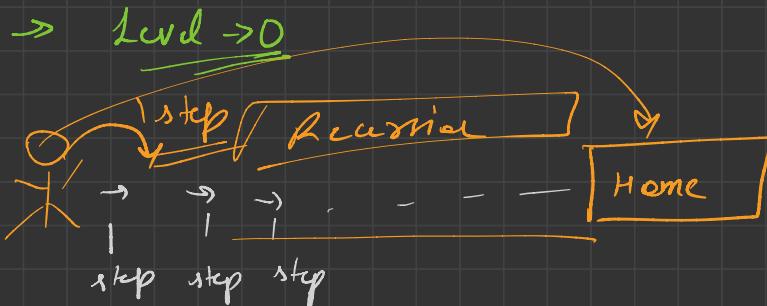
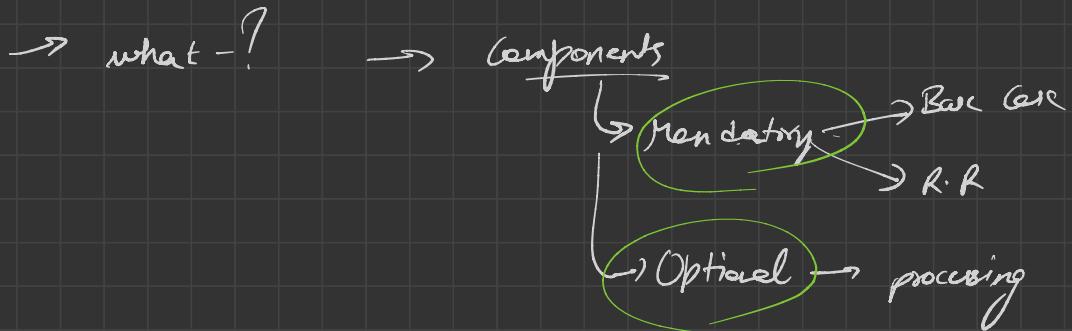



Recursion [Day - 2]



I can solve \rightarrow ek case, ki chinta koi nahi

1 Baaki apne step solve

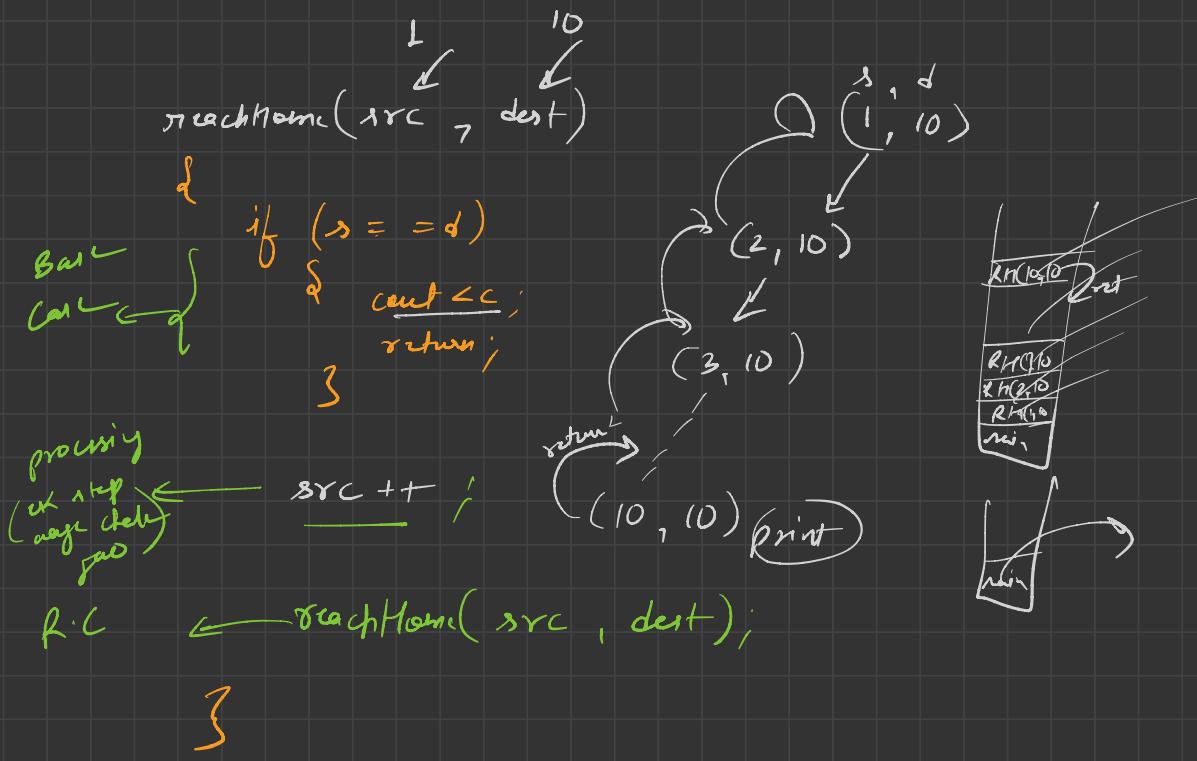
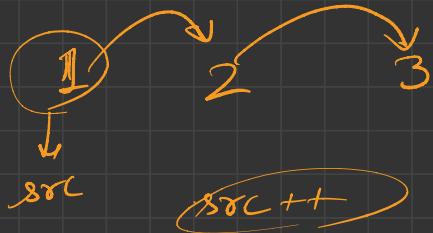
→ 1 step lata ja hogaya

