5.1. Program that Implements Stack using array.

#include<iostream> #include<conio.h> #include<stdlib.h> using namespace std;

int stack[100], n=100, top=-1; void push(int val) {

if(top>=n-1)

cout<<"Stack Overflow"<<endl; else {

top++; stack[top]=val;

}

}

void pop()

{ if(top<=- 1)

cout<<"Stack Underflow"<<endl; else {

cout<<"The popped element is "<< stack[top] <<endl; top--;

}

}

void display()

{ if(top>=0) {

cout<<"Stack elements are:"; for(int i=top; i>=0; i--) cout<<stack[i]<<" "; cout<<endl;

} else

cout<<"Stack is empty";

}

int main()

{ int ch, val;

cout<<"\n1. Push in stack"; cout<<"\n2. Pop from stack"; cout<<"\n3. Display stack";

cout<<"\n4. Exit"<<endl; do {

cout<<"Enter choice: "; cin>>ch;

switch(ch)

{ case 1: {

cout<<"Enter value to be pushed:"; cin>>val;

push(val); break;

}

case 2:

{ pop()

;

break;

}

case 3:

{ display()

; break;

}

case 4:

{ cout<<"Exit"<<endl; break;

}

default: {

cout<<"Invalid Choice"<<endl;

}

}

}while(ch!=4); return 0;

}