# GUESSING NUMBER

```
import java.util.Scanner;
import java.util.Random;
 public class guessing{
    public static void main (String[]args){
        Scanner sc = new Scanner(System.in);
        Random random = new Random();

        int randomNumber = random.nextInt(100)+1;
        int userGuess;
        int attempts = 0;
        System.out.println("Guess a number between the 1 to 100 ");
        while(true){
            System.out.println("Enter your guess");
            userGuess = sc.nextInt();
            attempt;
            if(userGuess > randomNumber){
                System.out.println("Entered number is too high ! Try
again");
             }
             else if(userGuess <  randomNumber){
                System.out.println("Entered number is too low! Try
again");

             } else {
                System.out.println("Congratulations! You guessed the
correct number");
                break;
            }

        }

    }
 }
```

**OUTPUT :-** PS C:\Users\Teju\Desktop\Java> javac guessing.javaPS C:\Users\Teju\Desktop\Java> java guessing.java
Guess a number between the 1 to 100
Enter your guess
8
Entered number is too low! Try again
Enter your guess
10
Entered number is too low! Try again
Enter your guess
50
Entered number is too low! Try again
Enter your guess
90
Entered number is too high ! Try again
Enter your guess
70
Entered number is too low! Try again
Enter your guess
80
Entered number is too high ! Try again
Enter your guess
75
Entered number is too high ! Try again
Enter your guess
74
Entered number is too high ! Try again
Enter your guess
72
Entered number is too high ! Try again

Enter your guess
70
Entered number is too low! Try again
Enter your guess
71
Congratulations! You guessed the correct number
PS C:\Users\Teju\Desktop\Java>

# BASIC CALCULATOR

```
public class basiccalcu{
    public static void main(String[]args){
        int num1;
        int num2;
        int res;
        char operator;
        Scanner obj = new Scanner(System.in);
        System.out.println("Enter Two Numbers:");
        num1 = obj.nextInt();
        num2 = obj.nextInt();
        System.out.println("Enter an operator(+,-,*,/)");
        operator = obj.next().charAt(0);
        switch(operator){
            case'+':res = num1+ num2;
            break;
            case'-':res = num1- num2;
            break;
            case'*':res = num1 * num2;
            break;
            case'/':res = num1 / num2;
            break;
        default:
        System.out.printf("invalid operator");
        return;


        }
```

```
        System.out.println(num1 + " " + operator + " " + num2 + " = " +
res);


    }
}
```

**OUTPUT :-** PS C:\Users\Teju\Desktop\Java> javac guessing.java
PS C:\Users\Teju\Desktop\Java> java guessing.java
Guess a number between the 1 to 100
Enter your guess
90
Entered number is too high ! Try again
Enter your guess
60
Entered number is too low! Try again
Enter your guess
70
Entered number is too high ! Try again
Enter your guess
65
Entered number is too low! Try again
Enter your guess
66
Entered number is too low! Try again
Enter your guess

67
Entered number is too low! Try again
Enter your guess
68
Congratulations! You guessed the correct number
PS C:\Users\Teju\Desktop\Java>

## SECOND LARGEST NUMBER

```
import java.util.Scanner
```

```
public class secondlargest {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);


        System.out.print("Enter the size of the array: ");
        int n = scanner.nextInt();


        if (n < 2) {
            System.out.println("Array must have at least two elements.");
            return;
        }


        int[] arr = new int[n];
        System.out.println("Enter " + n + " elements:");
        for (int i = 0; i < n; i++) {
            arr[i] = scanner.nextInt();
        }
```

```
        int firstLargest = Integer.MIN_VALUE, secondLargest =
Integer.MIN_VALUE;

        for (int num : arr) {
            if (num > firstLargest) {
                secondLargest = firstLargest;
                firstLargest = num;
            } else if (num > secondLargest && num != firstLargest) {
                secondLargest = num;
            }
        }


        if (secondLargest == Integer.MIN_VALUE) {
            System.out.println("No second largest element found (all
elements may be the same).");
        } else {
            System.out.println("The second largest element is: " +
secondLargest);
        }
    }
}
```

# OUTPUT :-

PS C:\Users\Teju\Desktop\Java> javac secondlargest.java
PS C:\Users\Teju\Desktop\Java> java secondlargest.java
Enter the size of the array: 5
Enter 5 elements:
1 3 5 2 9
The second largest element is: 5

# ANAGRAMS

```
import java.util.Arrays;
import java.util.Scanner;
public class anagram{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the first string:");
        String str1 = sc.nextLine();
        System.out.println("Enter the Second String:");
        String str2 = sc.nextLine();

         if(charsame(str1, str2)){
            System.out.println("Both Strings contains same chars!");
         }
        else
            {
                System.out.println("String doesn't contain the same chars
");
            }
         }
         public static boolean charsame(String str1, String str2) {

            if (str1.length() != str2.length()) {
                return false;
            }


            char[] arr1 = str1.toCharArray();
            char[] arr2 = str2.toCharArray();

            Arrays.sort(arr1);
            Arrays.sort(arr2);


            return Arrays.equals(arr1, arr2);
        }
    }
```

**OUTPUT :-**

```
PS C:\Users\Teju\Desktop\Java> javac anagram.java
PS C:\Users\Teju\Desktop\Java> java anagram.java
Enter the first string:
listen
Enter the Second String:
silent
Both Strings contains same chars!
```