Basic Programs

Q.No:1

Write a Program that accepts two Strings as command line arguments and generate the output in the required format.

Program:

```
public class string{
        public static void main(String[]args){
            if (args.length==2) {
                String company=args[0];
                String city=args[1];
                System.out.println(company+" Technologies "+city);
            }
        }
    }
```

Q.No:2

Write a Program to accept a String as a command line argument and print a Welcome message as given below.

Program:

```
public class welcome{
    public static void main(String[] args){
        if (args.length==1) {
```

```
            String name=args[0];
            System.out.println("Welcome "+name);
        }
    }
}
```

Q.No:3

Write a Program to accept two integers as command line arguments and print the sum of the two numbers.

Program:

```
public class sum{
    public static void main(String[] args){
        int a =Integer.parseInt(args[0]);
        int b =Integer.parseInt(args[1]);
        int sum = a+b;
        System.out.println("The sum of " +a+ " and " +b+ " is "+sum);
    }
}
```

If Statement

Q.No:1

Write a program to check if a given integer number is Positive, Negative, or Zero.

Program:

```
public class PositiveNegativeZero {
	public static void main(String[] args) {
	Scanner scanner=new Scanner(System.in);
	int a=scanner.nextInt();
	if(a>0) {
		System.out.println("Positive Number");
	}
	else if(a<0) {
		System.out.println("Negative Number");
	}
	else {
		System.out.println("Zero");
	}
	}
}
```

Q.No:2

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

Program:

```
public class OddEven {
	public static void main(String[] args) {
```

```
        Scanner scanner=new Scanner(System.in);
        int a=scanner.nextInt();
        if(a%2==0) {
            System.out.println("Even Number");
        }
        else {
            System.out.println("Odd Number");
        }
    }
}
```

Q.No:3

Initialize two character variables in a program and display the characters in alphabetical order.

Program:

```
public class ArrangeAlpha {
public static void main(String[] args) {
    Scanner sc=new Scanner(System.in);
    char ch1=sc.next().charAt(0);
    char ch2=sc.next().charAt(0);
    if(ch1>ch2) {
        System.out.println(ch2+","+ch1);
    }
```

```
        else {
                System.out.println(ch1+","+ch2);
        }
        }
}
```

Q.No:4

Initialize a character variable in a program and print the initialized data type.

Program:

```
public class AlphaDigitSpchar {
        public static void main(String[] args) {
                Scanner scanner=new Scanner(System.in);
                char ch=scanner.next().charAt(0);
                if((ch>='A'&&ch<='Z')||(ch>='a'&&ch<='z')) {
                        System.out.println("Alphabhet");
                }
                else if(ch>='0'&&ch<='9') {
                        System.out.println("Digit");
                }
                else {
                        System.out.println("Special Character");
                }
```

```
    }
}
```

Q.No:5

Write a program to accept gender ("Male" or "Female") and age and print the percentage of interest based on the given conditions.

Program:

```
public class GenderInterst {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        String gender = sc.next();
        int age = sc.nextInt();
        String g = gender.toLowerCase();
        if(gender.equals("female")) {
            if(age>=1&&age<=58) {
                System.out.println("Interest=8.2%");
            }
            else if(age>=59&&age<=100) {
                System.out.println("Interest=9.2%");
            }
            else {
                System.out.println("Invalid Age");
```

```
                }
            }
            else if(gender.equals("male")){
                if(age>=1&&age<=58) {
                    System.out.println("Interest=8.2%");
                }
                else if(age>=59&&age<=100) {
                    System.out.println("Interest=9.2%");
                }
                else {
                    System.out.println("Invalid Age");
                }
            }
            else {
                System.out.println("Invalid Gender");
            }
        }
}
```

Q.No:6

Initialize a character variable with an alphabet in a program.

Program:

```
public class UpperLower {
```

```
public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
       char ch = sc.next().charAt(0);
        if(ch>='a'&&ch<='z') {
                char upper=(char)(ch-32);
                System.out.println(""+upper);
        }
        else if(ch>='A'&&ch<='Z') {
                char lower=(char)(ch+32);
                System.out.println(""+lower);
        }
        else {
                System.out.println("Invalid");
        }
        }
}
```

Switch Statement

Q.No:1

Write a program to receive a color code from the user (an Alphabhet). The program should then print the color name, based on the color code given.

