MP-1 PRACTICAL-5

1. Develop a python program to demonstrate the Initial Basic Solution in Transportation problem using NW method in Linear Programming (Stepping stone).

Code:

```
def north_west_corner(supply,demand):
    supply_copy = supply[:]
    demand_copy = demand[:]
    i = 0
    j = 0
    bfs = []
    while len(bfs) < len(supply) + len(demand) - 1:
        s= supply_copy[i]
        d= demand_copy[j]
        v = min(s,d)
        supply_copy[i] -= v
        demand_copy[j] -= v
        bfs.append(((i,j),v))
        if supply_copy[i] == 0 and i < len(supply) - 1:
            i += 1
        elif demand_copy[j] == 0 and j < len(demand) - 1:
            j += 1
    return bfs

supply = [30,70,50]
demand = [40,30,40,40]
bfs = north_west_corner(supply,demand)
print(bfs)
```

Output:-

```
supply = [30,70,50]
demand = [40,30,40,40]
bfs = north_west_corner(supply,demand)
print(bfs)
```

```
[((0, 0), 30), ((1, 0), 10), ((1, 1), 30), ((1, 2), 30), ((2, 2), 10), ((2, 3), 40)]
```