

106) Floyd algorithm

CODE:

```
def
floyd_algorithm(graph):
n = len(graph)    dist =
graph
    for k in range(n):    for i in range(n):    for j in range(n):
dist[i][j] = min(dist[i][j], dist[i][k] + dist[k][j])

    return dist
graph =
[
    [0, 5, float('inf'), 10],
    [float('inf'), 0, 3, float('inf')],
    [float('inf'), float('inf'), 0, 1],
    [float('inf'), float('inf'), float('inf'), 0]
]
result =
floyd_algorithm(graph) for
row in result:    print(row)
```

OUTPUT:

```
C:\Windows\system32\cmd.e: X + v
[0, 5, 8, 9]
[inf, 0, 3, 4]
[inf, inf, 0, 1]
[inf, inf, inf, 0]
Press any key to continue . . . |
```

TIME COMPLEXITY : $O(n^3)$