

INPUT FILE
OF VERT., # OF EDGES

[https://ranger.uta.edu/~weems/NOTES3318/dfs\\$CC.notes13.dat](https://ranger.uta.edu/~weems/NOTES3318/dfs$CC.notes13.dat)
[https://ranger.uta.edu/~weems/NOTES3318/dfs\\$CC.notes13.out](https://ranger.uta.edu/~weems/NOTES3318/dfs$CC.notes13.out)
<https://ranger.uta.edu/~weems/NOTES3318/LAB/LAB5FALL23/lab5a.dat>
<https://ranger.uta.edu/~weems/NOTES3318/LAB/LAB5FALL23/lab5a.out>

10 15 SCC 1 6 8 (# VERT, # EDGES)
0 9 → 01 3 source dfw → 01
1 4 → 02 8 source waco → 02
1 7 6 dfw lubbock
2 1 SCC 2 lubbock waco
3 6 1 lubbock sink
4 5 2 waco kemah
4 9 7 kemah dfw
5 0 SCC 3 kemah sink
6 8 4 *STLNG ≤ 25 CHAR*
6 9 SCC 4 { SRC, DFW, LUB, WAC, KEM, SINK } ≤ 6
7 2 0
7 5 5
8 0 9
8 3
9 5

DIRECTED EDGES
(TAIL, HEAD)

- 1ST EDGE
- READ SOURCE (PROCESS BLINDLY)
 - SEARCH SOURCE DURING WHICH COMPUTE H1 & H2 VALUE ($H1=11, H2=10$)
 - SOURCE FINDS -1 AT SLOT 11
STORE SOURCE (0)
 - STORE SOURCE AT 0

SUBSCRIPT
VERT #
(-1 = NEVER USED)

OUTPUT
① PRINT TABLES
② SUM PROBES
③ RUN SCC
↳ IN 2ND DFS,
CHANGE
OUTPUT FROM
VERT NUMBER
TO STRING
(TABLE 1)

11 10: 11 8
9 2 (waco) 9 7: 9
10 -1
11 0 (source) 11 10: 11

12 -1
Total probes: 11
SCC 1
source
SCC 2
dfw
kemah
waco
lubbock
SCC 3
sink

$$\frac{H_1=11}{\text{- Try slot 11 (TAKEN)}} \quad \frac{H_2=10}{\text{- } 11+10=21}$$

$$\begin{aligned} 21 \% 13 &= 8 \\ \text{- IF 8 TAKEN,} \\ \text{- } 8+10 &= 18 \\ 18 \% 13 &= 5 \end{aligned}$$

Double hash table size is 13
Names in order of first appearance:

0 source
1 dfw
2 waco
3 lubbock
4 sink
5 kemah

TABLE 1

0 → SRC → 0 → 11

Double hash table used while processing input:

0 5 (kemah) 0 3: 0
1 4 (sink) 9 6: 9 2 8 1
2 3 (lubbock) 8 7: 8 2
3 -1
4 -1
5 -1

PROBE

TABLE 2

6 -1
7 -1
8 1 (dfw) 11 10: 11 8
9 2 (waco) 9 7: 9
10 -1
11 0 (source) 11 10: 11

12 -1
Total probes: 11