Recursion

Calling a function by the same function.

$5! = 5*4*3*2*1$
$5! = 5*4!$
$4! = 4*3!$
..

$1! = 1*0!$
$0! = 1$

Recursion
Factorial
with and without recursion
Fibonaaci
with and without recursion
Memoization
fibonaaci with memoization

Fibonaaci Series

0 1 1 2 3 5 8 13 21 ....

n = n-1 + n-2

fib8

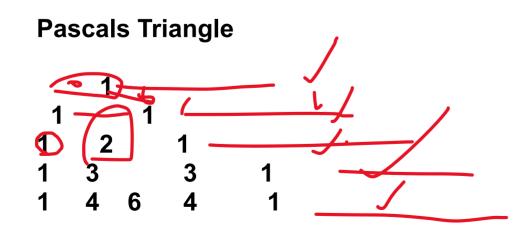fib7 +   fib6
fib6 + fib5   fib5 + fib4
5+4   4+3

Memoization

It will store the values and uses when ever it come again in the calulation of the factorials or fibonaaci ...

By Maping the values
to the keys

Pascals Triangle

```
    1
  1   1
1   2   1
1   3   3   1
1   4   6   4   1
```

Iteration
Recursion
Memoization