## 1. Write a program to take command line input and check number is odd or even.

```
import java.util.Scanner;
class prog_1{
    public static void main(String [] args){
        int no;
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter any No. : ");
        no = sc.nextInt();
        if(no%2==0)
            System.out.println("The value "+no+" is even.");
        else
            System.out.println("The value "+no+" is odd.");
    }
}
```

### Output

```
C:\Ashish\21BCA103 journal-1>java prog_1
Enter any No. : 5
The value 5 is odd.
```

## 2. Write a program to take command line input and sum of 2 number.

```
import java.util.Scanner;
class prog_2 {
    public static void main(String args[]) {
        int a, b, sum;
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter the first No. : ");
        a = sc.nextInt();
        System.out.print("Enter the second No. : ");
        b = sc.nextInt();
        sum = sum(a, b);
        System.out.println("The sum of two numbers "+a+" and "+b+" is: " +
sum);
    }
public static int sum(int a, int b) {
    int sum = a + b;
    return sum;
    }
```

```
}
```

Output

```
C:\Ashish\21BCA103 journal-1>javac prog_2.java

C:\Ashish\21BCA103 journal-1>java prog_2
Enter the first No. : 10
Enter the second No. : 5
The sum of two numbers 10 and 5 is: 15
```

## 3. Write a program to take command line input and calculate a Simple Interest.

```
import java.util.Scanner;
class prog_3 {
    public static void main (String args[]) {
        float p, r, n, si;
        Scanner s=new Scanner(System.in);
        System.out.print("Enter Value For Princip Amount :");
        p=s.nextFloat();
        System.out.print("Enter Value For Number Of Month :");
        n=s.nextFloat();
        System.out.print("Enter Value For Rate :");
        r=s.nextFloat();
        si = (p*r*n)/100;
        System.out.println("Simple Interest is : " +si);
    }
}
```

Output

```
C:\Ashish\21BCA103 journal-1>javac prog_3.java

C:\Ashish\21BCA103 journal-1>java prog_3
Enter Value For Princip Amount :6000
Enter Value For Number Of Month :3
Enter Value For Rate :2
Simple Interest is : 360.0
```

## 4. Write a Program to take command line input and Check Number is Positive or Negative.

```java
import java.util.Scanner;
class prog_4 {
    public static void main(String [] a) {
        int b;
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter any No. : ");
        b = sc.nextInt();
        if(b>0) {
            System.out.println(b+" is Positive.");
        }
        else {
            System.out.println(b+" is Nagetive.");
        }
    }
}
```

## Output

```
C:\Ashish\21BCA103 journal-1>javac prog_4.java

C:\Ashish\21BCA103 journal-1>java prog_4
Enter any No. : 10
10 is Positive.
```

## 5. Write a Program to take command line input and Check Year is Leap Year or Not.

```java
import java.util.Scanner;
class prog_5 {
    public static void main(String[] args) {
        int year;
        boolean leap = false;
        Scanner s=new Scanner(System.in);
        System.out.print("Enter any year : ");
        year=s.nextInt();
        if (year % 4 == 0) {
            if (year % 100 == 0) {
                if (year % 400 == 0)
                    leap = true;
                else
                    leap = false;
            }
            else
                leap = true;
```

```
            }
        else {
            leap = false;
            if (leap)
                System.out.println(year + " is a leap year.");
            else
                System.out.println(year + " is not a leap year.");
        }
    }
}
```

Output

```
C:\Ashish\21BCA103 journal-1>javac prog_5.java

C:\Ashish\21BCA103 journal-1>java prog_5
Enter any year : 2002
2002 is not a leap year.
```

## 6. Write a program to take command line input and find the Character Is Vowel or Not.

```
import java.util.Scanner;
class prog_6 {
    public static void main(String [] args) {
        char a;
        Scanner sc=new Scanner(System.in);
        System.out.print("Enter any Character :");
        a = sc.next().charAt(0);
        if(a == 'a' || a == 'e' || a == 'i' || a == 'o' || a == 'u' || a ==
'A' || a == 'E' || a == 'I' || a == 'O' || a == 'U' )
            System.out.println(a +" is vowel");
        else
            System.out.println(a+ " is consonant");
    }
}
```

