

Chạy tay thuật toán:

Ta có graph = {1: [2, 3, 4], 2: [7], 3: [6, 8], 4: [5], 5: [14], 6: [12], 7: [3], 8: [9, 10], 9: [11], 10: [], 11: [10, 15], 12: [13], 13: [14], 14: [11], 15: [16], 16: [17], 17: [18], 18: []}

BFS:

L = [1]

1  
current = 1  
L = [2,3,4]

7  
current = 8  
L = [5,12,9,10]

13  
current = 13  
L = [11]

2  
current = 2  
L = [3,4,7]

8  
current = 5  
L = [12,9,10,14]

14  
current = 11  
L = [15]

3  
current = 3  
L = [4,7,6,8]

9  
current = 12  
L = [9,10,14,13]

15  
current = 15  
L = [16]

4  
current = 4  
L = [7,6,8,5]

10  
current = 9  
L = [10,14,13,11]

16  
current = 16  
L = [17]

5  
current = 7  
L = [6,8,5]

11  
current = 10  
L = [14,13,11]

17  
current = 17  
L = [18]

6  
current = 6  
L = [8,5,12]

12  
current = 14  
L = [13,11]

18  
current = 18

Path :

1 → 3 → 8 → 9 → 11 → 15 → 16 → 17 → 18

DFS :

L = [1]

1  
current = 1  
L = [2,3,4]

4  
current = 14  
L = [2,3,11]

7  
current = 16  
L = [2,3,10,17]

2  
current = 4  
L = [2,3,5]

5  
current = 11  
L = [2,3,10,15]

8  
current = 17  
L = [2,3,10,18]

3  
current = 5  
L = [2,3,14]

6  
current = 15  
L = [2,3,10,16]

9  
current = 18

Path :

1 → 4 → 5 → 14 → 11 → 15 → 16 → 17 → 18

UCS :

Queue = (0, 1)

1  
current\_node = 1, current\_w = 0  
Queue = (50, 2), (350, 3), (300, 4)

2  
current\_node = 2, current\_w = 50  
Queue = (300, 4), (350, 3), (650, 7)

3  
current\_node = 4, current\_w = 300  
Queue = (350, 3), (650, 7), (1600, 5)

4  
current\_node = 3, current\_w = 350  
Queue = (450, 6), (1250, 8), (650, 7), (1600, 5)

5  
current\_node = 6, current\_w = 450  
Queue = (650, 7), (1150, 12), (1600, 5), (1250, 8)

6  
current\_node = 7, current\_w = 650  
Queue = (1150, 12), (1250, 8), (1600, 5)

7  
current\_node = 12, current\_w = 1150  
Queue = (1250, 8), (1600, 5), (2100, 13)

8  
current\_node = 8, current\_w = 1250  
Queue = (1550, 10), (1600, 5), (2040, 9), (2100, 13)

9  
current\_node = 10, current\_w = 1550  
Queue = (1600, 5), (2100, 13), (2040, 9)

10  
current\_node = 5, current\_w = 1600  
Queue = (2040, 9), (2100, 13), (3000, 14)

11  
current\_node = 9, current\_w = 2040  
Queue = (2100, 13), (3000, 14), (3240, 11)

12  
current\_node = 13, current\_w = 2100  
Queue = (3000, 14), (3240, 11)

13  
current\_node = 14, current\_w = 3000  
Queue = (3240, 11)

14  
current\_node = 11, current\_w = 3240  
Queue = (3640, 15)

15  
current\_node = 15, current\_w = 3640  
Queue = (4940, 16)

16

current\_node = 16, current\_w = 4940

Queue = (5710, 17)

17

current\_node = 17, current\_w = 5710

Queue = (6910, 18)

Path :

1 → 3 → 8 → 9 → 11 → 15 → 16 → 17 → 18

Cost: 6910

Thuật toán đã cho sẵn code là đúng.

Kết quả chạy tay phù hợp với kết quả trên máy tính.