Assignment 2

Q1) Write a program to check if a given number is positive, negative, or zero.

```java
import java.util.*;
class Checknum{
        public static void main(String[] args) {
            System.out.println("Enter the Number : ");
            Scanner sc = new Scanner(System.in);
            double num = sc.nextInt();

            if (num>0) {
                System.out.println(num + " Is positive");
            }
            if (num<0) {
                    System.out.println(num + " Is Negative");
            }

            else if(num==0){
                System.out.println(num + " Is zero ");

            }

        }

}
```

```
D:\CDAC Hydrabad\JAVA\Assignment 02>java Checknum
Enter the Number :
5
5.0 Is positive

D:\CDAC Hydrabad\JAVA\Assignment 02>java Checknum
Enter the Number :
-8
-8.0 Is Negative

D:\CDAC Hydrabad\JAVA\Assignment 02>
```

Q2) 2. Write a program to determine whether a given year is a leap year or not.

```java
import java.util.*;
class LeapYear{
    public static void main(String[] args) {
        System.out.println("Enter the year");
        Scanner sc = new Scanner(System.in);
        int year = sc.nextInt();
        if (year%400==0||year%4==0 || year%100 == 0) {
            System.out.println(year + " It is a leap Year");
        }
        else {
            System.out.println( " Not a Leap Year");
        }
    }
}
```

```
D:\CDAC Hydrabad\JAVA\Assignment 02>java LeapYear
Enter the year
5055
 Not a Leap Year

D:\CDAC Hydrabad\JAVA\Assignment 02>java LeapYear
Enter the year
2016
2016 It is a leap Year

D:\CDAC Hydrabad\JAVA\Assignment 02>
```

Q3) Write a program to check if a given character is a vowel or a consonant.

```java
import java.util.*;
class Vowels{
    public static void main(String[] args) {
        System.out.println("Enter the Character To check whether it vowel or consonant.: ");
        Scanner sc = new Scanner(System.in);
        char ch = sc.next().charAt(0);
        if(ch == 'a'||ch == 'e'||ch == 'i'||ch == 'o'||ch == 'u'||ch == 'A'||ch == 'E'||ch == 'I'||ch == 'O'||ch == 'U')
        {
            System.out.println("The Given Character " +ch+ " is a Vowel");
        }
        else{
            System.out.println("The Given Character "+ch+" is  Consonant");
        }

    }
}
```

```
D:\CDAC Hydrabad\JAVA\Assignment 02>java Vowels
Enter the Character To check whether it vowel or consonant.:
l
The Given Character l is  Consonant

D:\CDAC Hydrabad\JAVA\Assignment 02>java Vowels
Enter the Character To check whether it vowel or consonant.:
a
The Given Character a is a Vowel

D:\CDAC Hydrabad\JAVA\Assignment 02>
```

Q4) Write a program to find the largest of three numbers entered by the user.

```java
import java.util.*;
class LargestNum{
    public static void main(String[] args)
    {
        System.out.println("Enter the Three Numbers to check which is greater");

        Scanner sc = new Scanner(System.in);

        System.out.println("Enter 1st Number");
        int a = sc.nextInt();

        System.out.println("Enter 2nd Number");
        int b = sc.nextInt();

        System.out.println("Enter 3rd Number");
        int c = sc.nextInt();

        int grt = (a>b) ?((a>c)?a:c):((b>c)?b:c);


        System.out.println("The grestest number among three number is " + grt);
    }
}
```

```
D:\CDAC Hydrabad\JAVA\Assignment 02>java LargestNum
Enter the Three Numbers to check which is greater
Enter 1st Number
5
Enter 2nd Number
6
Enter 3rd Number
2
The grestest number among three number is 6

D:\CDAC Hydrabad\JAVA\Assignment 02>
```

Q5) Write a program to check if a given number is even or odd.

```java
import java.util.*;
class  CheckEvenOdd{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter the Number :- ");
        int num = sc.nextInt();


        if (num % 2 == 0) {
            System.out.println("The Number is Even");
        }
        else
            System.out.println("The Number is Odd");

    }
}
```

```
D:\CDAC Hydrabad\JAVA\Assignment 02>java CheckEvenOdd
Enter the Number :- 5
The Number is Odd

D:\CDAC Hydrabad\JAVA\Assignment 02>java CheckEvenOdd
Enter the Number :- 4
The Number is Even

D:\CDAC Hydrabad\JAVA\Assignment 02>
```