Program:

```
public class ColorCode {
	public static void main(String[] args) {
		Scanner sc = new Scanner(System.in);
		char code = sc.next().charAt(0);
		switch (Character.toUpperCase(code)) {
			case 'R':
				System.out.println("Red");
				break;
			case 'B':
				System.out.println("Blue");
				break;
			case 'G':
				System.out.println("Green");
				break;
			case 'O':
				System.out.println("Orange");
				break;
			case 'Y':
				System.out.println("Yellow");
				break;
			case 'W':
				System.out.println("White");
```

```
                    break;
                default:
                    System.out.println("Invalid Code");
            }
        }
}
```

Q.No:2

Write a program to receive a number and print the corresponding month name.

Program:

```
public class Month {
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int a=sc.nextInt();
        switch (a) {
            case 1:
                System.out.println("January");
                break;
            case 2:
                System.out.println("February");
                break;
            case 3:
```

```
        System.out.println("March");
        break;
case 4:
        System.out.println("April");
        break;
case 5:
        System.out.println("May");
        break;
case 6:
        System.out.println("June");
        break;
case 7:
        System.out.println("July");
        break;
case 8:
         System.out.println("August");
         break;
case 9:
        System.out.println("September");
        break;
case 10:
        System.out.println("October");
```

```
                    break;
                case 11:
                    System.out.println("November");
                    break;
                case 12:
                    System.out.println("December");
                    break;
                default:
                    System.out.println("Invalid");
            }
        }
}
```

For Loop

Q.No:1

Write a program to print numbers from 1 to 10 in a single row with one tab space.

Program:

```
public class NaturalNum {
public static void main(String[] args) {
    for(int i=1;i<=10;i++)
        System.out.print(i+"    ");
    }
```

```
}
```

Q.No:2

Write a program to print even numbers between 23 and 57. Each number should be printed in a separated row.

Program:

```
public class EvenNum23_57 {

	public static void main(String[] args) {

		for(int i=24;i<=57;i+=2)

			System.out.println(""+i);

	}

}
```

Q.No:3

Write a program to print the prime numbers between 10 and 99.

Program:

```
public class PrimeNum {

		public static void main(String[] args) {

			for(int n=10;n<=99;n++) {

				int count=0;

				for(int i=2;i<=n/2;i++) {

					if(n%i==0) {
```

```
                        count++;
                        break;
                    }
                }
                if(count==0) {
                    System.out.print(n+" ");
                }
            }
        }
    }
```

Q.No:4

Write a program to print the sum of all the digits of a given number.

Program:

```
public class SumOfDigit {
        public static void main(String[] args) {
          Scanner sc=new Scanner(System.in);;
            int a=sc.nextInt();
            int sum=0;
            while(a!=0) {
                sum = sum+(a%10);
                a=a/10;
```

```
            }
            System.out.println(""+sum);
        }
    }
```

Q.No:5

Write a program to print the Floyds Triangle.

Program:

```
public class FloydsTriangle {
        public static void main(String[] args) {
          Scanner sc=new Scanner(System.in);
            int rows=sc.nextInt();
            int a=1;
            for(int i=1;i<=rows;i++) {
                for(int j=1;j<=i;j++) {
                    System.out.print(a+ " ");
                    a++;
                }
                System.out.println();
            }
        }
    }
```

Q.No:6

Write a program to print the following pattern.

Program:

```
public class StarPattern {
	public static void main(String[] args) {
	Scanner sc=new Scanner(System.in);
		int n=sc.nextInt();
		for(int i=1;i<=n;i++) {
		   for(int j=1;j<=n-i;j++) {
				System.out.print(" ");
		   }
		   for(int k=1;k<=i;k++) {
				System.out.print("* ");
		   }
		   System.out.println();
		}
}
}
```

While Loop

Q.No:1

Write a program to reverse a given number and print.

Program:

```
public class Reverse {
public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int n=sc.nextInt();
        int r=0;
        while(n!=0) {
              int a = n%10;
            r=r*10+a;
            n=n/10;
        }
        System.out.println(""+r);
}
}
```

Q.No:2

Write a program to find if the given number is palindrome or not.

