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Homework

DISCLAIMER (my function goes West, East, North, South)

From Stack

1. (6, 4)

2. (5, 4)

3. (4, 4)

4. (3, 4)

5. (2, 4)

6. (1, 4)

7. (1, 5)

8. (1, 6)

9. (1, 7)

10. (1, 8)

11. (1, 3)

12. (1, 2)

From queue

1. (6, 4)

2. (6, 3)

3. (6, 5)

4. (5, 4)

5. (6, 6)

6. (7, 5)

7. (4, 4)

8. (8, 5)

9. (4, 5)

10. (3, 4)

11. (8, 6)

12. (4, 6)

Both algorithms begin at the starting point, and initially check the first west position. The difference between the algorithms is the order by which the function checks the surrounding indices. A stack begins by looking at the last object that enters it (LIFO), and a queue begins by looking at the first object that enters it (FIFO). This is evidence by the stack’s 2nd point being (5,4). (5,4), which is North, is the last valid point that the stack pushed into itself (South was an ‘X’). The queue’s 2nd point (6,3), which is West, is the first point that the queue pushed into itself.