = " +
PerimeterInKM);
    break;
case 3:
    double AreaInMiles = r.lengthMiles * r.widthMiles;
    System.out.println("Rectangle Area in Square Miles = " +
AreaInMiles);
    break;
case 4:
    double PerimeterInMiles = 2 * (r.lengthMiles + r.widthMiles);
    System.out.println("Rectangle Perimeter in Miles = " +
PerimeterInMiles);
    break;
default:
    System.out.println("ERROR: bad input.");
    break;
}
}
}

```