

**fact.c**

```
1 #include <stdio.h>
2
3 int main() {
4     int n, i = 1;
5     int factorial = 1;
6     printf("Enter a non-negative integer: ");
7     scanf("%d", &n);
8
9     // Check if the number is negative
10    if (n < 0) {
11        printf("Error: Factorial is not defined for negative numbers.\n");
12    } else {
13        // Calculate the factorial using a while loop
14        while (i <= n) {
15            factorial = factorial * i; // Multiply current factorial by i
16            i++;                  // Increment the counter
17        }
18        printf("Factorial of %d is %d \n", n, factorial);
19    }
20
21    return 0;
22}
23
```