#### Girdi 1:



t = 2

### Output step by step:

Shortest paths from A to B: [['A', 'B']] Shortest paths from A to C: [['A', 'B', 'C']] Shortest paths from A to D: [['A', 'B', 'D']] Shortest paths from A to E: [['A', 'B', 'D', 'E']] Shortest paths from B to A: [['B', 'A']] Shortest paths from B to C: [['B', 'C']] Shortest paths from B to D: [['B', 'D']] Shortest paths from B to E: [['B', 'D', 'E']] Shortest paths from C to A: [['C', 'B', 'A']] Shortest paths from C to B: [['C', 'B']] Shortest paths from C to D: [['C', 'B', 'D']] Shortest paths from C to E: [['C', 'B', 'D', 'E']] Shortest paths from D to A: [['D', 'B', 'A']] Shortest paths from D to B: [['D', 'B']] Shortest paths from D to C: [['D', 'B', 'C']] Shortest paths from D to E: [['D', 'E']] Shortest paths from E to A: [['E', 'D', 'B', 'A']] Shortest paths from E to B: [['E', 'D', 'B']] Shortest paths from E to C: [['E', 'D', 'B', 'C']] Shortest paths from E to D: [['E', 'D']] Edge ('A', 'B'): 4 times Edge ('B', 'C'): 4 times Edge ('B', 'D'): 6 times Edge ('D', 'E'): 4 times

## En yüksek ara kesici değere sahip olan kenar B-D'dir.

**BD** silindi

Topluluk Sayısı: 2 Topluluk 1: A, B, C Topluluk 2: D, E

#### Girdi 2:

```
A G --- H
I / I I
D --- E --- F --- I --- J
```

#### t = 2

```
Output step by step:
Shortest paths from A to D: [['A', 'D']]
Shortest paths from A to E: [['A', 'D', 'E']]
Shortest paths from A to F: [['A', 'D', 'E', 'F']]
Shortest paths from A to I: [['A', 'D', 'E', 'F', 'I']]
Shortest paths from A to G: [['A', 'D', 'E', 'F', 'G']]
Shortest paths from A to H: [['A', 'D', 'E', 'F', 'G', 'H']]
Shortest paths from A to J: [['A', 'D', 'E', 'F', 'I', 'J']]
Shortest paths from D to A: [['D', 'A']]
Shortest paths from D to E: [['D', 'E']]
Shortest paths from D to F: [['D', 'E', 'F']]
Shortest paths from D to I: [['D', 'E', 'F', 'I']]
Shortest paths from D to G: [['D', 'E', 'F', 'G']]
Shortest paths from D to H: [['D', 'E', 'F', 'G', 'H']]
Shortest paths from D to J: [['D', 'E', 'F', 'I', 'J']]
Shortest paths from E to A: [['E', 'D', 'A']]
Shortest paths from E to D: [['E', 'D']]
Shortest paths from E to F: [['E', 'F']]
Shortest paths from E to I: [['E', 'F', 'I']]
Shortest paths from E to G: [['E', 'F', 'G']]
Shortest paths from E to H: [['E', 'F', 'G', 'H']]
Shortest paths from E to J: [['E', 'F', 'I', 'J']]
Shortest paths from F to A: [['F', 'E', 'D', 'A']]
Shortest paths from F to D: [['F', 'E', 'D']]
Shortest paths from F to E: [['F', 'E']]
Shortest paths from F to I: [['F', 'I']]
Shortest paths from F to G: [['F', 'G']]
Shortest paths from F to H: [['F', 'G', 'H']]
Shortest paths from F to J: [['F', 'I', 'J']]
Shortest paths from I to A: [['I', 'F', 'E', 'D', 'A']]
Shortest paths from I to D: [['I', 'F', 'E', 'D']]
Shortest paths from I to E: [['I', 'F', 'E']]
Shortest paths from I to F: [['I', 'F']]
Shortest paths from I to G: [['I', 'G']]
Shortest paths from I to H: [['I', 'G', 'H'], ['I', 'J', 'H']]
Shortest paths from I to J: [['I', 'J']]
Shortest paths from G to A: [['G', 'F', 'E', 'D', 'A']]
Shortest paths from G to D: [['G', 'F', 'E', 'D']]
```

