**[Basic Question**

// Q1.   program to find greater between three numbers .

class GreaterNo1 {

   public static void main(String[] args) {

      int n1 = 3, n2 = 15, n3 = 8;

      if (n1 > n2) {

         if (n1 > n3) {

            System.out.println("Greatest Number is :" + n1);

         } else {

            System.out.println("Greatest Number is :" + n3);

         }

      } else if (n2 > n3) {

         System.out.println("Greatest Number is :" + n2);

      } else {

         System.out.println("Greatest Number is :" + n3);

      }

      // Second Way

      if (n1 > n2 && n1 > n3) {

         System.out.println("Greatest Number is :" + n1);

      } else if (n2 > n1 && n2 > n3) {

         System.out.println("Greatest Number is :" + n2);

      } else {

         System.out.println("Greatest Number is :" + n3);

      }

   }

}

// Q2 Program to check number is Even or Odd

public class EvenOdd {

    public static void main(String[] args) {

        int n=5;

        if(n%2==0)

        {

            System.out.println("Number is Even");

        }

        else{

            System.out.println("Number is Odd");

        }

    }

}

// Q program for leap Check Leap Year

//   There are Two Conditions :--

//    1] year is divisible by 400;

//    2] year is divisible by 4 but not divisible by 100

public class CheckLeapYear {

    public static void main(String[] args) {

        int year = 2024;

        if((year%400 == 0) || ((year%4==0) &&(year%100 !=0)))

        {

            System.out.println("Leap Year");

        }

        else{

            System.out.println("Not Leap Year");

        }

    }

}

// Q Swap two number using third variable

public class SwapTwoNo {

    public static void main(String[] args) {

        int a =10;

        int b =20;

        int c;

        c =a;

        a=b;

        b=c;

        System.out.println("a :"+a );

        System.out.println("b :"+b );

        //without using third variable

        a=a+b;

        b=a-b;

        a=a-b;

        System.out.println("a :"+a );

        System.out.println("b :"+b );

    }

}

//Q write a program for find a factorial

public class Factorial {

    public static void main(String[] args) {

        int n=5;

        int fact=1;

        for(int i=n; i>=1; i--)

        {

            fact=fact\*i;

        }

        System.out.println(fact);

    }

}

//Program for reverse a number

public class ReverseNo {

    public static void main(String[] args) {

        int no = 12345678;

        int rev = 0;

        int rem;

        while(no != 0)

        {

            rem = no%10;

            rev=rev\*10+rem;

            no=no/10;

        }

        System.out.println(rev);

    }

}

//Q program for reverse a string

public class ReverseStr {

    public static void main(String[] args) {

        String s1 = "shubham";

        String s2 = "";

        int len = s1.length();

        for(int i=len-1 ; i>=0; i--)

        {

            s2 = s2 + s1.charAt(i);

        }

        System.out.println(s2);

    }

}

// Q check number is prime or not

public class PrimeNo {

    public static void main(String[] args) {

        int no = 7;

        int count=0;

        for(int i=2 ; i<no; i++)

        {

            if(no%i==0)

            {

                System.out.println(no + " is NOT Prime");

                count++;

                break;

            }

        }

        if(count==0)

        {

          System.out.println(no + " is Prime");

        }

    }

}

// Print Prime number from 1 to 100

public class PrimeNo1to100 {

    public static void main(String[] args) {

        int no;

        int count = 0;

        for (no = 1; no <= 100; no++) {

            for (int i = 2; i < no; i++) {

                if (no % i == 0) {

                    // System.out.println(no + " is NOT Prime");

                    count++;

                    break;

                }

            }

        if (count == 0) {

            System.out.println(no + " is Prime");

        }

        count=0;

    }

    }

}

//Fibonacci series program

public class FibonacciSeries {

    public static void main(String[] args) {

        int a=0;

        int b=1;

        int c;

        for(int i=1; i<=10; i++)

        {

            c=a+b;

            System.out.println(c);

            a=b;

            b=c;

        }

    }

}

// Palindrome number

public class PalindromeNo {

    public static void main(String[] args) {

        int no = 121;

        int no1=no;

        int rev = 0;

        int rem;

        while(no1 != 0)

        {

            rem = no1%10;

            rev=rev\*10+rem;

            no1=no1/10;

        }

        if(no==rev)

        {

            System.out.println("Palindrome");

        }

        else{

            System.out.println("Not Palindrome");

        }

    }

}

// Q Find Length of a number

public class FindLengthOfNo {

    public static void main(String[] args) {

        int no = 123789;

        int length = 0;

        while(no != 0)

        {

            no=no/10;

            length=length+1;

        }

        System.out.println(length);

    }

}

Output : 6

// Q get digit from last

public class GetNoFromLast {

    public static void main(String[] args) {

        int no = 1234;

        // int rem;

        while (no != 0) {

            while (true) {

                int rem = no % 10;

                System.out.println(rem);

                break;

            }

            no = no / 10;

        }

    }

}

Output :4

3

2

1

// Find Binomial Coefficient

**public** **class** BinomialCoefficient {

**public** **int** fact(**int** no)

{

**int** fact =1;

**for**(**int** i=no; i>=1; i--)

{

fact = fact\*i;

}

**return** fact;

}

**public** **int** binCoefficient(**int** n , **int** r)

{

**int** n\_fact = fact(n);

**int** r\_fact = fact(r);

**int** n\_r\_fact = fact(n-r);

**int** binCoeff = n\_fact / (r\_fact\*n\_r\_fact);

**return** binCoeff;

}

**public** **static** **void** main(String[] args) {

// nCr = n!/r!\*(n-r)!

BinomialCoefficient b = **new** BinomialCoefficient();

System.***out***.println(b.binCoefficient(5, 2));

}

}

Program for Armstrong number

**public** **class** ArmstrongNo {

**int** countNo(**int** no1) {

**int** count1 = 0;

**while** (no1 != 0) {

**int** rem = no1 % 10;

count1++;

no1 = no1 / 10;

}

**return** count1;

}

**public** **static** **void** main(String[] args) {

ArmstrongNo a = **new** ArmstrongNo();

**int** no = 153;

**int** no1 = no;

**int** rem;

**int** sum = 0;

**int** count = a.countNo(no1);

**while** (no1 != 0) {

rem = no1 % 10;

sum = (**int**) (sum + Math.*pow*(rem, count));

no1 = no1 / 10;

}

**if** (sum == no) {

System.***out***.println("Armstrong number");

} **else** {

System.***out***.println("Not armstrong number");

}

}

}

What is Armstrong number

1 = 1^1 =1

13 = 1^2 + 3^2 = 13

153 = 1^3+5^3+3^3 = 153