Placement Preparation :

Coding Questions

CodeStudio

(Description + Answers)

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Delete middle element of a stack  **(Easy)**

Given a stack with**push(), pop(), empty()**operations, delete the **middle**of the stack without using any additional data structure.  
**Middle:**ceil((size\_of\_stack+1)/2) (1-based index)

**Example 1:**

**Input**:

Stack = {1, 2, 3, 4, 5}

**Output**:

ModifiedStack = {1, 2, 4, 5}

**Explanation**:

As the number of elements is 5 ,

hence the middle element will be the 3rd

element which is deleted

**Example 2:**

**Input**:

Stack = {1 2 3 4}

**Output**:

ModifiedStack = {1 3 4}

**Explanation**:

As the number of elements is 4 ,

hence the middle element will be the 2nd

element which is deleted

**Your Task:**  
You don't need to read input or print anything. Complete the function **deleteMid()**which takes the stack and its size as input parameters and modifies the stack in-place.  
**Note**: The output shows the stack from top to bottom.

**Expected Time Complexity:**O(N)  
**Expected Auxiliary Space:**O(N)

**Constraints:**  
2 ≤ size of stack ≤ 100

class Solution

{

    public:

    //Function to delete middle element of a stack.

    void deleteMid(stack<int>&s, int sizeOfStack)

    {

        // code here..

        stack<int> temp;

        int count=0;

        while(count!=(sizeOfStack/2)){

            int num=s.top();

            s.pop();

            temp.push(num);

            count++;

        }

        s.pop();

        while(!temp.empty()){

            int num=temp.top();

            temp.pop();

            s.push(num);

        }

    }

};