

Distance vector algo.

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IBM18CS013

```
class Graph():
```

```
    def __init__(self, vert):
```

```
        self.numvert = vert
```

```
        self.graph = []
```

```
    def addEdge(self, fr, to, weight):
```

```
        self.graph.append([fr, to, weight])
```

```
    def printDist(self, r, arr):
```

```
        print("Distances from" + str(r))
```

```
        for i in range(self.numvert):
```

```
            print(str(i) + "\t" * 2 + str(arr[i]))
```

```
    def fun(self, source):
```

```
        cost = [float('inf')] * self.numvert
```

```
        cost[source] = 0
```

```
        for _ in range(self.numvert - 1):
```

```
            for fr, to, weight in self.graph:
```

```
                if cost[fr] != float('inf') and cost[fr] +  
                    weight < cost[to]:
```


$cost[ta] = cost[fr] + weight$

$self.print_dist(source, cost)$