Q6) Days of the Week

Task: Write a program that takes an integer input (1-7) from the user and prints the corresponding day of the week. Use a switch statement to handle the conversion

```java
import java.util.*;
class DayOfWeek{
    public static void main(String[] args) {
        System.out.println("Enter the Day");
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();
        switch(n)
        {

        case 1:
         System.out.println(n+" -> Sunday"); |
         break;
        case 2:
         System.out.println(n+" -> Monday");
         break;
        case 3:
         System.out.println(n+" -> Tuesday");
         break;
        case 4:
         System.out.println(n+" -> Wednesday");
         break;
        case 5:
         System.out.println(n+" -> Thursday");
         break;
        case 6:
         System.out.println(n+" -> Friday");
         break;
        case 7:
         System.out.println(n+" -> Saturday");
         break;
        default:
         System.out.println("Invalid Input");
         break;

        }
    }
}
```

```
D:\CDAC Hydrabad\JAVA\Assignment 02>java DayOfWeek
Enter the Day
5
5 -> Thursday

D:\CDAC Hydrabad\JAVA\Assignment 02>java DayOfWeek
Enter the Day
1
1 -> Sunday

D:\CDAC Hydrabad\JAVA\Assignment 02>
```

Q7) Simple calculator using switch statement

File   Edit   Selection   Find   View   Goto   Tools   Project   Preferences   Help

Checknum.java   ✕   LeapYear.java   ✕   Vowels.java   ✕   Largest

```java
import java.util.*;
class Calcuator{
    public static void main(String[] args){
        int n;
        double res;
    do
    {
        System.out.println("Simple Calculator ");

        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the First Number");
        Double a = sc.nextDouble();
        System.out.println("Enter the First Number");
        Double b = sc.nextDouble();

        System.out.println("Choose operation: ");
            System.out.println("1. Addition");
            System.out.println("2. Subtraction");
            System.out.println("3. Multiplication");
            System.out.println("4. Division");
            System.out.println("5. Exit");
        n = sc.nextInt();

        switch(n)
        {
        case 1 :
            System.out.println("Adition");
            res = a + b;
            System.out.println("Result is "+ res);
            break;
        case 2 :
            System.out.println("Subtract");
            res = a - b;
            System.out.println("Result is "+ res);
            break;
        case 3 :
            System.out.println("Multiplication");
            res  = a * b;
            System.out.println("Result is "+ res);
            break;
        case 4 :
            System.out.println("Divison");
            if(b==0){
                System.out.println("Invalid input");
            }
            else{
            res = a / b;
            System.out.println("Result is " + res);
            break;}
        case 5 :System.out.println("Exit");
            break;
        default :
            System.out.println("Invalid Input");
        }
    }
    while(n != 5);
    }
}
```

```
Simple Calculator
Enter the First Number
2
Enter the First Number
3
Choose operation:
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Exit
1
Adition
Result is 5.0
Simple Calculator
Enter the First Number
55
Enter the First Number
66
Choose operation:
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Exit
3
Multiplication
Result is 3630.0
Simple Calculator
Enter the First Number
```

Q8) Traffic light system (R, Y, G → Stop, Wait, Go) using switch statement.

File   Edit   Selection   Find   View   Goto   Tools   Project   Preferences   Help