Program:

```
public class Palindrome {
            public static void main(String[] args) {
              Scanner sc=new Scanner(System.in);;
                  int num=sc.nextInt();
                  int original=num;
```

```
            int rev=0;
            while(num!=0) {
                int digit=num%10;
                rev=rev*10+digit;
                num=num/10;
            }
            if(rev==original) {
                System.out.println("Palindrome");
            } else {
                System.out.println("Not a Palindrome");
            }
        }
    }
```

Q.No:3

Write a program to print the first 5 values which are divisible by 2,3 and 5.

Program:

```
public class Valuesdivide235 {
        public static void main(String[] args) {
            int c=0;
            int n=1;
            while(c<5) {
```

```
                if(n%2==0&&n%3==0&&n%5==0) {
                        System.out.println(n);
                        c++;
                }
                n++;
            }
        }
    }
```

Arrays

Q.No:1

Write a program to initialize an integer array and print the sum and average of the array.

Program:

```
public class ArrSumAvg {
        public static void main(String[] args) {
            Scanner sc=new Scanner(System.in);
            System.out.print("Enter the number of elements: ");
            int a=sc.nextInt();
            int[]num=new int[a];
            int sum=0;
            for (int i=0;i<a;i++) {
                num[i]=sc.nextInt();
```

```
                sum+=num[i];
            }
            double avg=(double)sum/a;
            System.out.println("Sum of array elements: "+sum);
            System.out.println("Average of array elements: "+ avg);
        }
    }
```

Q.No:2

Write a program to initialize an integer array and find the maximum and minimum value of the array.

Program:

```
public class ArrMaxMin {
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        System.out.print("Enter the number of elements: ");
        int a=sc.nextInt();
        if (a>0) {
            int[]num=new int[a];
            for(int i=0;i<a;i++) {
                num[i]=sc.nextInt();
            }
            int max=num[0];
```

```
                int min=num[0];
                for(int i=1;i<a;i++) {
                        if(num[i]>max) {
                                max=num[i];
                        }
                        if(num[i]<min) {
                                min=num[i];
                        }
                }
                System.out.println("Maximum Value: "+max);
                System.out.println("Minimum Value: "+min);
        }
    }
}
```

Q.No:3

Write a program to initialize an integer array with values and check if a given number is present in the array or not.

Program:

```
public class ArrCheckNum {
        public static void main(String[] args) {
          Scanner sc=new Scanner(System.in);
            System.out.print("Enter the number of elements: ");
```

```
            int n=sc.nextInt();
            int[]arr=new int[n];
            for(int i=0;i<n;i++) {
                arr[i]=sc.nextInt();
            }
            System.out.print("Enter the number to search: ");
            int num=sc.nextInt();
            int a=-1;
            for(int i=0;i<n;i++) {
                if(arr[i]==num) {
                    a=i;
                    break;
                }
            }
            System.out.println(a);
        }
    }
```

Q.No:4

Initialize an integer array with ascii values and print the corresponding character values in a single row.

Program:

```
public class ArrAscii {
```

```
	public static void main(String[] args) {
		Scanner sc=new Scanner(System.in);
		System.out.print("Enter the number of values: ");
		int n=sc.nextInt();
		int[]a=new int[n];
		System.out.println("Enter the ASCII values:");
		for(int i=0;i<n;i++) {
			a[i]=sc.nextInt();
		}
		for(int i=0;i<n;i++) {
			System.out.print((char)a[i]);
		}
	}
}
```

Q.No:5

Write a program to find the largest 2 numbers and the smallest 2 numbers in the given array.

Program:

```
public class Arr2large2small {
	public static void main(String[] args) {
		Scanner sc=new Scanner(System.in);
		System.out.print("Enter number of elements: ");
```

```
int n=sc.nextInt();
int[]arr=new int[n];
if(n>=2) {
	for(int i=0;i<n;i++) {
		arr[i]=sc.nextInt();
	}
	int large=Integer.MIN_VALUE;
	int large2=Integer.MIN_VALUE;
	int small=Integer.MAX_VALUE;
	int small2=Integer.MAX_VALUE;
	for(int i=0;i<n;i++) {
		int num=arr[i];
		if(num>large) {
			large2=large;
			large=num;
		} else if(num>large2&&num!=large) {
			large2=num;
		}
		if(num<small) {
			small2=small;
			small=num;
		} else if(num<small2&&num!=small) {
```

```
                    small2=num;
                }
            }
            System.out.println("Largest: "+large);
            System.out.println("Second Largest: "+large2);
            System.out.println("Smallest: "+small);
            System.out.println("Second Smallest: "+small2);
        }
    }
}
```

Q.No:6

Write a program to initialize an array and print them in a sorted order.

