

Implement a class MyStack as a stack ADT, using array data structure. Then write a main app program to test all class methods.

The contents in the stack class include:

a) Three data fields

One dynamic array as the stack container

One integer that indicates the maximum size of the stack (when it is created)

One integer that keeps track of the index of the item on the top of the stack

b) public methods

A non-default constructor that initialize a stack with a maximum size:

MyStack(int s)

Push method that push an item into the stack

void push(int x)

Pop method that removes the top item from the stack, and returns that item when the method is called

int pop()

A method that checks if the stack is full

bool isFull()

A method that checks if the stack is empty

bool isEmpty()

A method that prints out the values in the stack (bottom left, top right)

void display()