**Algorithm Task**

**Project Idea: 1 (Climbing Stair)**

**Team Number: 12**

**GitHub Link:** [AhmedMetwaly12/algorithmtask (github.com)](https://github.com/AhmedMetwaly12/algorithmtask)

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**Code Number 1:**

Text

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**Pseudocode of Code Number 1**

f := 1

s := 1

Read integer n from the user

for I := 2 to n do {

tmp := f+s

f := s

s := tmp

}

If n < 1 then

s := 0

print s

**Analysis of Code Number 1**

n-2 = O(n)

**Code Number 2**

Text

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**Pseudocode of Code Number 2**

function fibonacci(n)

if n < 1 then

return 0

if n <= 2 then

return n

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

**Analysis of Code Number 2**

A piece of paper with writing

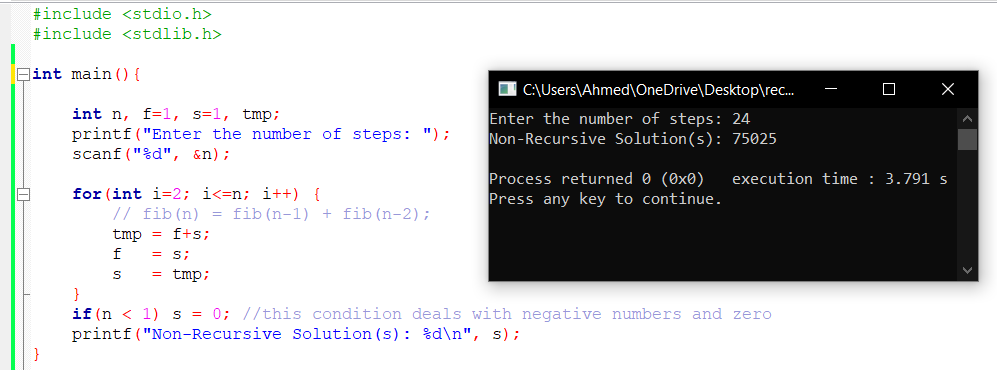
Description automatically generated with medium confidence

**Test Run of Codes**

**Code 1**

**Graphical user interface, text, application

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**Code 2**

Graphical user interface, text

Description automatically generated

Graphical user interface, text

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**Comparison**

|  |  |
| --- | --- |
| Code No. | Time Complexity |
| 1 | O(n) |
| 2 | O(2^n) |

**Therefore:** Code number 1 is better, more time efficient.