Q1.)

Ans: Assuming $n=5$, the activation tree would look as follows:

```
                    f(5)
                  /      \
              f(4)        f(3)
             /    \        |    \
         f(3)    f(2)    f(2)    f(1)
        /   \    /   \    /   \
     f(2)  f(1) f(1) f(0) f(1) f(0)
    /   \
  f(1)  f(0)
```
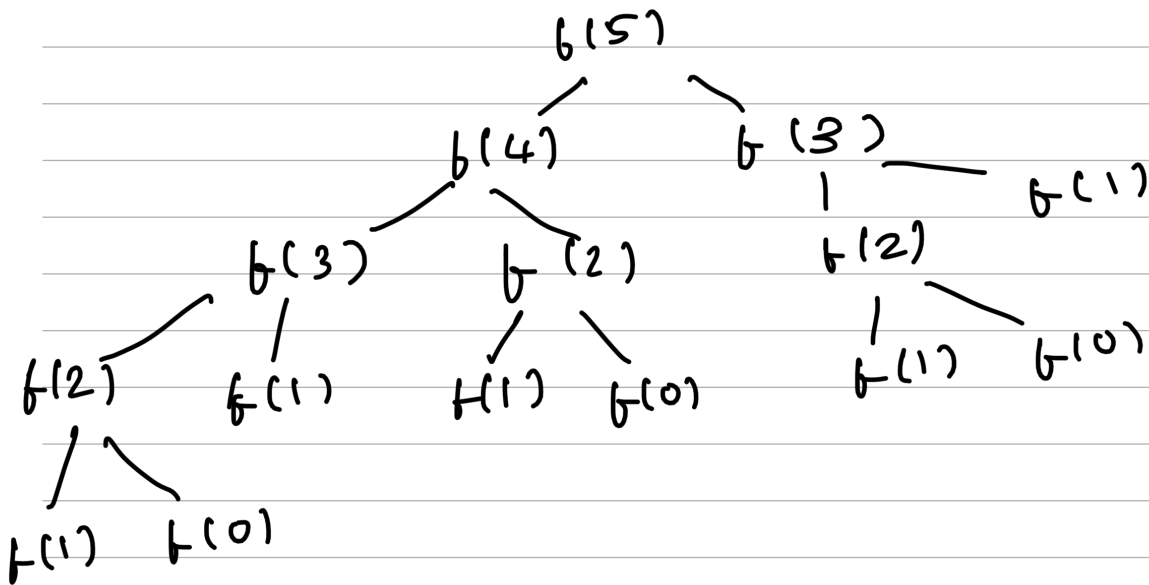
When $n=5$, the function will be called 16 times.

There are three activation records, one for main and two for fib.

This is how the stack and activation record would look like:

f(5)	Act f(5)
f(4)	Act f(4)
f(3)	Act f(3)
f(2)	Act f(2)
f(1)	Act f(1)

fib(n-2)
fib(n-1)
n
Return location
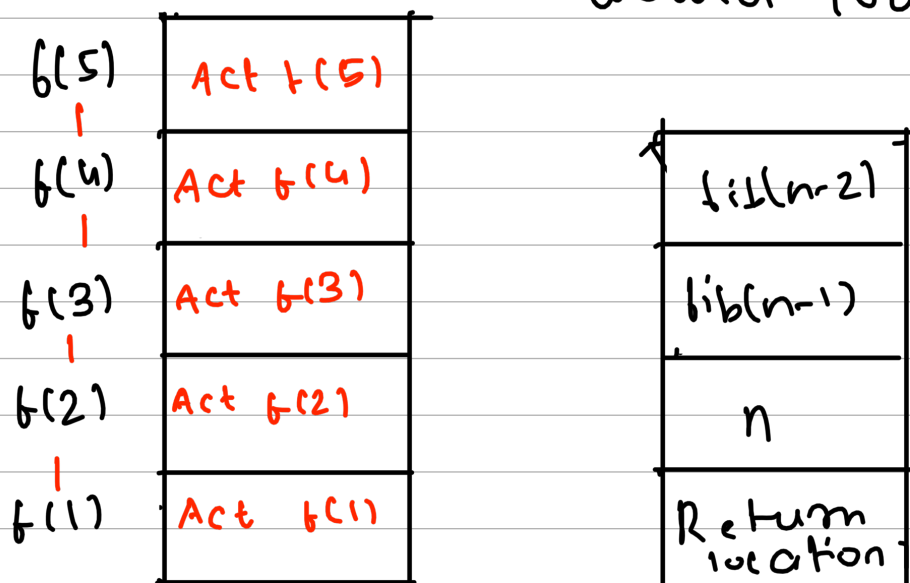
Q2.)

Looking at the code for BST than includes recursion we can say that the code is Tail recursion.

It is tail recursion as the recursion call is the last thing done by the function. There was no need to execute anything after the recursive call.