Checknum.java   ×   LeapYear.java   ×   Vowels.java   ×   LargestNum.java   ●   CheckEvenOdd.java   ×   D

```java
import java.util.Scanner;

class TrafficSignal {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        System.out.print("Enter traffic light (R/Y/G): ");
        char ch = sc.next().charAt(0);

        switch (ch) {
            case 'R':
            case 'r':
                System.out.println("Stop");
                break;

            case 'Y':
            case 'y':
                System.out.println("Wait");
                break;

            case 'G':
            case 'g':
                System.out.println("Go");
                break;

            default:
                System.out.println("Please enter From R, Y, or G.");
        }

        sc.close();
    }
}
```
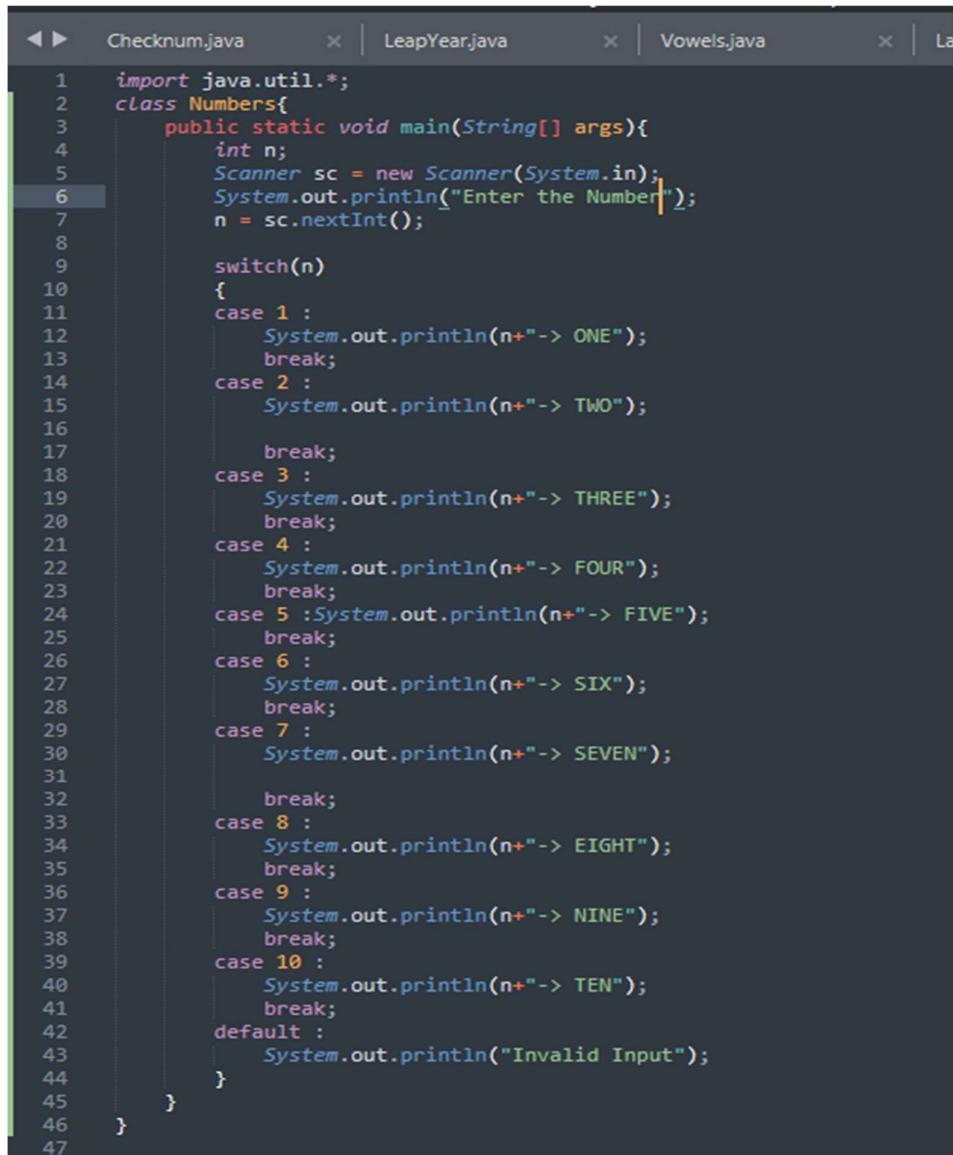
```
D:\CDAC Hydrabad\JAVA\Assignment 02>java TrafficSignal.java
Enter traffic light (R/Y/G): g
Go

D:\CDAC Hydrabad\JAVA\Assignment 02>java TrafficSignal.java
Enter traffic light (R/Y/G): r
Stop

D:\CDAC Hydrabad\JAVA\Assignment 02>java TrafficSignal.java
Enter traffic light (R/Y/G): y
Wait
```

Q9) Number to Word Conversion using switch statement.

```java
import java.util.*;
class Numbers{
    public static void main(String[] args){
        int n;
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the Number");
        n = sc.nextInt();

        switch(n)
        {
        case 1 :
            System.out.println(n+"-> ONE");
            break;
        case 2 :
            System.out.println(n+"-> TWO");

            break;
        case 3 :
            System.out.println(n+"-> THREE");
            break;
        case 4 :
            System.out.println(n+"-> FOUR");
            break;
        case 5 :System.out.println(n+"-> FIVE");
            break;
        case 6 :
            System.out.println(n+"-> SIX");
            break;
        case 7 :
            System.out.println(n+"-> SEVEN");

            break;
        case 8 :
            System.out.println(n+"-> EIGHT");
            break;
        case 9 :
            System.out.println(n+"-> NINE");
            break;
        case 10 :
            System.out.println(n+"-> TEN");
            break;
        default :
            System.out.println("Invalid Input");
        }
    }
}
```

```
D:\CDAC Hydrabad\JAVA\Assignment 02>java Numbers
Enter the Number
7
7-> SEVEN

D:\CDAC Hydrabad\JAVA\Assignment 02>java Numbers
Enter the Number
9
9-> NINE
```

Q10) Print the number of days in a month (1–12) using switch statement

```java
import java.util.*;
class Months{
    public static void main(String[] args) {
        System.out.println("Enter the Month");
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();
        switch(n)
        {

            case 1:
             System.out.println(n+" -> January");
             break;
            case 2:
             System.out.println(n+" -> February");
             break;
            case 3:
             System.out.println(n+" -> March");
             break;
            case 4:
             System.out.println(n+" -> April");
             break;
            case 5:
             System.out.println(n+" -> May");
             break;
            case 6:
             System.out.println(n+" -> June");
             break;
            case 7:
             System.out.println(n+" -> July");
             break;
            case 8:
             System.out.println(n+" -> August");
             break;
            case 9:
             System.out.println(n+" -> September");
             break;
            case 10:
             System.out.println(n+" -> Octumber");
             break;
              case 11:
             System.out.println(n+" -> November");
             break;
            case 12:
             System.out.println(n+" -> December");
             break;
            default:
             System.out.println("Invalid Input");
             break;

        }
    }
}
```

```
D:\CDAC Hydrabad\JAVA\Assignment 02>java Months
Enter the Month
5
5 -> May

D:\CDAC Hydrabad\JAVA\Assignment 02>java Months
Enter the Month
9
9 -> September

D:\CDAC Hydrabad\JAVA\Assignment 02>
```