Lab 7

boolean empty() algorithm:

1. If size of theData is zero then stack is empty, return true
2. Else, return false

E peek() algorithm:

1. If stack is empty, throw an exception that the stack is empty
2. Else, return the element of theData at size - 1

E pop() algorithm:

1. If stack is empty, throw an empty state exception
2. Use remove method of theData to remove the element at size - 1 and store in a temporary variable
3. Return the the temporary variable that contains the removed element

E push(E obj) algorithm:

1. Use add method of theData to add obj to the top
2. Return obj

Question 1

a. The first line adds “Jane” to the top of the stack
b. The second line adds “Joseph” to the top of the stack
c. The third line stores “Joseph” in the variable top and removes “Joseph” from the stack
d. The fourth line stores “Jane” in the variables nextTop without removing it from the stack

Question 2
While the stack is not empty, print the name at the top and remove it from the stack.

Question 3
Peek would print the name at the top of the stack but would not remove it. As a result, the stack would never be empty and we would have an infinite loop that would keep printing “Philip”.