Documentation

What is Fibonacci

- Fibonacci 0 and 1 are 0 and 1 so we don't need to calculate
- So just return the number itself, if num equal 0 or 1.
- Find the Fibonacci for given number we need previous two number Fibonacci value for example

  If we calculate Fibonacci for 10 we need Fibonacci value for 9,8.

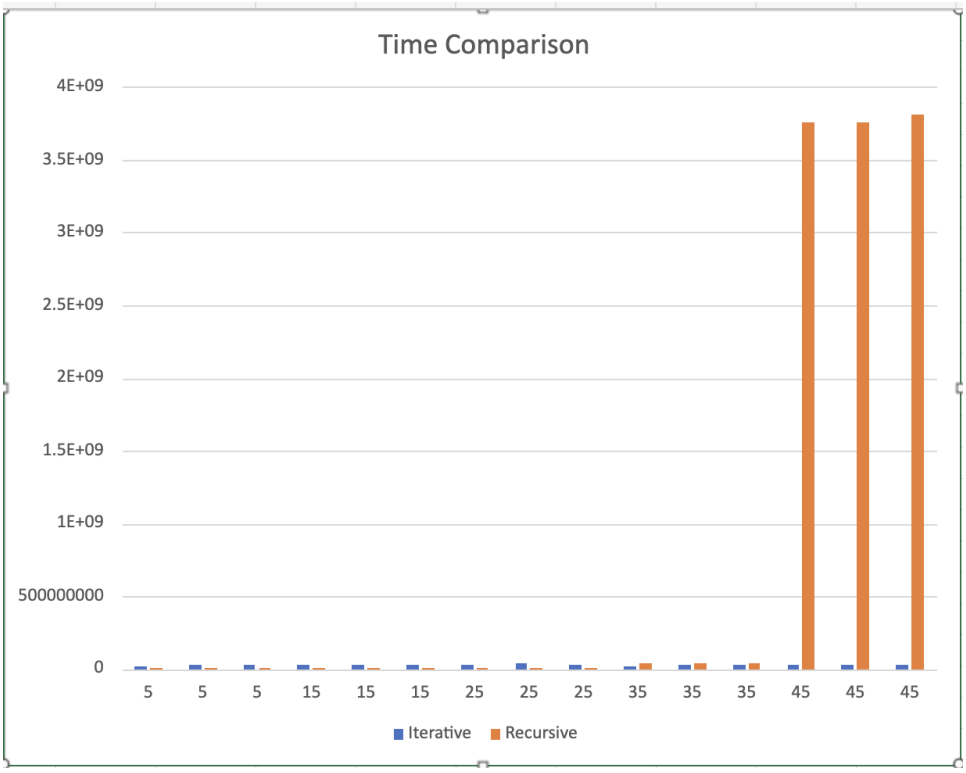
Calculate Fibonacci Using Iterative

- Here using for loop for calculate Fibonacci value for given number
- Here I am using data type long for all input and output (not using int) because Fibonacci output is big.
- Variable first and second are used to store previous Fibonacci value (first for n-2 and second for n-1)
- Variable result for store the Fibonacci value for given input
- Loop I=2 to n because we do not need to calculate I=0 or I=1.

Calculate Fibonacci Using Recursive

- If number (input) is 0 or 1 then it is the base case for recursive function
- Call recursively for calculate n-1 and n-2 Fibonacci

Graph



- Here I added 3 result for same test
- Here for input 5 to 25 recursive function is faster than iterative function
- For input 35 to 45 iterative function is faster than recursive function
- For input 45 there are huge difference between two method iterative function is much faster than recursive function