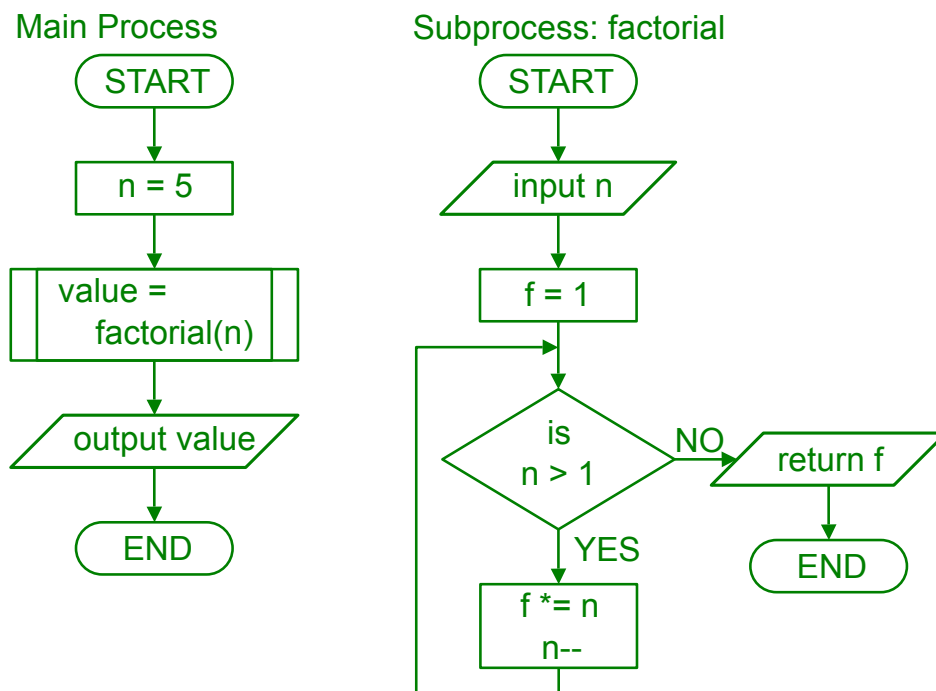


Worksheet: Factorial

1. Create an algorithm that has a main process that calls a subprocess named `factorial` that takes a single integer value as a parameter. The subprocess then uses *iteration* to calculate the factorial of that number. The main process will then output the results of the calculation to the display. (Note: the main process should have the value to pass to the subprocess hard coded rather than input a value from the user.) Firstly, represent your algorithm as a flowchart. Secondly, accurately convert that flowchart to Java code, using a `while` loop for the iteration. Recall that *factorial* is defined for positive integers to be: $n! = n * (n-1) * (n-2) * \dots * 1$.

Answers may vary.



```

public static void main(String[] args) {
    int f = factorial(5);
    System.out.println(f);
}

public static int factorial(int n) {
    int f = 1;
    while(n > 1) {
        f *= n;
        n--;
    }
    return f;
}
  
```