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Applications of stack (Recursion)

```
#include <stdio.h>

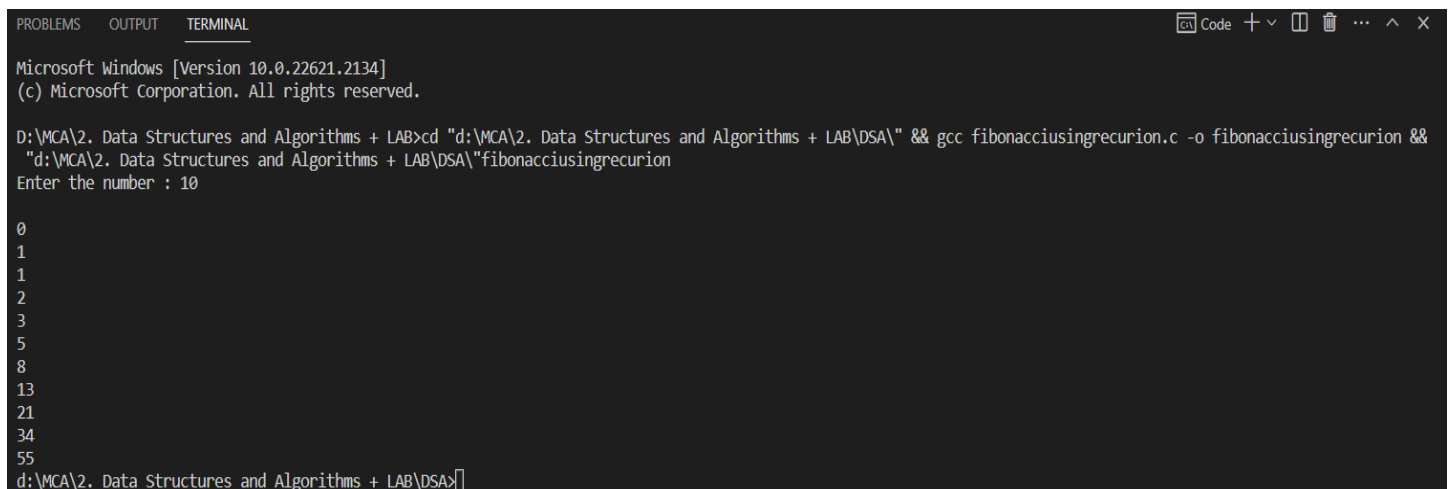
int fibonacciusingrecursion(int num)
{
    if (num <= 1)
    {
        return num;
    }
    else
    {
        return fibonacciusingrecursion(num - 1) + fibonacciusingrecursion(num - 2);
    }
}

int main()
{
    int num;
    printf("Enter the number : ");
    scanf("%d", &num);

    for (int i = 0; i <= num; i++)
    {
        int output = fibonacciusingrecursion(i);
        printf("\n%d ", output);
    }

    return 0;
}
```

OUTPUT



```
PROBLEMS OUTPUT TERMINAL
Microsoft Windows [Version 10.0.22621.2134]
(c) Microsoft Corporation. All rights reserved.

D:\MCA\2. Data Structures and Algorithms + LAB>cd "d:\MCA\2. Data Structures and Algorithms + LAB\DSA\" && gcc fibonacciusingrecursion.c -o fibonacciusingrecursion &&
"d:\MCA\2. Data Structures and Algorithms + LAB\DSA\"fibonacciusingrecursion
Enter the number : 10

0
1
1
2
3
5
8
13
21
34
55
d:\MCA\2. Data Structures and Algorithms + LAB\DSA>
```