Shortest paths from G to E: [['G', 'F', 'E']] Shortest paths from G to F: [['G', 'F']]

```
Shortest paths from G to I: [['G', 'I']]
Shortest paths from G to H: [['G', 'H']]
Shortest paths from G to J: [['G', 'I', 'J'], ['G', 'H', 'J']]
Shortest paths from H to A: [['H', 'G', 'F', 'E', 'D', 'A']]
Shortest paths from H to D: [['H', 'G', 'F', 'E', 'D']]
Shortest paths from H to E: [['H', 'G', 'F', 'E']]
Shortest paths from H to F: [['H', 'G', 'F']]
Shortest paths from H to I: [['H', 'G', 'I'], ['H', 'J', 'I']]
Shortest paths from H to G: [['H', 'G']]
Shortest paths from H to J: [['H', 'J']]
Shortest paths from J to A: [['J', 'I', 'F', 'E', 'D', 'A']]
Shortest paths from J to D: [['J', 'I', 'F', 'E', 'D']]
Shortest paths from J to E: [['J', 'I', 'F', 'E']]
Shortest paths from J to F: [['J', 'I', 'F']]
Shortest paths from J to I: [['J', 'I']]
Shortest paths from J to G: [['J', 'I', 'G'], ['J', 'H', 'G']]
Shortest paths from J to H: [['J', 'H']]
Edge ('A', 'D'): 7 times
Edge ('D', 'E'): 12 times
Edge ('E', 'F'): 15 times
Edge ('F', 'I'): 8 times
Edge ('F', 'G'): 8 times
Edge ('G', 'H'): 7 times
Edge ('I', 'J'): 7 times
Edge ('G', 'I'): 3 times
Edge ('H', 'J'): 3 times
```

# En yüksek ara kesici değere sahip olan kenar E-F'dir. E-F silindi

## 2. İterasyon:

Shortest paths from A to D: [['A', 'D']] Shortest paths from A to E: [['A', 'D', 'E']] Shortest paths from A to F: [] Shortest paths from A to I: [] Shortest paths from A to G: [] Shortest paths from A to H: [] Shortest paths from A to J: [] Shortest paths from D to A: [['D', 'A']] Shortest paths from D to E: [['D', 'E']] Shortest paths from D to F: [] Shortest paths from D to I: [] Shortest paths from D to G: [] Shortest paths from D to H: [] Shortest paths from D to J: [] Shortest paths from E to A: [['E', 'D', 'A']] Shortest paths from E to D: [['E', 'D']] Shortest paths from E to F: [] Shortest paths from E to I: []

```
Shortest paths from E to G: []
Shortest paths from E to H: []
Shortest paths from E to J: []
Shortest paths from F to A: []
Shortest paths from F to D: []
Shortest paths from F to E: []
Shortest paths from F to I: [['F', 'I']]
Shortest paths from F to G: [['F', 'G']]
Shortest paths from F to H: [['F', 'G', 'H']]
Shortest paths from F to J: [['F', 'I', 'J']]
Shortest paths from I to A: []
Shortest paths from I to D: []
Shortest paths from I to E: []
Shortest paths from I to F: [['I', 'F']]
Shortest paths from I to G: [['I', 'G']]
Shortest paths from I to H: [['I', 'G', 'H'], ['I', 'J', 'H']]
Shortest paths from I to J: [['I', 'J']]
Shortest paths from G to A: []
Shortest paths from G to D: []
Shortest paths from G to E: []
Shortest paths from G to F: [['G', 'F']]
Shortest paths from G to I: [['G', 'I']]
Shortest paths from G to H: [['G', 'H']]
Shortest paths from G to J: [['G', 'I', 'J'], ['G', 'H', 'J']]
Shortest paths from H to A: []
Shortest paths from H to D: []
Shortest paths from H to E: []
Shortest paths from H to F: [['H', 'G', 'F']]
Shortest paths from H to I: [['H', 'G', 'I'], ['H', 'J', 'I']]
Shortest paths from H to G: [['H', 'G']]
Shortest paths from H to J: [['H', 'J']]
Shortest paths from J to A: []
Shortest paths from J to D: []
Shortest paths from J to E: []
Shortest paths from J to F: [['J', 'I', 'F']]
Shortest paths from J to I: [['J', 'I']]
Shortest paths from J to G: [['J', 'I', 'G'], ['J', 'H', 'G']]
Shortest paths from J to H: [['J', 'H']]
Edge ('A', 'D'): 2 times
Edge ('D', 'E'): 2 times
Edge ('F', 'I'): 2 times
Edge ('F', 'G'): 2 times
Edge ('G', 'H'): 4 times
Edge ('I', 'J'): 4 times
Edge ('G', 'I'): 3 times
Edge ('H', 'J'): 3 times
```

En yüksek ara kesici değere sahip olan kenar G-H ve I-J'dir. G-H ve I-J kenarları silindi

Topluluk Sayısı: 3 Topluluk 1: A, D, E Topluluk 2: F, I, G Topluluk 3: H, J