<u>Ques</u> Multiplication

     m, n $\longrightarrow$ using addition

       2×3 $\Rightarrow$ 2 + 2 + 2 $\Rightarrow$ add 2 $\rightarrow$ 3 times

   Expectation   Faith $\rightarrow$ Combine

m, n   Mul(5, 6) $\Rightarrow$ 30   ans = Mul(5, 6)

5 7 $\Rightarrow$ 35   return ans + 5;

p s int Mul (int m, int n) {

    ans = Mul (m, n-1);

    return m + ans;   5, -1

}   ↖

    5, 7   5, 0

    ↓

    5, 6   5, 1

    ↓

    5, 5

        ⌎→ 5, 4 ⟶ 5, 3 ⟶ 5, 2

Ques Fibnacci Series

0	1	2	3	4	5	6	7
0	1	1	2	3	5	8	13

n^{th} fibnacci number

Expectetion

Fib(6)

$\Rightarrow$ 8

Faith

Fib(4) $\Rightarrow$ 3

Fib(5) $\Rightarrow$ 5

Combine

f4 = Fig(4);

f5 = Fib(5);

return f4 + f5;

p s
```
int fib(int n) {

    if(n == 0 || n == 1)
        return n;
    fnm1 = fib(n-1);
    fnm2 = fib(n-2);
    return fnm1 + fnm2;

}
```

fib(2)
‾‾‾‾‾‾‾‾
fib(4) | f1,2
‾‾‾‾‾‾‾‾
fib5 f1
‾‾‾‾‾‾‾‾
main

$$fa = fact(n-1)$$

$$return \, fa * n$$

F 3
F 4
F 5
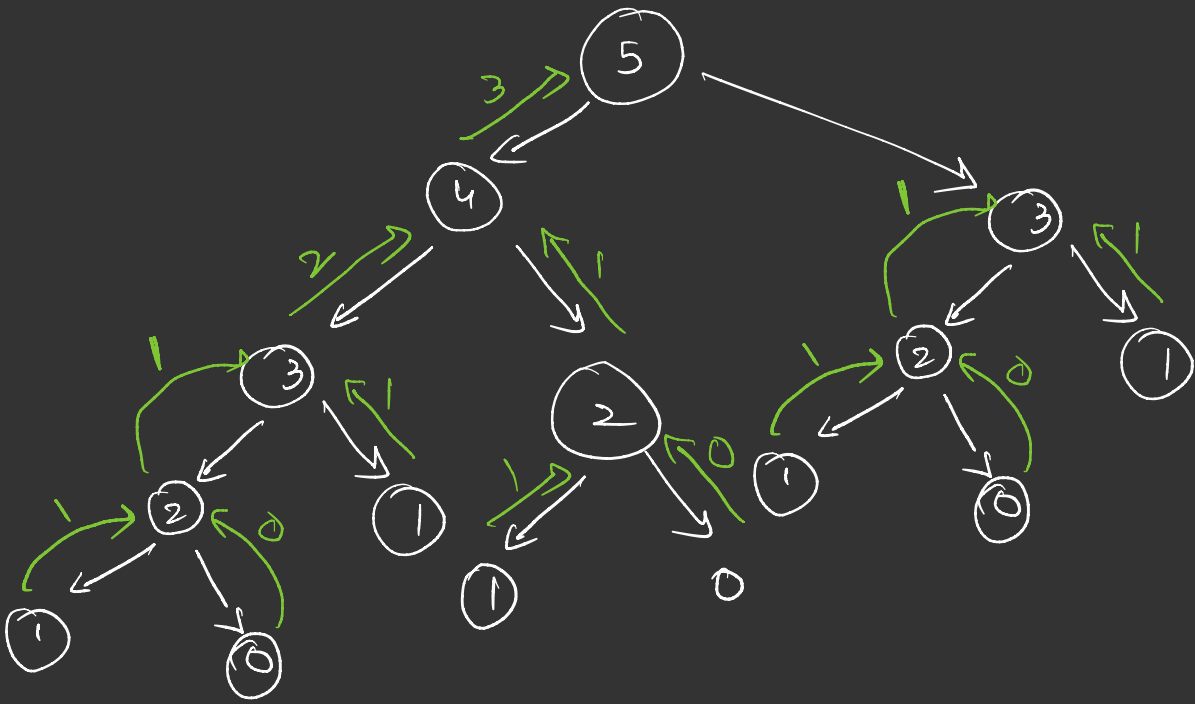
Ques: if a string is Palindrome

$$\overset{0}{a}\ \overset{1}{b}\ \overset{2}{c}\ \overset{3}{b}\ \overset{4}{a}$$

↑   ↑

s   e

a b c c b a

↑ ↑

s e

Expectation

                s   e

is P (a b c b a , 0 , 4)

       ⇒ True

Faith

isP (a b c b a , 1 , 3)

    ⇒ True

bool ans = is P (abcba, 1, 3)

return ans && s.charAt(0) == s.chA(4)

⇒ bool ans = is P (str , s+1 , e-1);

return ans && str.charAt(s) == s.charAt(e)

if (str.charAt(s) != s.charAt(e))

         return false;

return isP(str, s+1, e-1)

" "
" a "] → Palindrome