

106) Floyd algorithm

CODE:

```
def floyd_algorithm(graph):
    n = len(graph)
    dist = graph

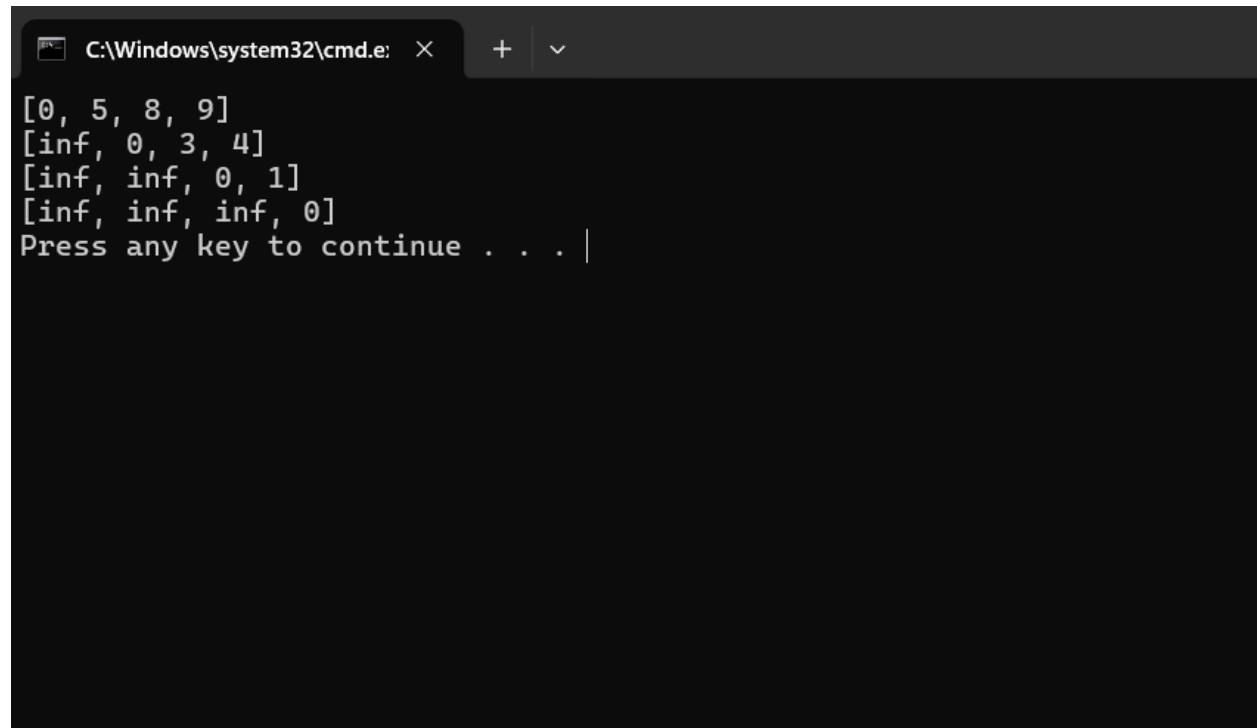
    for k in range(n):
        for i in range(n):
            for j in range(n):
                dist[i][j] = min(dist[i][j], dist[i][k] + dist[k][j])

    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 : $O(n^3)$