Gray Houston

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Project 1 Analysis Questions

Part 1

1.)

a.) The worst case running time/computation for the enqueue operation when no resizing of the array occurs is O(c) where “c” is an arbitrary constant value. This operation occurs in constant time because the array is never traversed. The only operations that occur in this function (without resizing) are placing the patient into the array at a known index, modularly incrementing the tail index, and incrementing the counter for the patients. All of these operations run in O(c) time. Therefore, the enqueue operation runs a worst case of O(c) time.