

```

1  /**
2   * @file - StackADT.h
3   *
4   * Defines StackADT<T> as an abstract data type.
5   * Does not specify the internal data structure that is necessary to use to hold the
6   * stack elements.
7   * An implementor of this abstract stack data type is free to choose the internal data
8   * structure.
9   * Specifies the operations or the functions that this abstract stack data type needs to
10  * support
11  * in order to become a Last in First out (LIFO) container or list.
12  * Does not specify the algorithms of these operations or functions.
13  * An implementor of this abstract stack data type is free to choose the algorithms for
14  * the operations
15  * that suit best with his/her choice of internal data structure of this abstract data
16  * type.
17  *
18  * @author - Humayun Kabir, Instructor, CSCI 161, VIU
19  * @version - 0.0.1
20  * @date - April 25, 2021
21  */
22
23 #ifndef __STACKADT_H_INCLUDED__
24 #define __STACKADT_H_INCLUDED__
25
26 #include <iostream>
27
28 template <typename T>
29 class StackADT {
30 public:
31     /*
32     * Default constructor
33     */
34     StackADT() {
35         std::cout<<"StackADT::constructor....."<<std::endl;
36     }
37
38     /*
39     * Destructor
40     */
41     virtual ~StackADT() {
42         std::cout<<"StackADT::desctructor....."<<std::endl;
43     }
44
45     virtual void push(T element) = 0;
46     //Puts the element at the top of the stack
47
48     virtual T pop() = 0;
49     //Removes the top element from the stack
50
51     virtual T peek() = 0;
52     //Gives the top element of the stack without removing it.
53
54     virtual int getSize() = 0;
55     //Gives the current size or the number of elements that have been pushed but not
56     //popped yet.
57
58     virtual bool isEmpty() = 0;
59     //Returns true if the the stack is empty.
60 };
61 #endif

```