

**College of Computer Studies
Laboratory Activity Form**

Course Number	CSIT221
Course Title	Data Structures and Algorithms 1
Topics Covered:	Stack and Queue
Objectives:	Implement a program using the stack and queue operations.
Description	
<p>Write a stack and queue test driver. A test driver is a program created to test functions that are to be placed in a library. Its primary purpose is to completely test functions; therefore, it has no application use. The functions to be tested are push stack, pop stack, enqueue, and dequeue. You may include other stack and queue functions as required. All data should be integers. You need two stacks and two queues in the program, as described below.</p> <ul style="list-style-type: none">a. Input stack: used to store all user inputb. Input queue: used to store all user inputc. Output stack: used to store data deleted from input queued. Output queue: used to store data deleted from input stack <p>Use a menu-driven user interface that prompts the user to select either insert or delete. If an insert is requested, the system should prompt the user for the integer to be inserted. The data are then inserted into the input stack and input queue. If a delete is requested, the data are deleted from both structures: the data popped from the input stack are enqueued in the output queue, and the data dequeued from the input queue are pushed into the output stack.</p> <p>Processing continues until the input structures are empty. At this point print the contents of the output stack while deleting all of its data. Label this output "Output Stack", then print all of the data in the output queue while deleting all of its data. Label this output "Output Queue."</p>	
Sample Output if Applicable	
Remarks	
<p>Project name: TestStackQueue Filenames: stackqueue.h, stackqueue.c, main.c</p>	