*/\* Simple Stack Program Example in C++\*/*

*/\* Data Structure Programs,Stack Programs,C++ Examples \*/*

**#include<iostream>**

**#include<conio.h>**

**#include<stdlib.h>**

**#define MAX\_SIZE 5**

using namespace std;

int **main**() {

int item, choice, i;

int arr\_stack[MAX\_SIZE];

int top = 0;

int exit = 1;

cout << "\nSimple Stack Example - Array - C++";

do {

cout << "\n\nnStack Main Menu";

cout << "\n1.Push \n2.Pop \n3.Display \nOthers to exit";

cout << "\nEnter Your Choice : ";

cin>>choice;

switch (choice) {

case 1:

if (top == MAX\_SIZE)

cout << "\n## Stack is Full!";

else {

cout << "\nEnter The Value to be pushed : ";

cin>>item;

cout << "\n## Position : " << top << ", Pushed Value :" << item;

arr\_stack[top++] = item;

}

break;

case 2:

if (top == 0)

cout << "\n## Stack is Empty!";

else {

--top;

cout << "\n## Position : " << top << ", Popped Value :" << arr\_stack[top];

}

break;

case 3:

cout << "\n## Stack Size : " << top;

for (i = (top - 1); i >= 0; i--)

cout << "\n## Position : " << i << ", Value :" << arr\_stack[i];

break;

default:

exit = 0;

break;

}

} while (exit);

return 0;

}

**Program 02-**

#include<iostream>

#include<conio.h>

#include<stdlib.h>

using namespace std;

class stack

{

int stk[5];

int top;

public:

stack()

{

top=-1;

}

void push(int x)

{

if(top > 4)

{

cout <<"stack over flow";

return;

}

stk[++top]=x;

cout <<"inserted" <<x;

}

void pop()

{

if(top <0)

{

cout <<"stack under flow";

return;

}

cout <<"deleted" <<stk[top--];

}

void display()

{

if(top<0)

{

cout <<" stack empty";

return;

}

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

cout <<stk[i] <<" ";

}

};

main()

{

int ch;

stack st;

while(1)

{

cout <<"**\n**1.push 2.pop 3.display 4.exit**\n**Enter ur choice";

cin >> ch;

switch(ch)

{

case 1: cout <<"enter the element";

cin >> ch;

st.push(ch);

break;

case 2: st.pop(); break;

case 3: st.display();break;

case 4: exit(0);

}

}

return (0);

}

Sample Output

Simple Stack Example - Array

Main Menu

1.Push

2.Pop

3.Display

Others to exit

Enter Your Choice : 1

Enter The Value to be pushed : 34

## Position : 0 , Pushed Value : 34

Main Menu

1.Push

2.Pop

3.Display

Others to exit

Enter Your Choice : 1

Enter The Value to be pushed : 89

## Position : 1 , Pushed Value : 89

Main Menu

1.Push

2.Pop

3.Display

Others to exit

Enter Your Choice : 1

Enter The Value to be pushed : 900

## Position : 2 , Pushed Value : 900

Main Menu

1.Push

2.Pop

3.Display

Others to exit

Enter Your Choice : 1

Enter The Value to be pushed : 450

## Position : 3 , Pushed Value : 450

Main Menu

1.Push

2.Pop

3.Display

Others to exit

Enter Your Choice : 1

Enter The Value to be pushed : 789

## Position : 4 , Pushed Value : 789

Main Menu

1.Push

2.Pop

3.Display

Others to exit

Enter Your Choice : 1

## Stack is Full!

Main Menu

1.Push

2.Pop

3.Display

Others to exit

Enter Your Choice : 2

## Position : 4 , Popped Value : 789

Main Menu

1.Push

2.Pop

3.Display

Others to exit

Enter Your Choice : 2

## Position : 3 , Popped Value : 450

Main Menu

1.Push

2.Pop

3.Display

Others to exit

Enter Your Choice : 2

## Position : 2 , Popped Value : 900

Main Menu

1.Push

2.Pop

3.Display

Others to exit

Enter Your Choice : 2

## Position : 1 , Popped Value : 89

Main Menu

1.Push

2.Pop

3.Display

Others to exit

Enter Your Choice : 2

## Position : 0 , Popped Value : 34

Main Menu

1.Push

2.Pop

3.Display

Others to exit

Enter Your Choice : 2

## Stack is Empty!

Main Menu

1.Push

2.Pop

3.Display

Others to exit

Enter Your Choice : 4