B2

Implement the following C function in Assembly Language Programming. This problem is solely based on stack, so at first get solid idea of stack and do the full use of stack.

```c
#include<stdio.h>

int f(int a);

int main()
{
    int x,res;

    scanf("%d",&x);
    res=f(x);
    printf("The result is %d\n",res);

    return 0;
}

int f(int a)
{

    if(a==0)
        return 0;
    else if(a==1)
        return 1;
    else if(a==2)
        return 1;
    return f(a-1)+f(a-2)+f(a-3);
}
```

Points to be noted:

1. Don't use any shortcut series summation rule or any other shortcut rule
2. You have to convert the input digits into an integer input
3. You can't use any data register to store the intermediate results but you can use the registers for intermediate calculation. You have to store the intermediate result into the stack.

Violation of these criteria will deduce the marks.