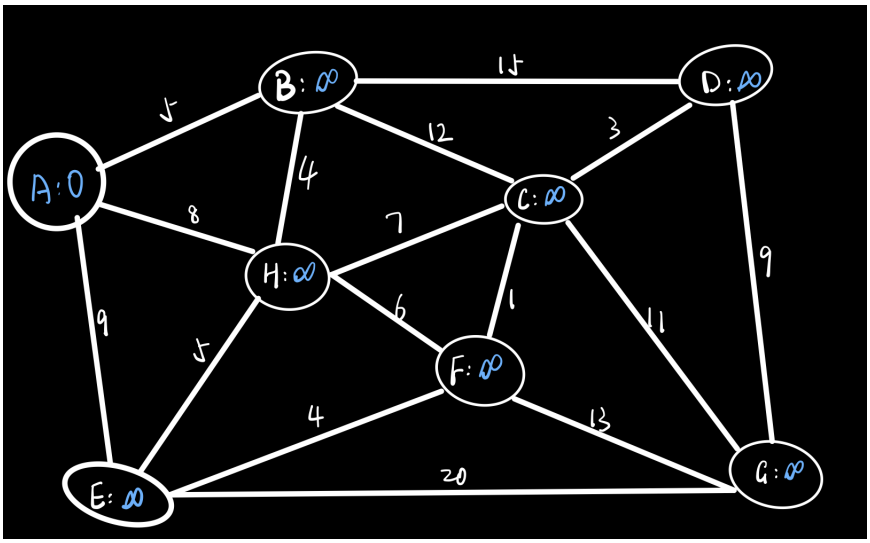
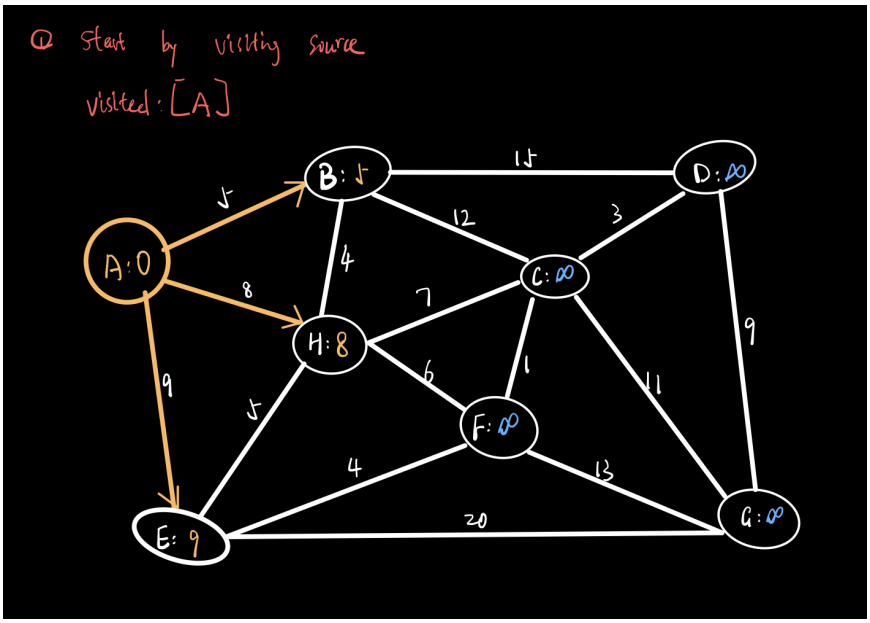
step-by-step

