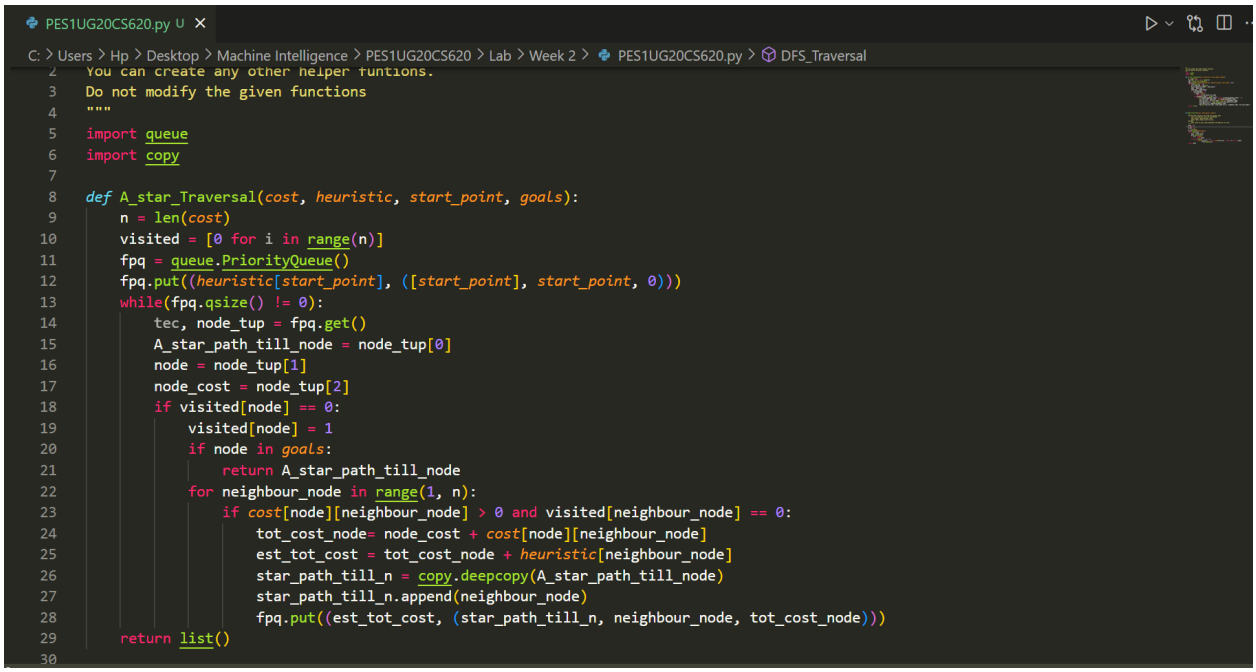
MI Assignment - Week 2

Name : Adarsh Subhas Nayak
SRN : PES1UG20CS620
Roll No : 54
Date : 18-08-2022

Code :



PES1UG20CS620.py U

C: > Users > Hp > Desktop > Machine Intelligence > PES1UG20CS620 > Lab > Week 2 > PES1UG20CS620.py > ...

```python

def DFS_Traversal(cost, start_point, goals):
    """
    Perform DFS Traversal and find the optimal path
        cost: cost matrix (list of floats/int)
        start_point: Staring node (int)
        goals: Goal states (list of ints)
    Returns:
        path: path to goal state obtained from DFS(list of ints)
    """
    path = []
    # TODO
    front = []
    n = len(cost)
    front.append(start_point)
    while len(front) != 0:
        curr = front.pop()
        path.append(curr)
        if curr in goals:
                return path
        for i in range(n - 1, 0, -1):
                if cost[curr][i] != -1 and cost[curr][i] != 0 and (i not in path):
                        front.append(i)
    return path


```

main* Run Testcases 0 0 Ln 6, Col 12 Spaces: 4 UTF-8 CRLF Python 3.10.1 64-bit Go Live

Output :

Select C:\Windows\System32\cmd.exe

```
C:\Users\Hp\Desktop\Machine Intelligence\PES1UG20CS620\Lab\Week 2>python SampleTest.py --SRN PES1UG20CS620
Test Case 1 for A* Traversal PASSED
Test Case 2 for DFS Traversal PASSED

C:\Users\Hp\Desktop\Machine Intelligence\PES1UG20CS620\Lab\Week 2>
```