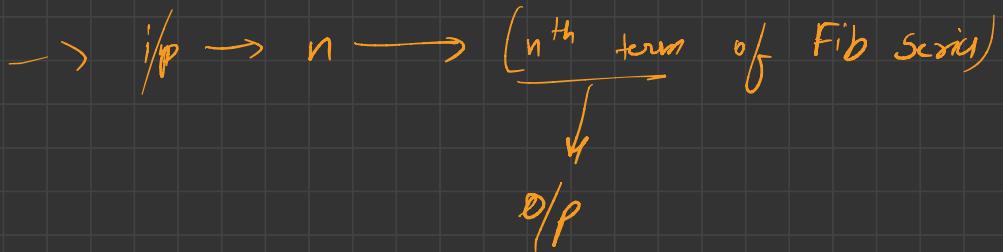
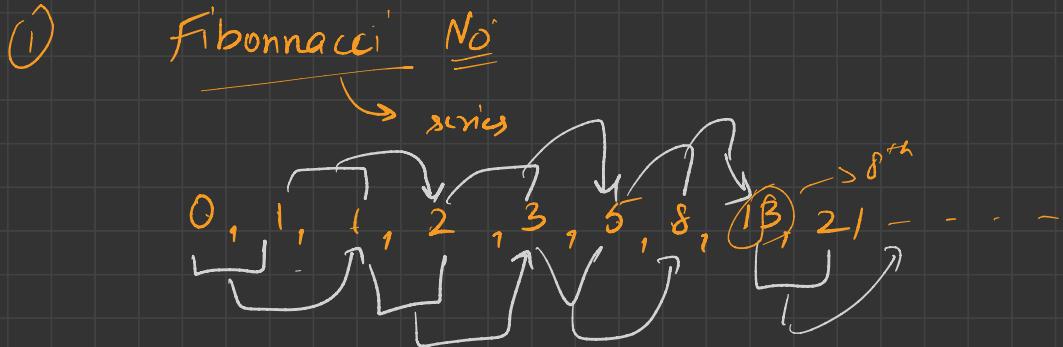
→ Recursion use karke

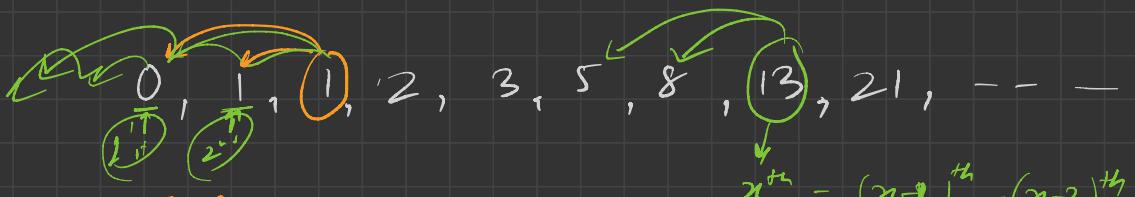
→ Rukna koi hai \rightarrow Base case \rightarrow