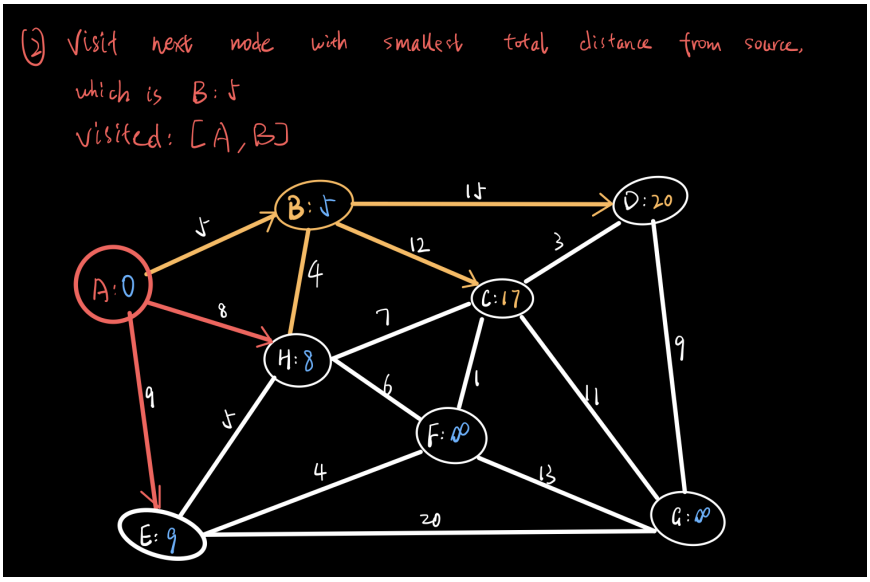
- initial:



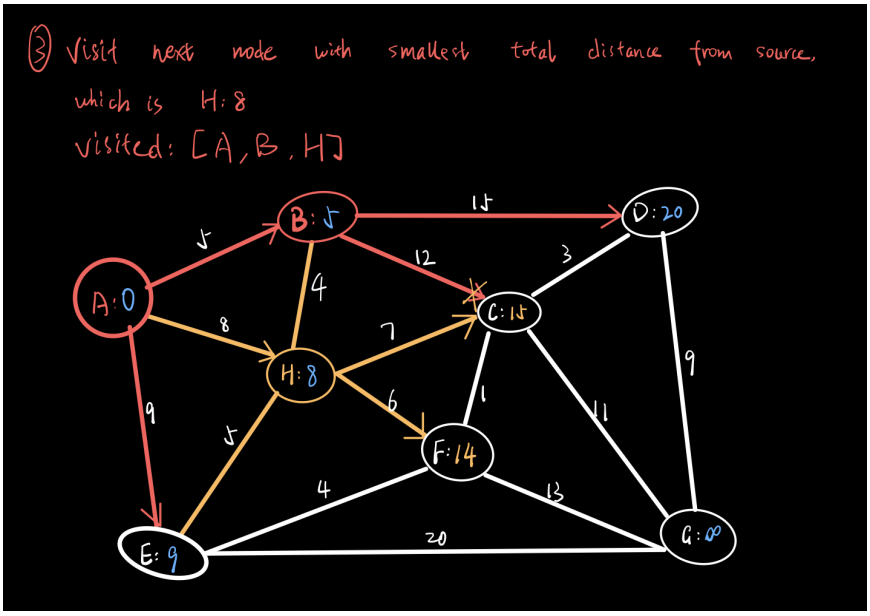
1. visit source `A`:



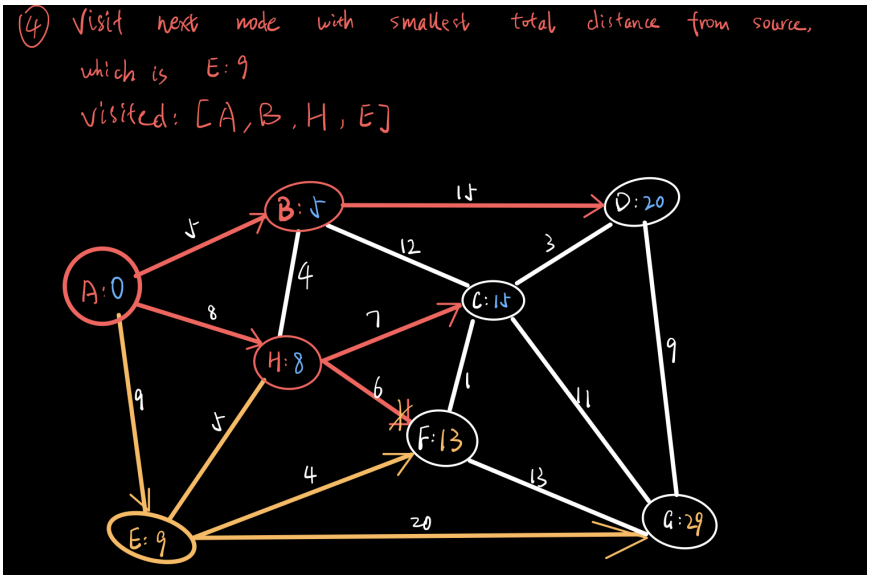
2. visit vertex `B`, which has the lowest total distance of `5` among all unvisited vertices:



