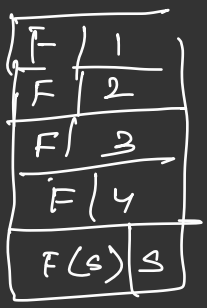
Ques Factorial

Expection	Faith	Combination
fact(5)	fact(4)	int f = fact(4);
→ 120	⇒ 24	int res = f * 5;
		return res;

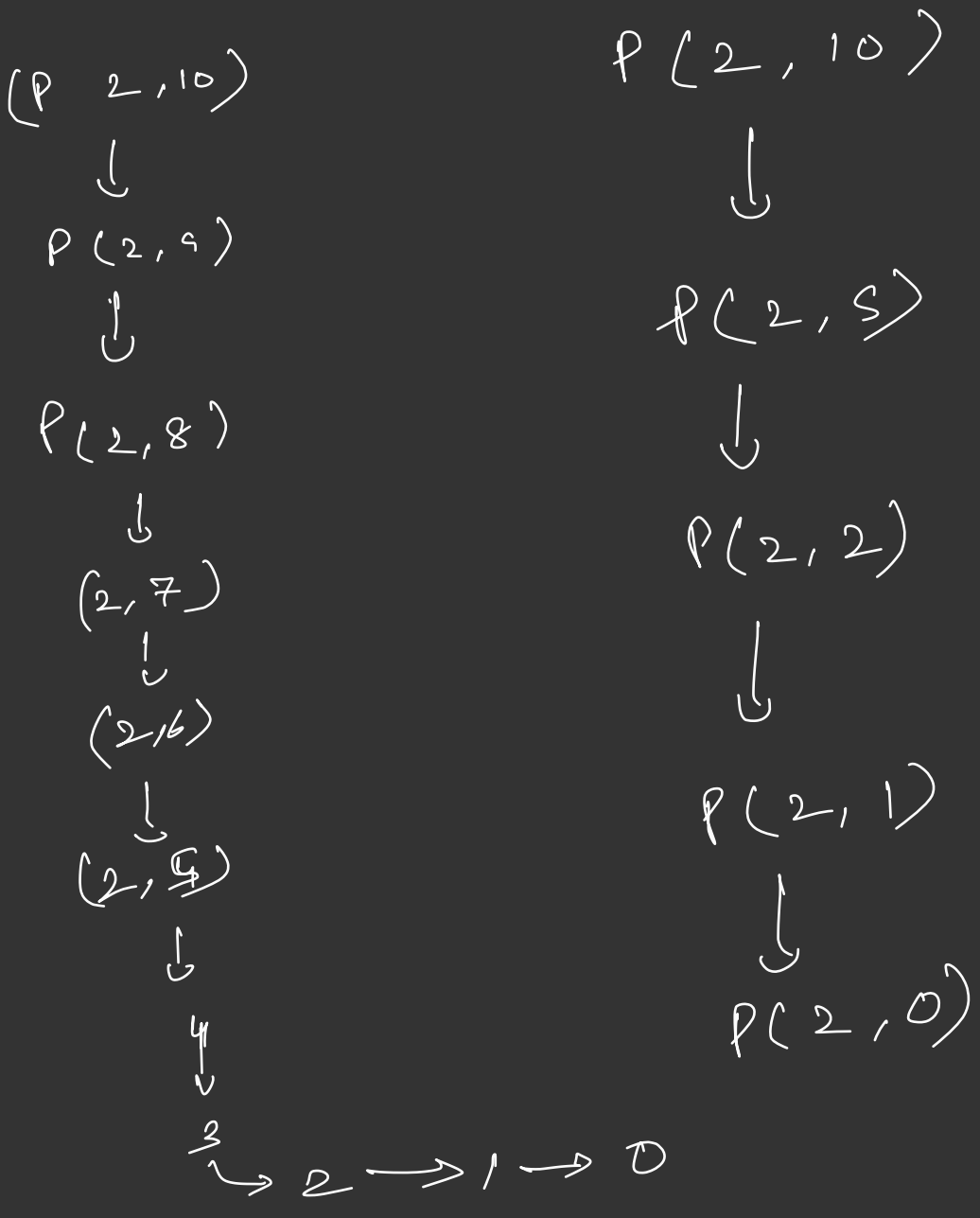
```
fact(int n) {
    if(n == 0) return 1;
    int result = n * fact(n-1);
    return result
}
```



Ques Power(int a, int b) ⇒ a^b

Expectation	Faith	Combine
power(2, 10)	power(2, 9)	return 2 x power(2, 9)
⇒ 1024	⇒ 512	

```
int power(int a, int b)
{
  if (b == 0) return 1;
  return power(a, b-1) * a;
}
```



2^5

$2^{10} = 2^5 \times 2^5$

$10^5 = 10^2 \times 10^2 \times 10$

$2^6 \Rightarrow 2^3 \times 2^3$

$10^8 = 10^4 \times 10^4$

$2^{11} \Rightarrow 2^5 \times 2^5 \times 2$

$2^3 \Rightarrow 2^1 \times 2^1 \times 2$

Expection	Faith	Combine

pow(a, b)	pow(a, b/2)	p = pow(a, b/2)
		if(b%2 == 0){
		ans = p*p;
		}
		else {
		ans = p*p*a
		}

Ques Fibnacci

→ n^{th} fibnacci

s^{th} fibnacci

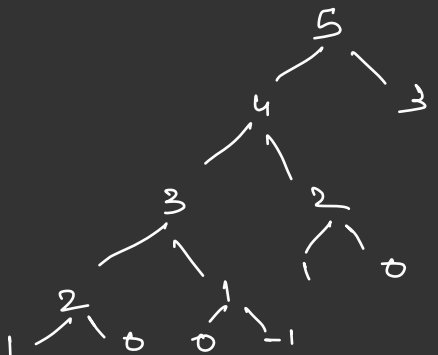
0 1 2 3 4 5 6 7 8 9

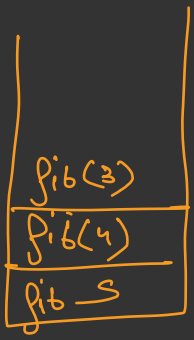
0, 1, 1, 2, 3, 5, 8, 13, 21, 34

n^{th} → n-1 , n-2

Expectation	Faith	Combine
fib(5)	fib(3) fib(4)	return fib(3)+fib(4)

fib(n-1) + fib(n-2);





Ques print in reverse

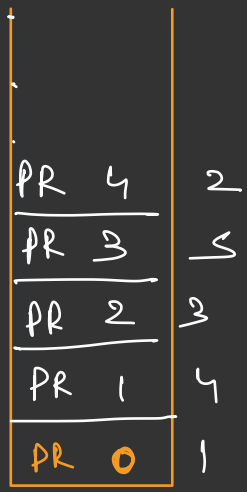
Console

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

Expectation	Faith	Combine
PR(arr, 0)	PR(arr, 1)	PR(arr, 1)
6	6	syso(arr[0])
7	7	
2	2	
5	5	
3	3	
4	4	
1		

```
PR(int arr[], int n)
    if(n == a.L) return;

    PR(arr, n+1);
    syso(arr[n]);
```



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

6
7
2