

Distance Vector Algorithm (Python)

IBM18CS002

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class vector:

def __init__(self, n):

self.matrix = []

self.n = n

def newedge(self, u, v, w):

self.matrix.append((u, v, w))

def display(self, dist, src):

print "vector or routing table of %d"

• format(chr(ord('A') + src))

for i in range(self.n):

print "%d\t\t" % i, format(chr(ord('A') + i))

• format(chr(ord('A') + i), dist[i])

~~def path~~

def BellmanFord(self, src):

dist = [99] * self.n

dist[src] = 0

for _ in range(self.n - 1):

for u, v, w in self.matrix:

if dist[u] != 99 and dist[u] + w < dist[v]:

```
dist[v] = dist[u] + w  
self.display(dist, src)
```

```
matrix = []
```

```
print("Enter no of routes")
```

```
n = int(input())
```

```
print("Enter adj matrix")
```

```
for i in range(n):
```

```
    g = list(map(int, input().split(" ")))
```

```
    matrix.append(g)
```

```
g = graph Vector(n)
```

```
for i in range(n):
```

```
    for j in range(n):
```

```
        if matrix[i][j] == 1:
```

```
            g.newedge(i, j, 1)
```

```
for _ in range(n):
```

```
    g.Bellmanford(-)
```