

1) sum of natural no. upto n ?

Code: import java.util.Scanner;

Public class S0N {

Public static void main (String[] args) {

Scanner scanner = new Scanner (System.in);

System.out.print ("Enter a number: ");

int n = scanner.nextInt();

int sum = 0;

for (int i=1, i<=n; i++) {

sum += i;

}

System.out.println ("The sum of natural numbers up to " + n + " is: " + sum);

Scanner.close();

}

2) Given number is Prime or not?

Code: import java.util.Scanner;

Public class Prime {

Public static void main (String[] args) {

Scanner scanner = new Scanner (System.in);

System.out.print ("Enter a number: ");

int number = scanner.nextInt();

if (isPrimeNumber) {

System.out.println (number + " is Prime");

} else {

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```
System.out.println("number is not prime");
}
Scanner.close();
}

Public static boolean isPrime(int number){
    if(number<=1){
        return false;
    }
    for(int i=2; i<=Math.sqrt(number); i++){
        if(number % i == 0){
            return false;
        }
    }
    return true;
}
```

### 3) Factorial of a number:

Code:-

```
import java.util.Scanner;
Public class Factorial{
    Public static void main(String[] args){
        Scanner scanner = new Scanner(System.in);
        System.out.print("enter a number:");
        int number = scanner.nextInt();
        long factorial = 1;
        for(int i=1; i<=number; i++){
            factorial *= i;
        }
        System.out.println("factorial " + number + " is " + factorial);
        scanner.close();
    }
}
```

4) Reverse a number:

```
code: import java.util.Scanner;  
Public class Reverse{  
    Public static void main(String[] args){  
        Scanner scanner = new Scanner(System.in);  
        System.out.println("Enter a number");  
        int number = scanner.nextInt();  
        int reverse = 0;  
        while (number != 0){  
            int digit = number % 10;  
            reverse = reverse * 10 + digit;  
            number /= 10;  
        }  
        System.out.print("The reverse " + reverse);  
        scanner.close();  
    }  
}
```

5) Armstrong number:

```
code: import java.util.Scanner;  
Public class Arm {  
    Public static void main(String[] args){  
        Scanner scanner = new Scanner(System.in);  
        System.out.print("Enter a number: ");  
        int number = scanner.nextInt();  
        if (isArmstrong(number)) {  
            System.out.println(number + " is Arm.");  
        } else {  
        }  
    }  
}
```

```
System.out.println(number + " is not ");
```

```
}
```

```
Scanner.close();
```

```
}
```

```
int originalNumber = number;
```

```
int numberOfDigit = String.valueOf(number).length();
```

```
int sum = 0;
```

```
while (number != 0) {
```

```
    int digit = number % 10;
```

```
    sum += Math.pow(digit, numberOfDigit);
```

```
    number /= 10;
```

```
} return sum == originalNumber;
```

```
}
```

## ⑥ Palindrome:

```
class Palindrome {
```

```
    public static void main (String args) {
```

```
        int n = 12321;
```

```
        int rev = 0;
```

```
        while (n > 0) {
```

```
            i = n % 10;
```

```
            rev = rev * 10 + i;
```

```
            n = n / 10;
```

```
}
```

```
        if (rev == n) {
```

```
            System.out.println ("Palindrome");
```

```
}
```

```
        else {
```

```
            System.out.println ("not");
```

```
}
```

7) Sum of digits:

```
class sumo-D{  
    public static void main(String[] args){  
        int n=123;  
        int sum=0;  
        while(n>0){  
            i=n%10;  
            sum+=i;  
            n=n/10;  
        }  
        System.out.println("The sum is "+sum);  
    }  
}
```

8) Divisible by 5 & 7 upto n:

```
class Divisi{  
    public static void main(String[] args){  
        int n=100;  
        for(int i=1; i<=n; i++){  
            if(i%5==0 & i%7==0){  
                System.out.println(i);  
            }  
        }  
    }  
}
```

9) Perfect number:

```
class Perfect{  
    public static void main(String[] args){  
        int sum=0;  
        int n=28;  
        int o=n;  
        for(i=1; i<n; i++){  
            if(o % i == 0){  
                sum+=i;  
            }  
        }  
        if(sum==n){  
            System.out.println("Perfect number");  
        }  
    }  
}
```

```
if(n*i == 0){  
    sum = sum + i;  
}  
if(sum == 0){  
    System.out.print("Perfect");  
}  
else{  
    System.out.print("Not");  
}
```

10) Sum of even-odd:

```
class soo {  
    public static void main(String[] args) {  
        int n = 10; esum = 0, osum = 0;  
        for (int i = 1; i <= n; i++) {  
            if (i % 2 == 0)  
            {  
                esum += i;  
            }  
            else {  
                osum += i;  
            }  
        }  
        System.out.print("esum: " + esum);  
        System.out.print("osum: " + osum);  
    }  
}
```

ii) leap year

```
class leap year{  
    public static void main (String[] args){  
        int year=2024;  
        if (year%4==0 || year%400==0 || year%100!=0){  
            System.out.println ("leap year");  
        }  
        else {  
            System.out.println ("Not leap year");  
        }  
    }  
}
```

12) Even or odd:

```
class even-odd{  
    public static void main (String[] args){  
        int n=400;  
        if (n%2==0){  
            System.out.println ("even");  
        }  
        else {  
            System.out.print (" odd");  
        }  
    }  
}
```

13) GCD & LCM

```
class GCD-LCM{  
    public static void main (String args){  
        int a=2;  
        int b=4;  
        int temp;  
        while (b>0){  
            temp=b;  
            b=a%b;  
            a=temp;  
        }  
    }  
}
```

```
a=temp;  
}  
int gcd = a;  
int lcm = (a*b)/gcd;  
System.out.println("GCD "+gcd);  
System.out.println("LCM "+lcm);  
}  
}
```

#### (4) Strong Number:

```
class StrongNum{
```

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

```
int n=145;
```

```
int sum=0, rem, fact;
```

```
int temp=n;
```

```
while(n>0){
```

```
rem = n%10;
```

```
fact=1
```

```
for(i=1; i<=n; i++){
```

```
fact = fact * i;
```

```
}
```

```
sum = sum + fact;
```

```
n = n / 10;
```

```
}
```

```
if(sum == temp){
```

```
System.out.print("strong");
```

```
}
```

```
else {
```

```
System.out.print("No");
```

```
}
```

```
}
```

15) Celsius to Fahrenheit:

Code:

```
class Temp{  
    public static void main(String[] args){  
        double celsius=39.0;  
        double fahrenheit=(celsius*9/5)+32;  
        System.out.println(fahrenheit);  
    }  
}
```

16) Fahrenheit to Celsius:

Code:

```
class Temp{  
    public static void main(String[] args){  
        double fahrenheit=102.2;  
        double celsius=(fahrenheit-32)*5/9;  
        System.out.println(celsius);  
    }  
}
```

17) Binary to Decimal:

Code:

```
class Bin-Dec{  
    public static void main(String[] args){  
        String bintri="1010";  
        int dec=Integer.parseInt(binDec,2);  
        System.out.println(decimal);  
    }  
}
```

## 19) Decimal to Binary:

Code:

```
class Dec-Bin {
    public static void main(String[] args) {
        int decimal=10;
        String binary=Integer.toBinaryString(decimal);
        System.out.println(binary);
    }
}
```

## 20) Addition of 2 numbers:

Code:

```
class Addition {
    public static void main(String[] args) {
        int a=2;
        int b=3;
        int c=a+b;
        System.out.println("sum is:" + c);
    }
}
```