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DFS
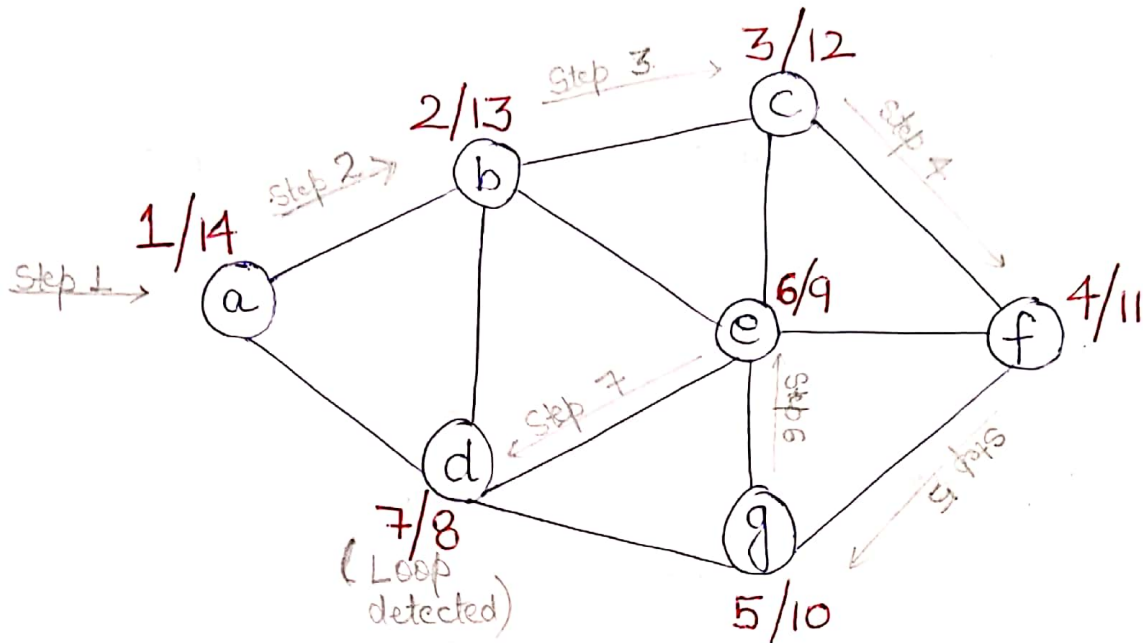
Q1

undirected graph

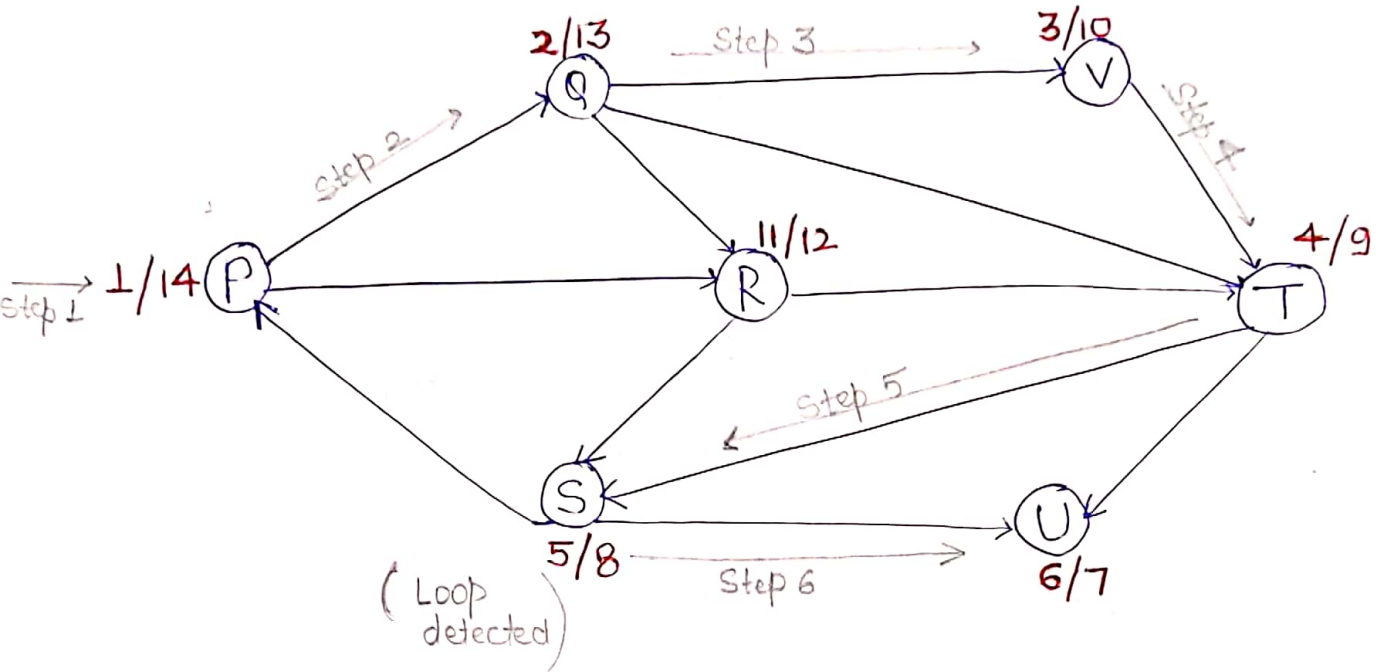$$[a, b, c, f, g, e, d]$$ LOOP is in the graph.

→ node ⓓ is visited from ⓔ at time 7

⇒ From ⓓ we can go to ⓔ, ⓕ, ⓑ, ⓐ

→ ⓔ was entered at time 6, but not departed.

→ ⓖ was entered at time 5, but not departed.

→ ⓑ was entered at time 2, but not departed.

→ ⓐ was entered at time 1, but not departed.

⇓

Conclusion → Loop

Q2

Directed graph

2/13   Step 3   →   3/10

Q   V

Step 2 →

Step 4

1/14 P   11/12   4/9

Step 1 →   R   T

Step 5 ←

S

5/8   U

(Loop   Step 6   6/7
detected)

[P, Q,R,V , T, S, U]   <u>LOOP</u> is in the graph

→ Node Ⓢ is visited from Ⓣ at time 5.

⇒ From Ⓢ , we can go to Ⓟ and Ⓤ

→ Ⓟ was entered at time 1, but not departed so we go to Ⓤ