L1 kep aage badley







(1) R.C

$\nearrow n^{\text{th}} \text{ term of fib series}$

$$f(n) = f(n-1) + f(n-2)$$

Recurs

(2) Base case

if ($n = 0$) } $\rightarrow f(0)$
 return 0;

if ($n = 1$) } $\rightarrow f(1)$
 return 1

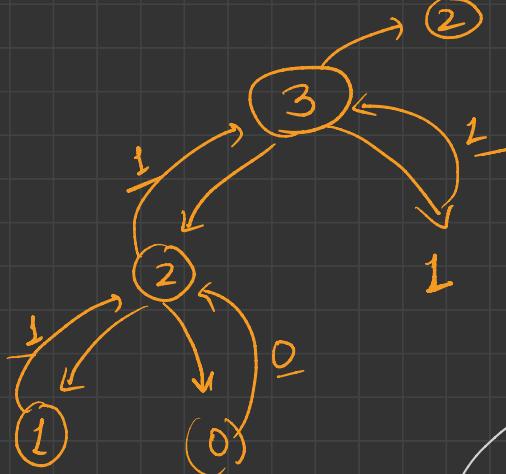
PM T

$P(0) / P(1) \rightarrow \text{true}$
 (~~case~~ 1 case solve
 know how the)

prove
 $f(k)$ is true

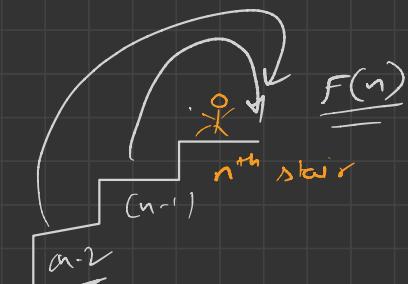
prove
 $f(k+1)$ is true

$Fib(n)$

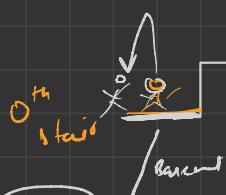


$0, 1, 1, 2, 3, 5, 8, \dots$

$0^n, 1^1, 1^1, 2^1, 3^1, 5^1, 8^1, \dots$



$\frac{Carry}{\uparrow 1step}$
 $\uparrow 2step$



R.P

