/\* Wap in c++ to implement **stack as an array \*/**

#include<iostream.h>

#include<conio.h>

#include<process.h>

int pop(int[],int&);

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

void display(int[],int);

const int size=50;

void main()

{

clrscr();

char m,ch;

int k,stack[size],item,top=-1,res;

do

{ cout<<"\nChoose from the following : \n\n"

<<"\n 1. Push"

<<"\n 2. Pop"

<<"\n 3. Display"

<<"\n 4. Exit"

<<"\n\nEnter your choice : "; cin>>k;

switch(k)

{

case 1: ch='y';

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

{ cout<<"\nEnter the element : ";

cin>>item;

res=push(stack,top,item);

if(res==-1)

{cout<<"\nOverflow !!!!";

exit(1); }

cout<<"\nThe stack formed is : \n\n";

display(stack,top);

cout<<"\n\n\nWant to enter again ?: ";

cin>>ch;

}

break;

case 2: ch='y';

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

{ res=pop(stack,top);

if(res==-1)

{

cout<<"\nUnderflow !!!!";

exit(1);

}

else

{

cout<<"\nThe deleted Element is : "<<res<<endl;

cout<<"\nThe resultant stack is : \n\n";

display(stack,top); }

cout<<"\nWant to delete again ? : ";

cin>>ch;

}

break;

case 3: cout<<"\nThe resultant stack is : ";

display(stack,top);

break;

case 4: exit(0);

break;

default: cout<<"\nPlease enter desired keyword : ";

} // end of switch

cout<<"\n\nChoose from the menu again ? : ";

cin>>m;

}while(m=='y'||m=='Y'); // end of do-while loop

getch();

} // end of main()

int push(int stack[],int &top,int el)

{

if(top==size-1)

return -1;

else

{

top++;

stack[top]=el;

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)

{

cout<<stack[top]<<"<--";

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

cout<<stack[i]<<"<--";

}

**Output:**

Choose from the following :

1. Push

2. Pop

3. Display

4. Exit

Enter your choice : 1

Enter the element : 1

The stack formed is :

1 🡨

Want to enter again ?: y

Enter the element : 2

The stack formed is :

2 🡨 1 🡨

Want to enter again ?: y

Enter the element : 3

The stack formed is :

3 🡨2 🡨 1 🡨

Want to enter again ?: y

Enter the element : 4

The stack formed is :

4 🡨 3 🡨 2 🡨 1 🡨

Want to enter again ?: N

Choose from the menu again ? : y

Choose from the following :

1. Push

2. Pop

3. Display

4. Exit

Enter your choice : 2

The deleted Element is : 4

The resultant stack is :

3 🡨 2 🡨 1 🡨

Want to delete again ? : y

The deleted Element is : 3

The resultant stack is :

2 🡨 1 🡨

Want to delete again ? : n

Choose from the menu again ? : y

Choose from the following :

1. Push

2. Pop

3. Display

4. Exit

Enter your choice : 3

The resultant stack is :

2 🡨1 🡨

Choose from the menu again ? : n