## Output

```
C:\Ashish\21BCA103 journal-1>javac prog_6.java

C:\Ashish\21BCA103 journal-1>java prog_6
Enter any Character :A
A is vowel
```

## 7. Write a program to reverse a given number using while loop.

```
import java.util.Scanner;
class prog_7 {
    public static void main(String[] args) {
        int n , r = 0;
        System.out.print("Enter any No. to reverse : ");
        Scanner sc = new Scanner(System.in);
        n = sc.nextInt();
        while(n != 0) {
            int re = n % 10;
            r = r * 10 + re;
            n = n/10;
        }
        System.out.println("The reverse of the given number is : " + r);
    }
}
```

## Output

```
C:\Ashish\21BCA103 journal-1>javac prog_7.java

C:\Ashish\21BCA103 journal-1>java prog_7
Enter any No. to reverse : 4321
The reverse of the given number is : 1234
```

## 8. Write a program to reverse a given number using for loop.

```
import java.util.Scanner;
class prog_8 {
    public static void main(String[] args) {
        int n,i,r = 0;
        System.out.print("Enter any No. to reverse : ");
        Scanner sc = new Scanner(System.in);
```

```
        n = sc.nextInt();
        for(i=1;n!=0;i++) {
            int re = n % 10;
            r = r * 10 + re;
            n = n/10;
        }
        System.out.println("The reverse of the given number is : " + r);
    }
}
```

## Output

```
C:\Ashish\21BCA103 journal-1>javac prog_8.java

C:\Ashish\21BCA103 journal-1>java prog_8
Enter any No. to reverse : 4321
The reverse of the given number is : 1234
```

## 9. Write a program to check number is Armstrong or Not

```
import java.util.Scanner;
class prog_9 {
    public static void main(String[] args) {
        int n, no, r, rem = 0;
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter the No. : ");
        n = sc.nextInt();
        no = n;
        while (no != 0) {
            r = no % 10;
            rem += Math.pow(r, 3);
            no /= 10;
        }
        if(rem == n)
            System.out.println(n + " is an Armstrong number.");
        else
            System.out.println(n + " is not an Armstrong number.");
    }
}
```

## Output

```
C:\Ashish\21BCA103 journal-1>javac prog_9.java

C:\Ashish\21BCA103 journal-1>java prog_9
Enter the No. : 420
420 is not an Armstrong number.
```

## 10. Write a to check number is Prime number or not.

```
import java.util.Scanner;
public class prog_10 {
    public static void main(String args[]) {
        int i,n,m=0,flag=0;
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter any No. : ");
        n = sc.nextInt();
        m=n/2;
        if(n==0||n==1) {
            System.out.println(n+" is not prime number");
        }
        else {
            for(i=2;i<=m;i++) {
                if(n%i==0) {
                    System.out.println(n+" is not prime number");
                    flag=1;
                    break;
                }
            }
            if(flag==0) {
                System.out.println(n+" is prime number");
            }
        }
    }
}
```

## Output

```
C:\Ashish\21BCA103 journal-1>javac prog_10.java

C:\Ashish\21BCA103 journal-1>java prog_10
Enter any No. : 123
123 is not prime number
```

## 11. Write a program to check given string is Palindrome or not.

```
import java.util.Scanner;
class prog_11 {
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        String str, reverseStr = "";
        System.out.print("Enter any string :");
        str = sc.nextLine();
        int strLength = str.length();
        for (int i = (strLength - 1); i >=0; --i) {
            reverseStr = reverseStr + str.charAt(i);
        }
        if (str.toLowerCase().equals(reverseStr.toLowerCase())) {
            System.out.println(str + " is a Palindrome String.");
        }
        else {
            System.out.println(str + " is not a Palindrome String.");
        }
    }
}
```

## Output

```
C:\Ashish\21BCA103 journal-1>javac prog_11.java

C:\Ashish\21BCA103 journal-1>java prog_11
Enter any string :Ashish
Ashish is not a Palindrome String.
```