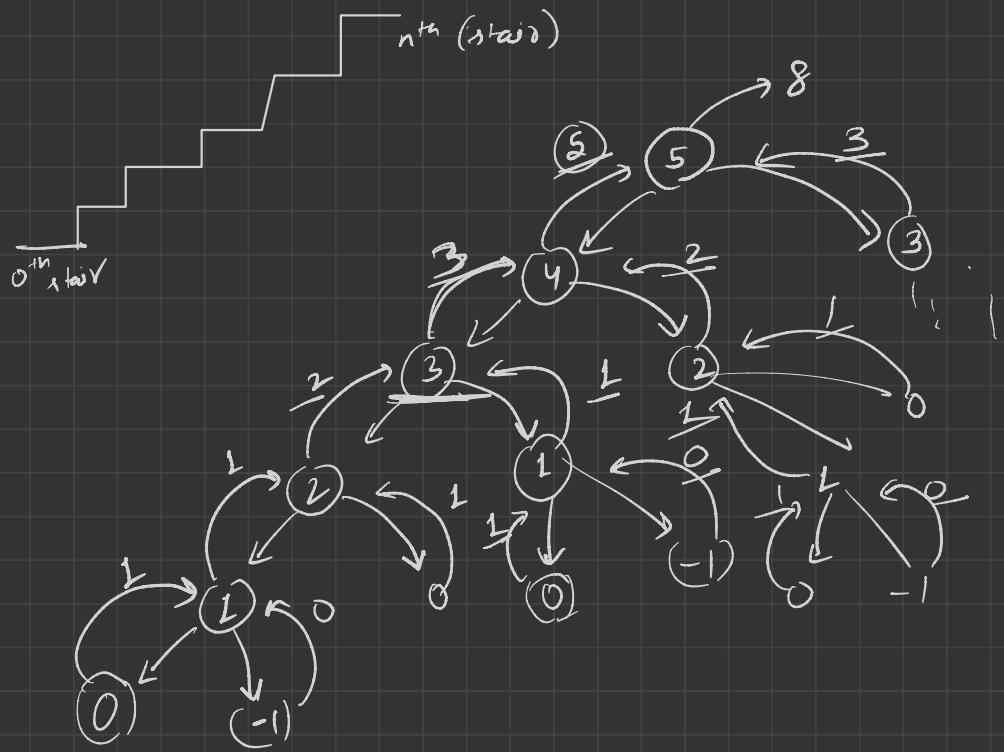
$$F(n) = F(n-1) + F(n-2)$$

Base Case :-

$fib(n)$

$\text{if } (n < 0)$
return 0;

$\text{if } (n == 0)$
return 1;

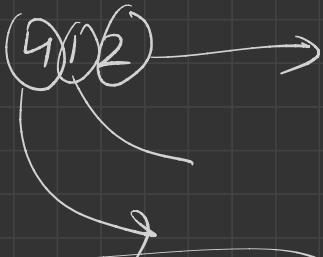


0 Say Digits

i/p \rightarrow 412

o/p \rightarrow four One two

243
↓
two Four Three



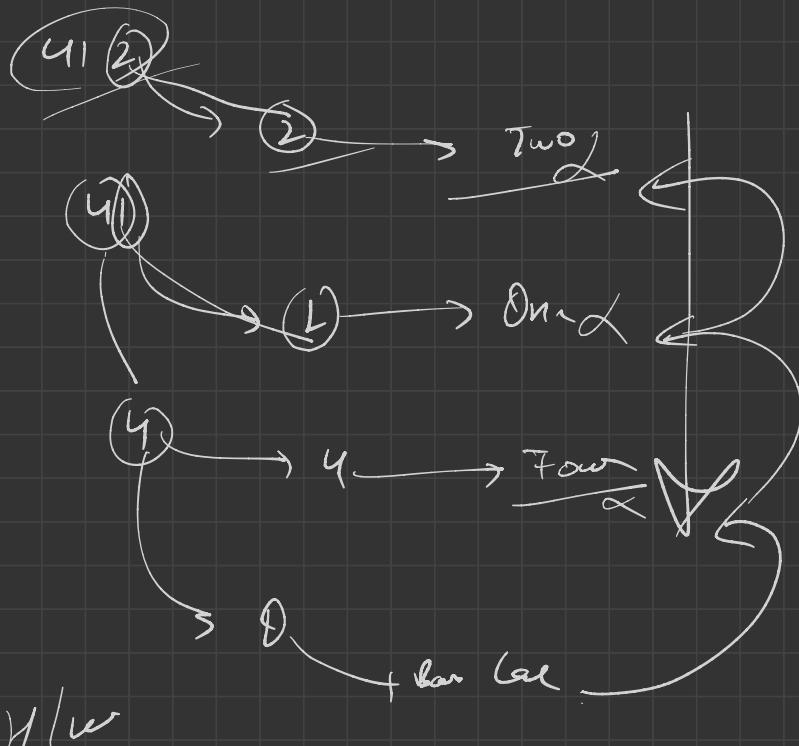
0 \rightarrow Zero
1 \rightarrow One
2 \rightarrow Two
.
g \rightarrow Nine

string arr[10] = { "Zero", "One",
"Two", ---, "Nine" };

string arr[10]

0 \rightarrow 432 \rightarrow digit
/10
int digit = number % 10
number = number / 10;

$i/p \rightarrow 412$



Y/w

→ Recursion Tree

→ function call stack