Find Closest Node to Given Two Nodes
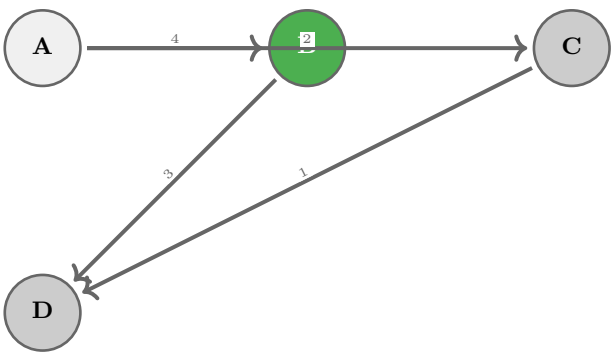
`current_node=B, result=-1, min_max_dist=∞`

Pseudocode:

```
def find_closest_node(graph, node1, node2):
    # Perform BFS from both nodes
    dist1 = BFS(graph, node1)
    dist2 = BFS(graph, node2)
    min_max_dist = float('inf')
    result = -1
    for node in graph:
        if dist1[node] != -1 and dist2[node] != -1:
            curr_max = max(dist1[node], dist2[node])
            if curr_max < min_max_dist:
                min_max_dist = curr_max
                result = node
    return result

def BFS(graph, start):
    dist = {node: -1 for node in graph}
    queue = deque([start])
    dist[start] = 0
    while queue:
        current = queue.popleft()
        for neighbor in graph[current]:
            if dist[neighbor] == -1:
                dist[neighbor] = dist[current] + 1
                queue.append(neighbor)
    return dist
```

Frontier (BFS from A)

List:

Frontier (BFS from B)

List:

Distances from A

| 0 | 1 | 1 | 2 |

Distances from B

| - | 0 | - | 1 |

Variables

current_node	B
result	-1
min_max_dist	∞