

Problem----→ Program to Implement using Array

CODE:

```
#include <stdio.h>
int stack[8],i,j,choice=0,n,top=-1;
void push();
void pop();
void show();
int main ()
{

    printf("\nEnter the number of elements in the stack\n");
    scanf("%d",&n);
    while(choice != 4)
    {
        printf("Chose options \n");
        printf("\n1.Push\n2.Pop\n3.Show\n4.Leave");
        printf("\n Enter your choice \n");
        scanf("%d",&choice);
        switch(choice)
        {
            case 1:
            {
                push();
                break;
            }
            case 2:
            {
                pop();
                break;
            }
            case 3:
            {
                show();
                break;
            }
            case 4:
            {
                printf("Leaving\n");
                break;
            }
            default:
            {
                printf("Please Enter valid choice \n");
```

```

        }
    };
}

void push ()
{
    int val;
    if (top == n )
        printf("\n Stack Overflow\n");
    else
    {
        printf("Enter value \n");
        scanf("%d",&val);
        top = top +1;
        stack[top] = val;
    }
}

void pop ()
{
    if(top == -1)
        printf("\n Stack Underflow\n");
    else
        top = top -1;
}

void show()
{
    for (i=top;i>=0;i--)
    {
        printf("%d\n",stack[i]);
    }
    if(top == -1)
    {
        printf("Stack Empty\n");
    }
}

```

OUTPUT:

EXPLORER

> OPEN EDITORS

> DS PRACTICE

> OUTLINE

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

Code

Chose options

1.Push

2.Pop

3.Show

4.Leave

Enter your choice

3

434

54

5

64

5

35

12

Chose options

1.Push

2.Pop

3.Show

4.Leave

Enter your choice

2

Chose options

1.Push

2.Pop

3.Show

4.Leave

Enter your choice

3

54

5

64

5

35

12

Chose options

1.Push

2.Pop

3.Show

4.Leave

Enter your choice

0 0

Live Share

Ln 24, Col 22

Spaces: 4

UTF-8

CRLF

C++

Win32