

Lab 17 Factorial

Due Oct 19 by 11:59pm **Points** 10 **Submitting** a file upload **Available** until Oct 19 at 11:59pm

This assignment was locked Oct 19 at 11:59pm.

In this lab, you are to convert the below C++ function *fact* into an external Assembly language function and create a driver program that calls it. Have your driver ask for an integer from the user then call fact(n).

Upload both the program and a screenshot showing the output. Create some string variable to test. Run 5! for your submission screenshot.

Extra Credit 2 pts. What is the largest n before you bust your stack? (Hint: start a loop that sets $n = 1$ to fact(n), then after returning continually add 1 to n and see how large an n that you can pass before you get a stack overflow)

```
#include <iostream>
using namespace std;
int fact(int n) {
    if (n==0)
        return 1;
    else
        return n*fact(n-1);
}
int main() {
    int n = 5;
    cout<<"Factorial of "<<n<<" is "<<fact(n);
    return 0;
}
```

