/*1.Write a java application to check and display message whether the given number is perfect or not. */

```
import java.util.Scanner;
class CheckPerfectNo{
public static void main(String a[]){
Scanner s=new Scanner(System.in);
System.out.println();
System.out.print("Enter a number ::");
int num=s.nextInt();
//System.out.println(num);
int d=1,sum=0;
while(d<=num/2){
if(num%d==0)
sum +=d;
d++;
}//Close of while
if(sum==num)
System.out.println(num+" is a perfect no.");
else
System.out.println(num+" is not a perfect no.");
```

}//Close of main

}//Close of class

//OUTPUT

```
Enter a number ::10
```

10 is not a perfect no.

Enter a number ::28

28 is a perfect no.

/*2.Write a java application to accept a number and display whether the given number is prime or not. */

//Method 1

```
import java.util.Scanner;
class CheckPrimeNo{
public static void main(String a[]){
Scanner s=new Scanner(System.in);
System.out.println();
System.out.print("Enter a number ::");
int num=s.nextInt();
//System.out.println(num);
int d=2;
while(d<=num/2){
if(num%d==0)
d=num;
d++;
}//Close of while
if(d>num)
System.out.println(num+" is not prime number.");
else
```

```
System.out.println(num+" is a prime number.");
```

}//Close of main

}//Close of class

//OUTPUT

```
Enter a number ::12
12 is not prime number.


Enter a number ::11
11 is a prime number.
```

/*2.Write a java application to accept a number, check and display whether the given number is prime or not.*/

//Method 2

```
import java.util.Scanner;
class CheckPrimeNo_2{
public static void main(String a[]){
Scanner s=new Scanner(System.in);
String rem="";
System.out.println();
System.out.print("Enter a number ::");
int num=s.nextInt();
//System.out.println(num);
int d=2;
while(d<=num/2){
```

```
if(num%d==0){
d=num;
rem="not";
}//Close of if
d++;
}//Close of while
System.out.println(num+ " is "+rem+" a prime number.");
```

}//Close of main

}//Close of class

//OUTPUT

```
Enter a number ::10
10 is not a prime number.

Enter a number ::5
5 is  a prime number.
```

/*3.Write a java application to accept a number, check and display whether the given number is palindrome or not. */

```
import java.util.Scanner;
class CheckPalindromeNo{
public static void main(String args[]){
Scanner s=new Scanner(System.in);
System.out.println();
System.out.print("Enter a number ::");
```

```
int num=s.nextInt();
//System.out.println(num);
int tnum=num,d,rev=0;
while(tnum>0){
d=tnum%10;
rev=rev*10+d;
tnum=tnum/10;
}//Close of while
if(rev==num)
System.out.println(num+" is palindrome.");
else
System.out.println(num+" is not palindrome.");
```
}//Close of main

}//Close of class

//OUTPUT

```
Enter a number ::155
155 is not palindrome.

Enter a number ::121
121 is palindrome.
```

/*4.Write a java application to accept a number, calculate and display its factorial value. */

```
import java.util.Scanner;
```

```
class GetFactorialValue{
public static void main(String args[]){
Scanner s=new Scanner(System.in);
System.out.println();
System.out.print("Enter  a number ::");
int num=s.nextInt();
//System.out.println(num);
int i,fact;
i=fact=1;
while(i<=num){
fact=fact*i;
i++;
}//Close of while
System.out.println(num +"!="+fact);
}//Close of main
}//Close of class
```

//OUTPUT

```
Enter  a number ::5
5!=120

Enter  a number ::10
10!=3628800
```

/*5.Write a java application to accept base and corresponding value of a number to calculate and print its exponential value. */

```
import java.util.Scanner;
class GetExponentialValue{
public static void main(String args[]){
Scanner s=new Scanner(System.in);
System.out.println();
System.out.print("Enter value for base ::");
int b=s.nextInt();
//System.out.println(b);
System.out.print("Enter corresponding power ::");
int p=s.nextInt();
//System.out.println(p);
int exp,i;
exp=i=1;
while(i<=p){
exp=exp*p;
i++;
}//Close of while
System.out.println("Exponential value of "+b+"^"+p+"="+exp);
```

}//Close of main

}//Close of class

//OUTPUT

```
Enter value for base ::2
```

Enter corresponding power ::3

Exponential value of 2^3=27

Enter value for base ::4

Enter corresponding power ::5

Exponential value of 4^5=3125

/*6.Write a java application to accept a number ,calculate and display fabonacci series upto that given number. */

```
import java.util.Scanner;
class PrintFibonacciSeries{
public static void main(String args[]){
Scanner s=new Scanner(System.in);
System.out.println();
System.out.print("Enter no. of terms to print fibonacci ::");
int num=s.nextInt();
//System.out.println(num);
int tail=0,head=1,nterm=0,i=1;
while(i<=num){
System.out.print(nterm+"   ");
tail=head;
head=nterm;
nterm=tail+head;
i++;
```

}//Close of while

}**//Close of main**

}**//Close of class**

//OUTPUT

Enter no. of terms to print fibonacci ::5

0 1 1 2 3

Enter no. of terms to print fibonacci ::10

0 1 1 2 3 5 8 13 21 34

Enter no. of terms to print fibonacci ::15

0 1 1 2 3 5 8 13 21 34 55 89 144 233 377