**COMPUTER SCIENCE**

1. **Recursion sequence for Fibonacci**

**Question**

Why is it a bad idea to use a recursion method to find the fibonacci of a number?

**Fibonacci number**

A Fibonacci sequence is a set of numbers that are obtained when the two preceding numbers in the sequence are added to get the next and on ward.

The sequence usually starts with a 0 and a 1: the 0 plus the 1 will give us another 1, the 1 plus the new 1 will give us a 2 and so on:

The first few numbers in the series are: 0,1,1,2,3,5,8,13,21,34…

You can find a number in the Fibonacci sequence using a recursion, but it is better to use an interaction as the recursion function is expensive in that it costs a lot of memory, the function calls itself for every number in the sequence, the higher the number the more memory is used.

# Function for nth Fibonacci number

def Fibonacci(n):

if n<0:

print("Incorrect input")

# First Fibonacci number is 0

elif n==0:

return 0

# Second Fibonacci number is 1

elif n==1:

return 1

else:

return Fibonacci(n-1)+Fibonacci(n-2)

# Driver Program

print(Fibonacci(9))