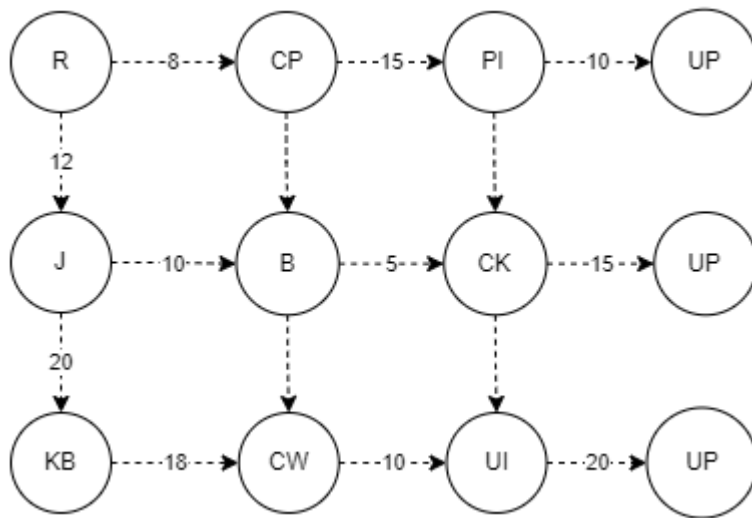Jawaban a

R: Undagi Residence Setu,

CP: Ciputat,

PI: Pondok Indah,

J: Jatiwaringin,

B: Buaran,

CK: Cikokol,

KB: Kebayoran Baru,

CW: Cawang,

UI: Universitas Indonesia,

UP: Universitas Pamulang Kampus 3

Jawaban b

```python
jarak_terdekat.py > [∅] city_names
1    import heapq
2
3    def dijkstra(graph, start):
4        distances = {node: float('inf') for node in graph}
5        distances[start] = 0
6
7        queue = [(0, start)]
8
9        while queue:
10           current_distance, current_node = heapq.heappop(queue)
11
12           if current_distance > distances[current_node]:
13               continue
14
15           for neighbor, weight in graph[current_node].items():
16               distance = current_distance + weight
17
18               if distance < distances[neighbor]:
19                   distances[neighbor] = distance
20                   heapq.heappush(queue, (distance, neighbor))
21
22       return distances
23
```

```python
24   # Buat graf berbobot untuk representasi jarak antar simpul
25   graph = {
26       'R': {'CP': 8, 'J': 12, 'KB': 20},
27       'CP': {'PI': 15},
28       'PI': {'UP': 10},
29       'J': {'B': 10},
30       'B': {'CK': 5},
31       'CK': {'UP': 15},
32       'KB': {'CW': 18},
33       'CW': {'UI': 10},
34       'UI': {'UP': 20},
35       'UP': {}
36   }
37
38   # Tambahkan nama kota untuk setiap simpul
39   city_names = {
40       'R': 'Undagi Residence Setu',
41       'CP': 'Ciputat',
42       'PI': 'Pondok Indah',
43       'J': 'Jatiwaringin',
44       'B': 'Buaran',
45       'CK': 'Cikokol',
46       'KB': 'Kebayoran Baru',
47       'CW': 'Cawang',
48       'UI': 'Universitas Indonesia',
49       'UP': 'Universitas Pamulang Kampus 3'
50   }
51
52   start_node = 'R'
53   distances = dijkstra(graph, start_node)
54
55   # Hitung jarak terpendek dari simpul awal ke simpul tujuan
56   end_node = 'UP'
57   shortest_distance = distances[end_node]
58   print("Jarak terpendek dari", city_names[start_node], "ke", city_names[end_node], ":", shortest_distance, "km")
59
```

Jarak terdekat: