

**Lab No: 7 Date: 2081/**

**Title: Write a suitable tail-recursive program of your own idea.**

If a function is calling itself and that recursive call is the last statement in a function then it is called tail recursion. After that call there is nothing, it is not performing anything, so, it is called tail recursion. For better understanding, please have a look at the below image. Comparing tail recursion with loops. The first and the foremost thing that we need to remember is every recursive function can be written using a loop and vice versa is also true i.e. every loop can be written using a recursive function.

**IDE: Visual studio Code**

**Language: C**

**Source code:**

#include <stdio.h>

void tail(int n)

{

    while (n > 0)

    {

        printf("%d,", n);

        n--;

    }

}

int main()

{

    int n;

    printf("Enter a number: ");

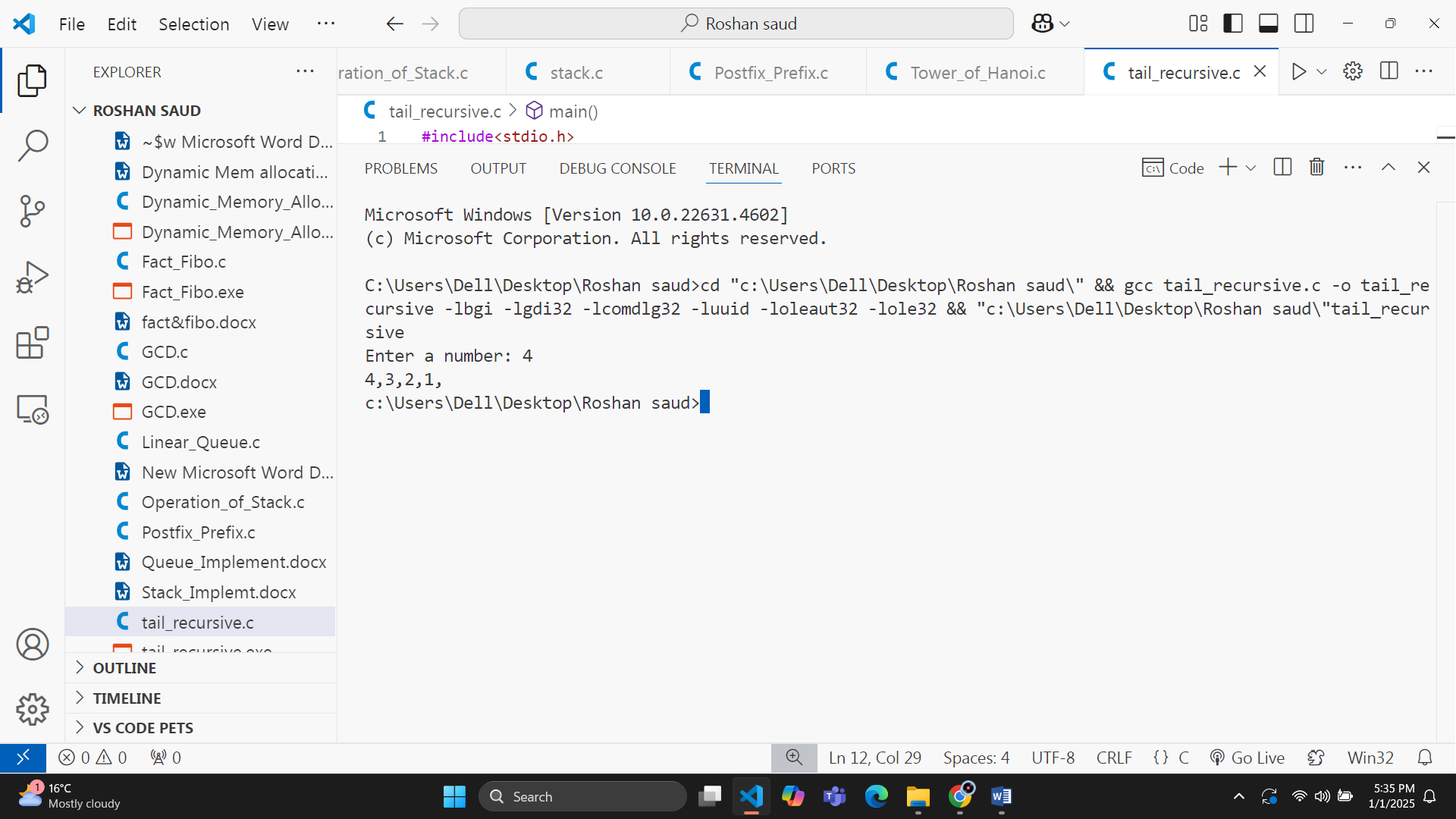
    scanf("%d", &n);

    tail(n);

    return 0;

}

**Output:**

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