#include <stdio.h>

int stack[100], i, choice = 0, n, top = -1;

void push();

void pop();

void show();

void main() {

printf("Enter the number of elements in the stack: ");

scanf("%d", &n);

printf("Stack operations using array\n");

while (choice != 4) {

printf("1. Push\n2. Pop\n3. Show\n4. Exit\n");

printf("Enter your choice: ");

scanf("%d", &choice);

switch (choice) {

case 1: push(); break;

case 2: pop(); break;

case 3: show(); break;

case 4: printf("Exiting...."); break;

default: printf("Please enter a valid choice.\n");

}

}

}

void push() {

int val;

if (top == n - 1) {

printf("\nOverflow\n");

} else {

printf("Enter the value: ");

scanf("%d", &val);

top = top + 1;

stack[top] = val;

}

}

void pop() {

if (top == -1) {

printf("Underflow\n");

} else {

top = top - 1;

}

}

void show() {

if (top == -1) {

printf("Stack is empty\n");

} else {

for (i = top; i >= 0; i--) {

printf("%d\n", stack[i]);

}

}

}

Enter the number of elements in the stack: 5

Stack operations using array

1. Push

2. Pop

3. Show

4. Exit

Enter your choice: 1

Enter the value: 5

1. Push

2. Pop

3. Show

4. Exit

Enter your choice: 1

Enter the value: 10

1. Push

2. Pop

3. Show

4. Exit

Enter your choice: 2

1. Push

2. Pop

3. Show

4. Exit

Enter your choice: 3

5

1. Push

2. Pop

3. Show

4. Exit

Enter your choice: 4

Exiting....