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COURSE CODE: CSA 0993
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```java
1.) Import java.util.Scanner;

Class Helloworld {
    Public Static Void main(String[] args) {
        Scanner input = new
            Scanner(System.in);
    int mat1[][] = {{1,2}, {5,3}};
    int mat2[][] = {{2,3}, {4,1}};
    int mat_sum[][] = new int[2][2]
    int len = mat1.length
    For (int i = 0; i < len; i++) {
        for (int j = 0; j < len; j++) {

    mat_sum[i][j] = mat1[i][j] +
                    mat2[i][j];

    System.out.print(mat_sum[i][j] +
                                "\t");
    }

    system.out.println();
    }
}
```

```java
Import java.util.Scanner;
public class specialCharacterCounter {
    public static void main (string[] args) {
        Scanner input = new Scanner(system.in);
        System.out.println("Enter a line of text:");
        Strings S = input.nextln();
        int SP = 0;

        System.out.print("Special Characters:");
        For (char ch: S.toChar Array()) {
            if (!character.is Letter or Digit(ch)) {
                Sp++;
                system.out.print(ch);
            }
        }
        system.out.println("\n Number of special
                            Characters:" + SP);
    }
}
```

10)

```java
Import java.Util. Scanner;
Public Class Factorial {
Public Static Void main (String [] args) {

    Scanner input = new Scanner (system.in)

    int  n = input . nextln ();
    int  Fact = 1;

    for (int i = 1; i <= n; Fact * = i++);

    System.out. println (n + " Factorial = "
                              + Fact );

}
}
```

```
Import java.util.*;
Public Class Staticis {
    public Static Void main (String [] args)
        Scan
        int [] a = {16, 18, 27, 16, 23, 2?
                     , 19 };

        Array.Sort (a)
        double median = (a.length      .orElse(0)
                         Array.stream(a).average()
        System.out.println ("Mean : " + Me);
        double median = (a.length % 2 == 0) ?
                         (a [a.length /2 - 1] + a
                              [a.length /2]) /
                          2.0 : a [a.length /2]
        System.out.println ("Median: " + Median);
        Map < integer, integer > Countmap = new
                                            HashMap <> (

        int mode = a[0];
        For (int num: a) {
            int Count = Count Map.merge (num, 1, integer
                                                  :: sum
            if (Count > CountMap.getOrDefault (mode, 0))
                                        mode = num;
        }
        system.out.println ("Mode: " + Mode);
    }
}
```

```java
Import    java.util.Scanner;
Public  Class   Stuff {
    Public  Static  Void  main (String[]
                                  args) {

    int  n  =  new Scanner(System.in)

    For (int i = n; i >= 1; i--) {
        System. out.println (" ". repeat(n-i))
        System. Out. Println ("*". repeat(i));
    }
}
}
```

5.)

```java
Import java.util.Scanner;
public Class Pattern {
    public Static void main (String [] args) {

        Scanner input = new Scanner(system.in);
        System.out.print (" Enter the number: ");
        int x = input.nextln();

        System.out.print ("Max No. of times
                                printed :  ");
        int n = input.nextln();

        For (int i=1; i<= 2 * n-1; i++) {
            int Count = i <= n ? i: 2 * n-i;
            System.out.print ln (String.Value of (x).
                                repeat (count));
        }
            input.close();
        }
    }
```

4:)

```java
public
Class Matrix {
    public static void main (String [] args) {
        int [][] mat1 = {{1, 2}, {5, 3}};
        int [][] mat2 = {{2, 3}, {4, 1}};
        int [][] result = new int [2][2];

        For (int i = 0; i < 2; i++) {
            For (int j = 0; j < 2; i++) {
                result [i][j] += mat1[i][k] *
                                    mat[j][k];
            }
        }

        System.out.println ("Mat Sum: ");

        For (int i = 0; i < 2; i++) {
            For (int j = 0; j < 2; j++) {
                System.out.print (result [i][j] +
                                    "  ");
            }
            System.out.println ();
        }
    }
}
```

3.)

```java
Import java.util.Scanner;
Import java.util.SortNames;
Import java.util.Array;

Public Class SortNames {
    public static Void main (String[] args)

        Scanner input = new Scanner (system.in)

        String[] arr = { "Banana", "Apple",
                         "Carrot", "Radish", "Jack"}

        System.out.print ("order (A/D): ");

        Char order = input.next ().charAt (0);

        Arrays.Sort(arr, (a,b) -> order == 'A' ? a.Compare
                           To (b) : CompareTo (a) );

        Arrays.Stream (arr).ForEach (system.out::println

        input.Close ();
    }
}
```

```java
2.)  Import java.util.Scanner;
     Public Class  Stuff {
       Public Static Void main(Strings[] args)
                                                  {
           Scanner. iput = new  Scanner(system.in);
           System.out. Print ("Enter the symbol: ")

           char Symbol  = input.next(). CharAt(0);

           System.out. Print("Enter rows & Columns: ")

           int rows  = input.nextInt(), Cols =
                                              input.next()

           For (int i=0; i< rows; i++) {
              For (int j=0;  j< Cols; J++) {
                 System.out. Print (symbol + " ");
              }

              system.out. println(),

           }
       }
     }
```