**Aim:**

To write a menu driven program to insert , display & Delete elements in a Array Stack.

**Source Code:**

#include<iostream.h>

#include<process.h>

int Pop(int [], int&);

void Display(int [], int);

int Push(int [], int&, int);

const int size=50;

int main()

{

system("cls");

int Stack[size],Item,top=-1,res;

int ch;

do

{

system("cls");

cout<<" \t\t\t Array Stack Menu\n " ;

cout<<" \t 1. Insert\n ";

cout<<" \t 2. Delete\n ";

cout<<" \t 3. Display\n ";

cout<<" \t 4. Exit\n ";

cout<<" Enter your choice (1-4)... ";

cin>>ch;

switch(ch)

{

case 1:

{

cout<<" \n Enter ITEM for insertion : ";

cin>>Item;

res=Push(Stack,top,Item);

if(res==-1)

{

cout<<" OVERFLOW!!! Aborting \n ";

exit(1);

}

cout<<" \n The Stack now is : \n ";

Display(Stack,top);

system("pause");

break;

}

case 2:

{

cout<<" Now deletion of elements begins...\n ";

char ch2='y';

while(ch2=='y'||ch2=='Y')

{

res=Pop(Stack,top);

if(res==-1)

{

cout<<"\n UNDERFLOW!!! Aborting!! \n";

exit(1) ;

}

else

{

cout<<" \nElement deleted is : " <<res<<endl;

cout<<" \n The Stack now is \n";

Display(Stack,top);

}

cout<<"\n Want to delete more elements? (y/n)...";

cin>>ch2;

}

break;

}

case 3:

{

cout<<" \n The Stack now is \n";

Display(Stack,top);

system("pause");

break;

}

case 4:

{

break;

}

default :

cout<<" Valid choices are 1...4 only\n ";

system("pause");

break ;

}

}while(ch!= 4);

return 0 ;

}

int Push(int Stack[], int & top, int ele)

{

if(top==size-1)

return -1;

else

{

top++;

Stack[top]=ele;

}

return 0;

}

int Pop( int Stack[ ], int & top )

{

int ret;

if(top==-1)

return -1;

else

{

ret=Stack[top];

top--;

}

return ret;

}

void Display(int Stack[], int top)

{

if(top==-1)

return;

cout<<Stack[top]<<" <--"<<endl;

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

cout<<Stack[i]<<endl;

}

**Output :**

 