**public class TestFactorial{**

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

int x = 4;

String fact;

Factorial f = new Factorial(4);

if (f.positive()){

fact = f.calculateFactorial ();

f.getUnderline();

System.out.println(fact);

}

else

System.out.println("Factorial cannot be calculated");

}

}

**class Factorial{**

int n;

long fact, sum;

String result ;

**Factorial(int x){**

n = x;

fact = 1;

sum = 0;

result = "";

}

boolean positive(){

return (n >= 0) ;

}

**String calculateFactorial(){**

int x = n;

while (n > 1){

fact = fact \* n;

sum = sum + fact;

result = result + n + "\t" + fact + "\n";

n = n - 1;

if(n==1){

result=result+"\*\*\*\*\*\*\*\*\*\*\*\*\*\nThe factorial of "+x+" is "+fact;

}

}

return result;

}

**String getUnderline(){**

String str = "";

int i = 0;

do{

str = str + "\*";

}

while(++i < 10);

str = str + "\n";

return str;

}

}



**public class TestFactorial{**

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

int x = 4;

String fact;

Factorial f = new Factorial(4);

if (f.positive()){

fact = f.calculateFactorial ();

f.getUnderline();

System.out.println(fact);

}

else

System.out.println("Factorial cannot be calculated");

}

}

**class Factorial{**

int n;

long fact, sum;

String result ;

**Factorial(int x){**

n = x;

fact = 1;

sum = 0;

result = "";

}

**boolean positive(){**

return (n >= 0) ;

}

**String calculateFactorial(){**

int x = n;

result = "n\tFactorial\tSum\n";

while (n > 1){

fact = fact \* n;

sum = sum + fact;

result = result + n + "\t" + fact + "\t\t" + sum +"\n";

n = n - 1;

if(n==1){

result=result+"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\nThe sum of n! factorial is "+sum;

}

}

return result;

}

**String getUnderline(){**

String str = "";

int i = 0;

do{

str = str + "\*";

}

while(++i < 10);

str = str + "\n";

return str;

}

}