## 12. Write a program in java to display the pattern like right angle triangle using an asterisk.

*

```
* *
* * *
* * * *
* * * * *
```

```
import java.util.Scanner;
class prog_12 {
    public static void main(String [] args) {
        int i,a,b=0;
        Scanner sc=new Scanner(System.in);
        System.out.print("Enter any No. : ");
        a = sc.nextInt();
        for(b=1;b<=a;b++) {
            for(i=1;i<=b;i++) {
                System.out.print(" * ");
            }
            System.out.println("\n");
        }
    }
}
```

Output

```
C:\Ashish\21BCA103 journal-1>javac prog_12.java

C:\Ashish\21BCA103 journal-1>java prog_12
Enter any No. : 5
 *

 *  *

 *  *  *

 *  *  *  *

 *  *  *  *  *
```

13. Write a program in java to make such a pattern like a pyramid with numbers increased by 1.

```
   1
 2 3
```

4 5 6
7 8 9 10

```
import java.util.Scanner;
class prog_13 {
    public static void main(String [] args) {
        int i,a,b,n=1;
        Scanner sc=new Scanner(System.in);
        System.out.print("Enter any No. : ");
        a = sc.nextInt();
        for(b=1;b<=a;b++) {
            for(i=1;i<=a;i++) {
                if((b+i)<=a) {
                    System.out.print(" ");
                }
                else {
                    System.out.print(n+" ");
                    n++;
                }
            }
            System.out.println("\n");
        }
    }
}
```

## Output

```
C:\Ashish\21BCA103 journal-1>javac prog_13.java

C:\Ashish\21BCA103 journal-1>java prog_13
Enter any No. : 5
    1

   2 3

  4 5 6

 7 8 9 10

11 12 13 14 15
```

14. Write a C Program to display the pattern using the alphabet.

A B C D E
A B C D
A B C
A B
A

```
import java.util.Scanner;
class prog_14 {
    public static void main(String [] args) {
        int i,a,b=0;
        char c;
        Scanner sc=new Scanner(System.in);
        System.out.print("Enter any No. : ");
        a = sc.nextInt();
        for(b=a;b>=1;b--) {
            c='A';
            for(i=1;i<=b;i++) {
                System.out.print(c+" ");
                c++;
            }
            System.out.println("\n");
        }
    }
}
```

## Output

```
C:\Ashish\21BCA103 journal-1>javac prog_14.java

C:\Ashish\21BCA103 journal-1>java prog_14
Enter any No. : 5
A B C D E

A B C D

A B C

A B

A
```

## 15. Write a program to take command line input and print factorial of given number.

```
import java.util.Scanner;
class prog_15 {
    public static void main(String args[]) {
        int n, c, f = 1;
        System.out.print("Enter an Number to calculate its factorial 'Must
Integer': ");
        Scanner in = new Scanner(System.in);
        n = in.nextInt();
        for(c = 1; c <= n; c++)
            f = f*c;
            System.out.println("Factorial of "+n+" is = "+f);
    }
}
```

### Output

```
C:\Ashish\21BCA103 journal-1>javac prog_15.java

C:\Ashish\21BCA103 journal-1>java prog_15
Enter an Number to calculate its factorial 'Must Integer': 420
Factorial of 420 is = 0
```

## 16. Write a program to display Fibonacci series.

```
import java.util.Scanner;
public class prog_16 {
    public static void main(String[] args) {
        int n, a = 0, b = 0, c = 1;
        Scanner s = new Scanner(System.in);
        System.out.print("Enter value: ");
        n = s.nextInt();
        System.out.print("Fibonacci Series : ");
        for(int i = 1; i <= n; i++) {
            a = b;
            b = c;
            c = a + b;
            System.out.print(a+",");
        }
        System.out.print("\b.");
```

```
    }
}
```

## Output

```
C:\Ashish\21BCA103 journal-1>javac prog_16.java

C:\Ashish\21BCA103 journal-1>java prog_16
Enter value: 5
Fibonacci Series : 0,1,1,2,3.
C:\Ashish\21BCA103 journal-1>
```