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**Semester CS3-2**

**Question 1**

Copy code

#include <iostream>

using namespace std;

class Stack {

int top;

int array[12];

public:

Stack()

{

top = -1; }

void push(int x)

{ if (top >= 11) {

cout << "Stack overloaded" << endl; return;

} array[++top] = x;

cout << "Pushed: " << x << endl;

}

void pop()

{

if (top < 0)

{

cout << "Underflow" << endl;

}

cout << "Popped: " << array[top--] <<endl;

}

int peek()

{

if (top < 0)

{

cout << "-1" << endl;

return -1;

}

return array[top];

}

bool empty()

{ return top < 0;

}

};

int main()

{

Stack s;

s.push(53);

s.push(52);

s.push(56);

cout << "Top element is " << s.peek() <<endl;

s.pop();

cout << "Top element after pop is " << s.peek() << endl;

if (s.empty())

{ cout << "Stack is empty" << endl; }

else {

cout<< "Stack is not empty" << endl; }

return 0; }