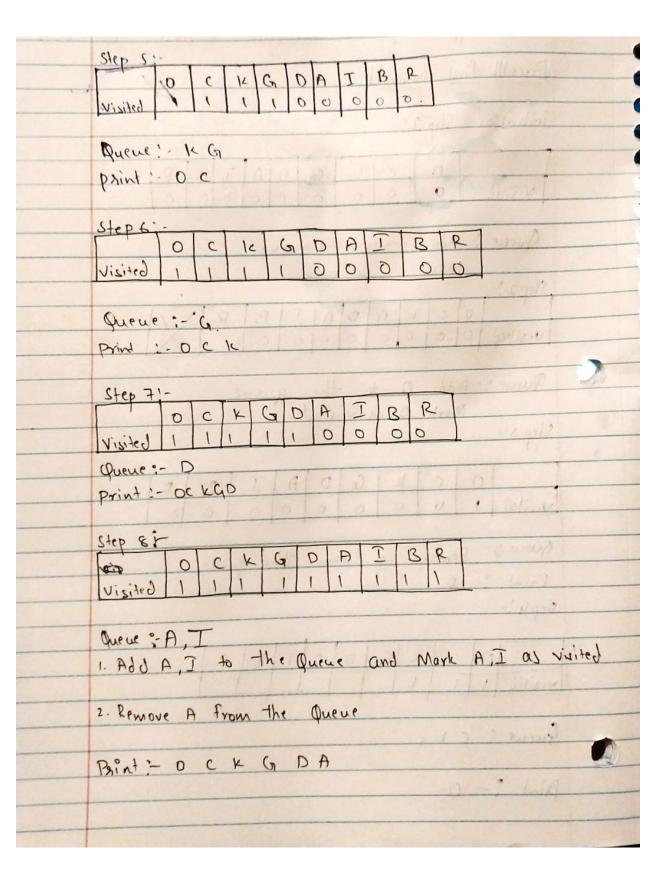
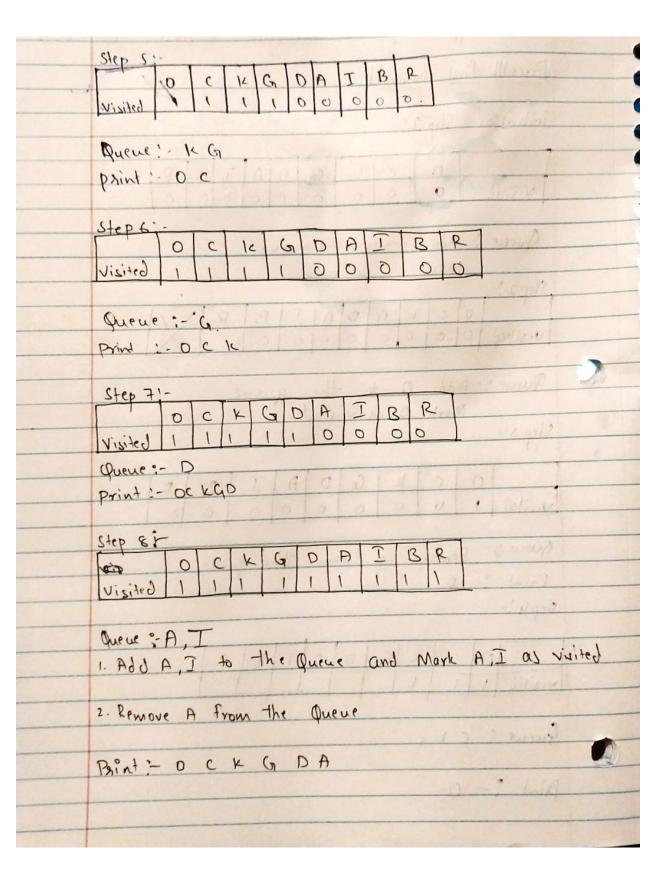
Week 12: Homework 1: Project: "490. The Maze" - LC - Breadth-First Traversal

Manual Approach

0	Manual Approach of Breadth First - Traversal (Maze).
	Breadth-First-Traversal :-
	initialize Step 1:-
	Visited 0 0 0 0 0 0 0 0
	Queue: - Att orto-the queue
	Step 2:- 0 C K G D A I B P visited 0 0 0 0 0 0 0 0 0
P	
"(Queur :- Add O to the queue Mark O as visited
	Step 3:-
	0 C K G D A I B R Visited 1 0 0 0 0 0 0 0
	Queue &- Remove o I rom the queue
	Print :- 0 Slep4:-
3,413	Wisited 1 1 1 1 1 BR
	Queue; cx;
	Print: - 0





Python Code:

```
from collections import deque
m = 4
n = 3
def Maze(matrix):
  q = deque()
  q.append((0, 0))
  count = 0
  while (len(q) > 0):
   p = q.popleft()
  if (p[0] == n - 1 \text{ and } p[1] == m - 1):
   count += 1
  if (p[0] + 1 < n \text{ and})
    matrix[p[0] + 1][p[1]] == 1):
    q.append((p[0] + 1, p[1]))
  if (p[1] + 1 < m \text{ and}
    matrix[p[0]][p[1] + 1] == 1):
    q.append((p[0], p[1] + 1))
  return count
def main():
  matrix = [ [ 1, 0, 0, 1 ],
     [ 1, 1, 1, 1 ],
     [1,0,1,1]]
```

```
print(Maze(matrix))

if __name__ == "__main__" :
    main()
```

Screenshot:

