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Batch B1

Assignment No. 2

Best First Search:

Code:

```
from queue import PriorityQueue
v = 6
graph = [[] for i in range(v)]

def bestFirst(sr, t, n):
    vis = [False] * n
    pq = PriorityQueue()
    pq.put((0, sr))
    vis[sr] = True

    while pq.empty() != True:
        u = pq.get()[1]
        print(u, end=" ")
        if u == t:
            break

        for v, c in graph[u]:
            if vis[v] == False:
                vis[v] = True
                pq.put((c, v))
    print()


def addedge(x, y, cost):
    graph[x].append((y, cost))
    graph[y].append((x, cost))


addedge(0, 1, 10)
addedge(0, 2, 7)
addedge(0, 3, 3)
addedge(1, 2, 17)
addedge(3, 5, 26)
addedge(2, 4, 5)
```

```
source = 0
t = 9
print("Best First of Tree : ")
bestFirst(source, t, v)


# Niraj Amrutkar
```

Output:

```
C:\Users\ADITYA\Desktop\Python>python -u "c:\Users\ADITYA\Desktop\Python\BestFirst.py"
Best First of Tree :
0 3 2 4 1 5
```