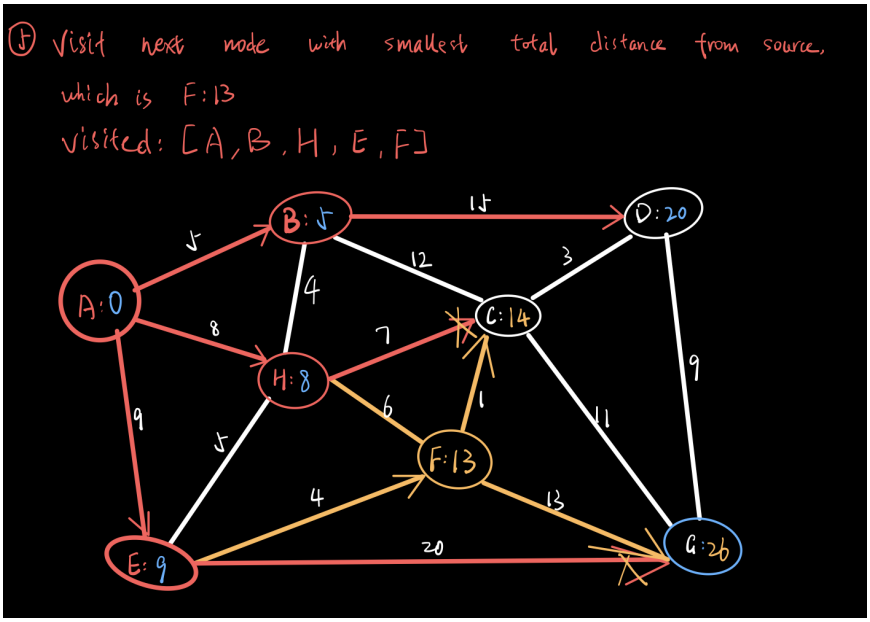
3. visit vertex `H`, which has the lowest total distance of `8` among all unvisited vertices:



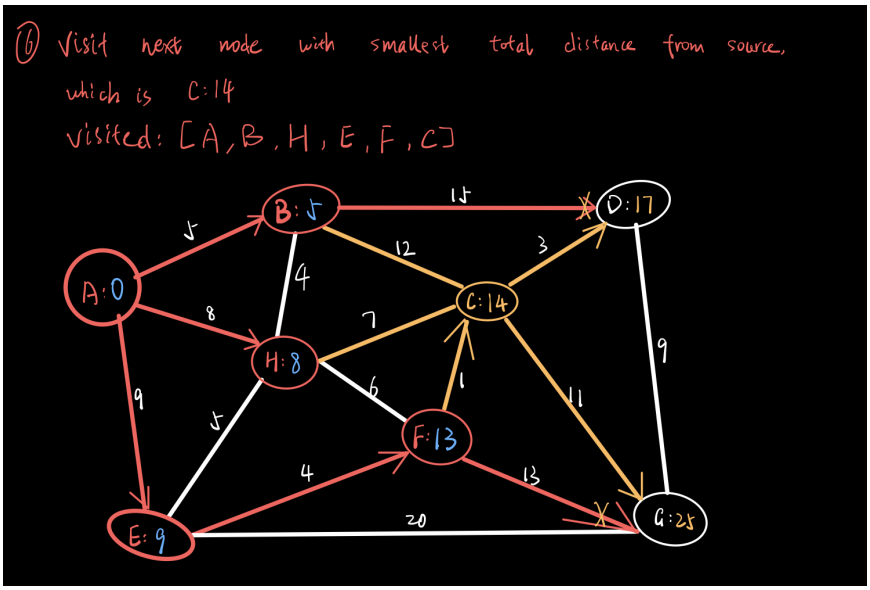
4. visit vertex `E`, which has the lowest total distance of `9` among all unvisited vertices:



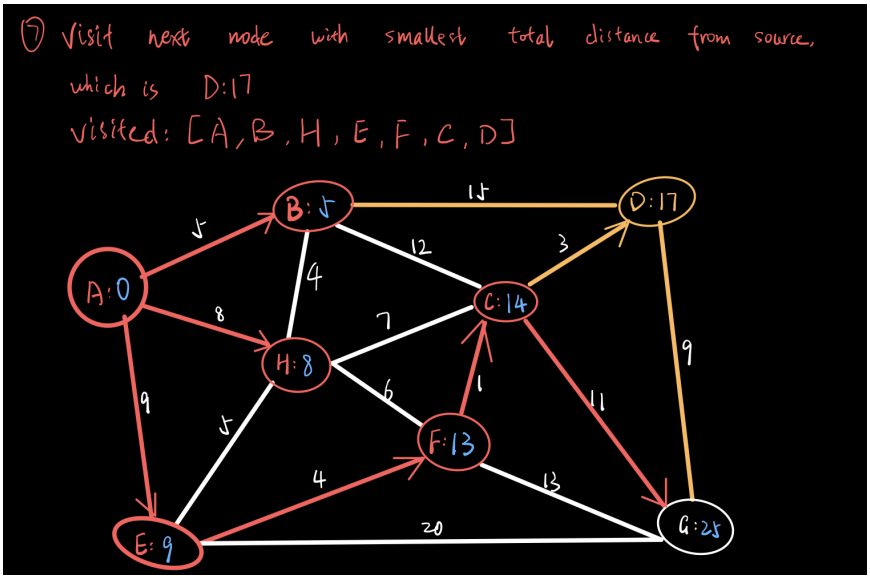
5. visit vertex `F`, which has the lowest total distance of `13` among all unvisited vertices:



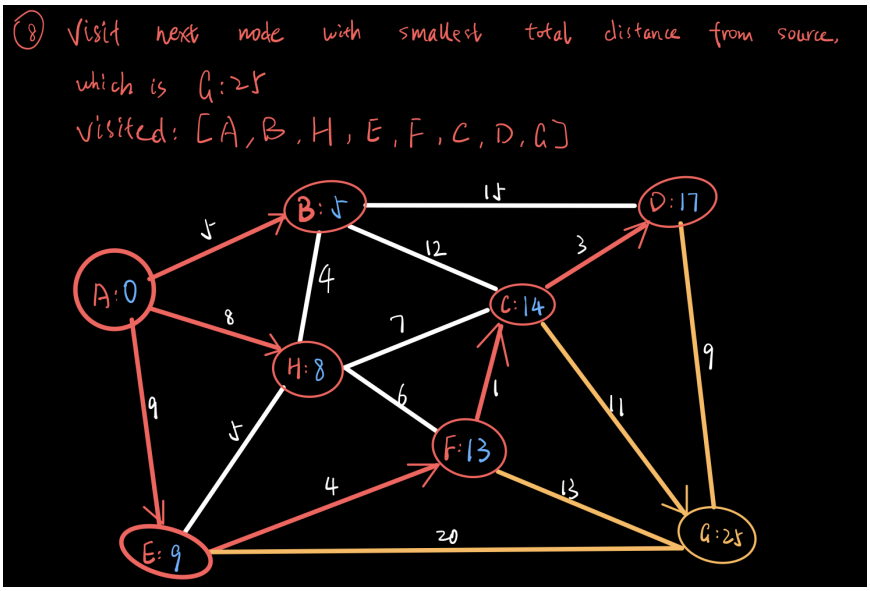
6. visit vertex `C`, which has the lowest total distance of `14` among all unvisited vertices:



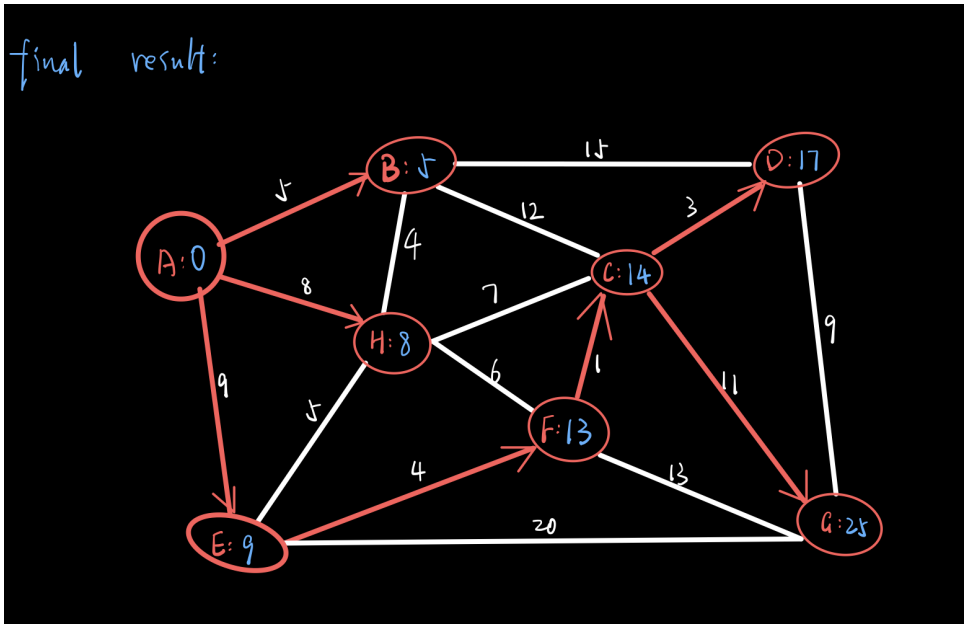
7. visit vertex `D`, which has the lowest total distance of `17` among all unvisited vertices:

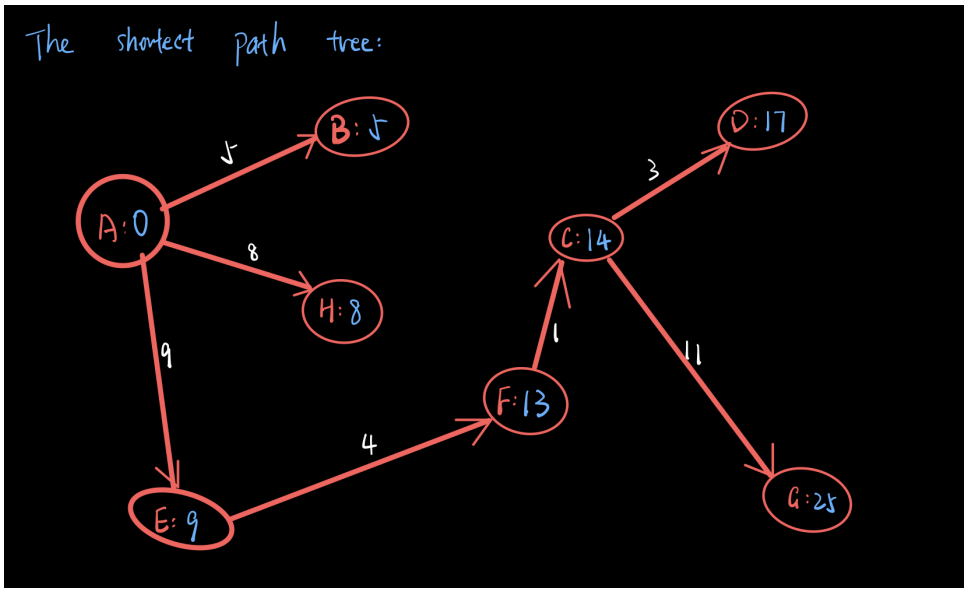


8. visit vertex `G`, which has the lowest total distance of `25` among all unvisited vertices:



- final & shortest path tree:




The shortest path tree:
A: 0
B: √
H: 8
E: 9
F: 13
C: 14
D: 17
G: 25
√
8
9
4
1
3
11