

```

package programmingIILap;
import java.util.Scanner;

public class Factorials {
    public static void
main(String[] args) {
    String keepGoing = "y";
    Scanner scan = new
Scanner(System.in);
    while (keepGoing.equals("y") ||
keepGoing.equals("Y")) {
        System.out.print("Enter an
integer: ");
        int val = scan.nextInt();
        try {

            System.out.println("Factorial(" + val
+ ") = " + MathUtils.factorial(val));
        }
        catch (IllegalArgumentException
e){
            System.out.println("Error:
" + e.getMessage());
        }
        System.out.print("Another
factorial? k/n");
        keepGoing = scan.next();
    }
}

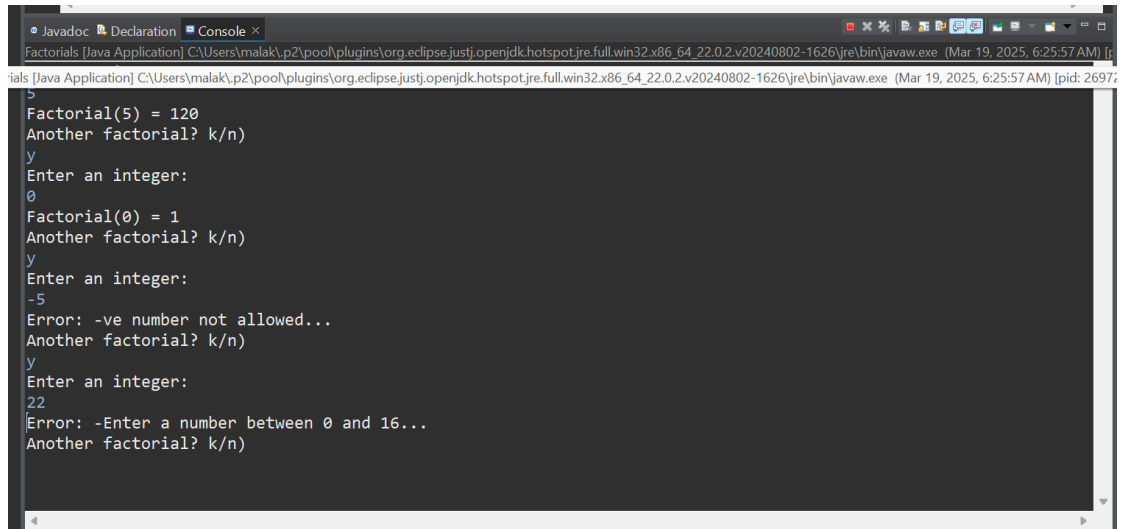
// o class with factorial method //

    class MathUtils {
        public static int
factorial(int n) throws
IllegalArgumentException {
            if(n < 0)
                throw new
IllegalArgumentException("-ve number
not allowed...");
            else if(n > 16)
                throw new
IllegalArgumentException("-Enter a
number between 0 and 16...");
            int fac = 1;
            for (int i=n; i>0; i--)
                fac *= i;
            return fac;
        }
    }
}

```

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```
Factorial(5) = 120
Another factorial? k/n
y
Enter an integer:
0
Factorial(0) = 1
Another factorial? k/n
y
Enter an integer:
-5
Error: -ve number not allowed...
Another factorial? k/n
y
Enter an integer:
22
Error: -Enter a number between 0 and 16...
Another factorial? k/n
```