

MODULE 5 - ACTIVITY 4

QUESTIONS :

Suppose that a client performs an intermixed sequence of (queue) enqueue and dequeue operations. The enqueue operations put the integers 0 through 9 in order onto the queue; the dequeue operations print out the return value. Which of the following sequence(s) could not occur?

- (a) 0 1 2 3 4 5 6 7 8 9
- (b) 4 6 8 7 5 3 2 9 0 1
- (c) 2 5 6 7 4 8 9 3 1 0
- (d) 4 3 2 1 0 5 6 7 8 9

SOLUTION:

- (a) 0 1 2 3 4 5 6 7 8 9 - Possible
- (b) 4 6 8 7 5 3 2 9 0 1 - Not possible because 0 should be dequeued before other elements.
- (c) 2 5 6 7 4 8 9 3 1 0 - Not possible because 0 should be dequeued before other elements.
- (d) 4 3 2 1 0 5 6 7 8 9 - Not possible because 0 should be dequeued before other elements.