Program:

```
public class ArrSort {
        public static void main(String[] args) {
            Scanner sc=new Scanner(System.in);
            System.out.print("Enter number of elements: ");
            int n=sc.nextInt();
            int[]arr=new int[n];
            for(int i=0;i<n;i++) {
                arr[i]=sc.nextInt();
```

```
            }
            for(int i=0;i<n-1;i++) {
                int a=i;
                for(int j=i+1;j<n;j++) {
                    if(arr[j]<arr[a]) {
                        a=j;
                    }
                }
                int t=arr[i];
                arr[i]=arr[a];
                arr[a]=t;
            }
            System.out.println("Sorted array:");
            for(int i=0;i<n;i++) {
                System.out.print(arr[i]+" ");
            }
        }
    }
```

Q.No:7

Write a program to remove the duplicate elements in an array and print the same.

Program:

```
public class ArrDuplicate {
	public static void main(String[] args) {
		Scanner sc=new Scanner(System.in);
		System.out.print("Enter number of elements: ");
		int n=sc.nextInt();
		int[]a=new int[n];
		for(int i=0;i<n;i++) {
			a[i]=sc.nextInt();
		}
		for(int i=0;i<n;i++) {
			boolean found=false;
			for(int j=0;j<i;j++) {
				if(a[i]==a[j]) {
					found=true;
					break;
				}
			}
			if(!found) {
				System.out.print(a[i] +" ");
			}
		}
	}
```

```
    }
```

Q.No:8

Write a program to print the sum of the elements of an array following the given below condition.

Program:

```
public class ArrSumCon {

    public static void main(String[] args) {

        Scanner sc=new Scanner(System.in);

        System.out.print("Enter number of elements: ");

        int n=sc.nextInt();

        int[]arr=new int[n];

        for(int i=0;i<n;i++) {

            arr[i]=sc.nextInt();

        }

        int sum=0;

        boolean skip=false;

        for(int i=0;i<n;i++) {

            if(arr[i]==6) {

                skip=true;

            } else if(arr[i]==7&&skip) {

                skip=false;

            } else if(!skip) {
```

```
                    sum=sum+arr[i];
                }
            }
            System.out.println(""+sum);
        }
}
```

Q.No:9

Write a program to reverse the elements of a given 2*2 array. Four integer numbers needs to be passed as Command Line arguments.

Program:

```
public class Arr3x3 {
        public static void main(String[] args) {
            if (args.length != 9) {
                System.out.println("Please enter 9 integer numbers");
                return;
            }
            int[][]arr=new int[3][3];
            int index=0;
            for(int i=0;i<3;i++) {
                for(int j=0;j<3;j++) {
                    arr[i][j]=Integer.parseInt(args[index]);
```

```
                index++;
            }
        }
        for(int i=0;i<3;i++) {
            for(int j=0;j<3;j++) {
                System.out.print(arr[i][j]+" ");
            }
            System.out.println();
        }
        int max=arr[0][0];
        for(int i=0;i<3;i++) {
            for(int j=0;j<3;j++) {
                if(arr[i][j]>max) {
                    max=arr[i][j];
                }
            }
        }
        System.out.println("The biggest number: "+max);
    }
}
```

Q.No:10

Write a program to find the biggest number in a 3*3 array. The

program is supposed to receive 9 integer numbers as command line arguments.

Program:

```
public class Arr3x3 {
	public static void main(String[] args) {
		if (args.length != 9) {
			System.out.println("Please enter 9 integer numbers");
			return;
		}
		int[][]arr=new int[3][3];
		int index=0;
		for(int i=0;i<3;i++) {
			for(int j=0;j<3;j++) {
				arr[i][j]=Integer.parseInt(args[index]);
				index++;
			}
		}
		for(int i=0;i<3;i++) {
			for(int j=0;j<3;j++) {
				System.out.print(arr[i][j]+" ");
			}
			System.out.println();
```

```
            }
            int max=arr[0][0];
            for(int i=0;i<3;i++) {
                for(int j=0;j<3;j++) {
                    if(arr[i][j]>max) {
                        max=arr[i][j];
                    }
                }
            }
            System.out.println("The biggest number: "+max);
        }
}
```