420-B31

# Lab 08 – The Stack ADT Answers

# Part A, Question 4

Complete the following table. Recall that the Object State for a stack should include the size, top and contents of the stack.

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| --- | --- | --- |
| Method | Object State | Return value |
| Stack <String> s =  new ListStack<String> (); | Size = 0 | A new LinkedList |
| s.push("C"); | Size = 1  Top = C | True |
| s.push("A"); | Size = 2  Top = A  C | True |
| s.push("M"); | Size = 3  Top = M  A  C | True |
| s.peek(); |  | M |
| s.pop(); | Size = 2  Top = A  C | M |
| s.peek(); |  | A |
| s.isEmpty(); |  | False |
| s.pop(); | Size = 1  Top = C | A |
| s.pop(); | Size = 0 | C |
| s.peek(); |  | EmptyStackException |
| s.isEmpty(); |  | True |