**Implementation of stack without classes**

#include <iostream>

using namespace std;

char stack1[100], stack2[100]; int n=100, top=-1;

void push(char val, char array[100]) {

if(top>=n-1)

cout<<"Stack Overflow"<< endl;

else {

top++;

array[top]=val;

}

}

void pop (char array[100]) {

if (top<=-1)

cout <<"Stack Underflow"<< endl;

else {

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

top--;

}

}

void display(char array[100]) {

if (top>=0) {

cout <<"Stack elements are:";

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

cout<<array[i]<<" ";

cout<<endl;

} else

cout<<"Stack is empty";

}

int main()

{

push ('a',stack1);

push ('x',stack2);

push ('b',stack1);

push ('y',stack2 );

push ('c',stack1);

push ('z',stack2 );

display (stack1);

display (stack2);

}

Output:

Stack elements are: c b a

Stack elements are:z y x

**Stack with classes**

//Stack data structure

#include <iostream>

#define SIZE 10

using namespace std;

class stack

{char stck[SIZE];

int tos;

public:

stack();

void push(char ch);

char pop();

};

stack::stack()

{tos = 0;}

void stack::push(char ch)

{if (tos == SIZE) {cout<<"overloading"; return;}

stck[tos] = ch;

tos++;

}

char stack :: pop()

{if (tos == 0) {cout<< "stack is empty"; return 0;}

tos--;

return stck[tos];

}

int main()

{stack S1,S2;

int i;

S1.push('a');

S2.push('x');

S1.push('b');

S2.push('y');

S1.push('c');

S2.push('z');

for(i=0; i<3; i++) cout<< "a symbol from S1:"<<S1.pop()<<endl;

for(i=0; i<3; i++) cout<< "a symbol from S2:"<<S2.pop()<<endl;

return 0;

}