EXERCISES

Section 2.7.

2. Derive and simplify the path expression for the flow graph in Figure 2.12. Assign reasonable cycle weights and compute the maximum number of paths in the graph and the minimum number of paths to reach all edges.

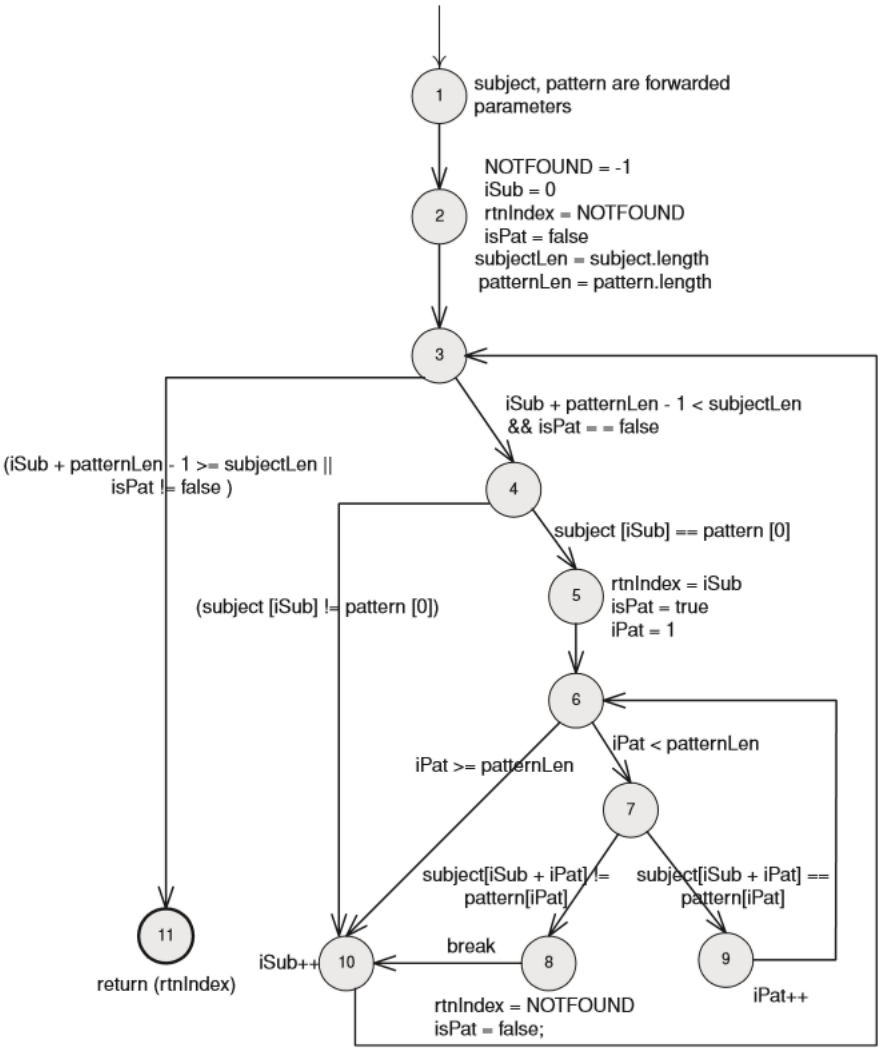
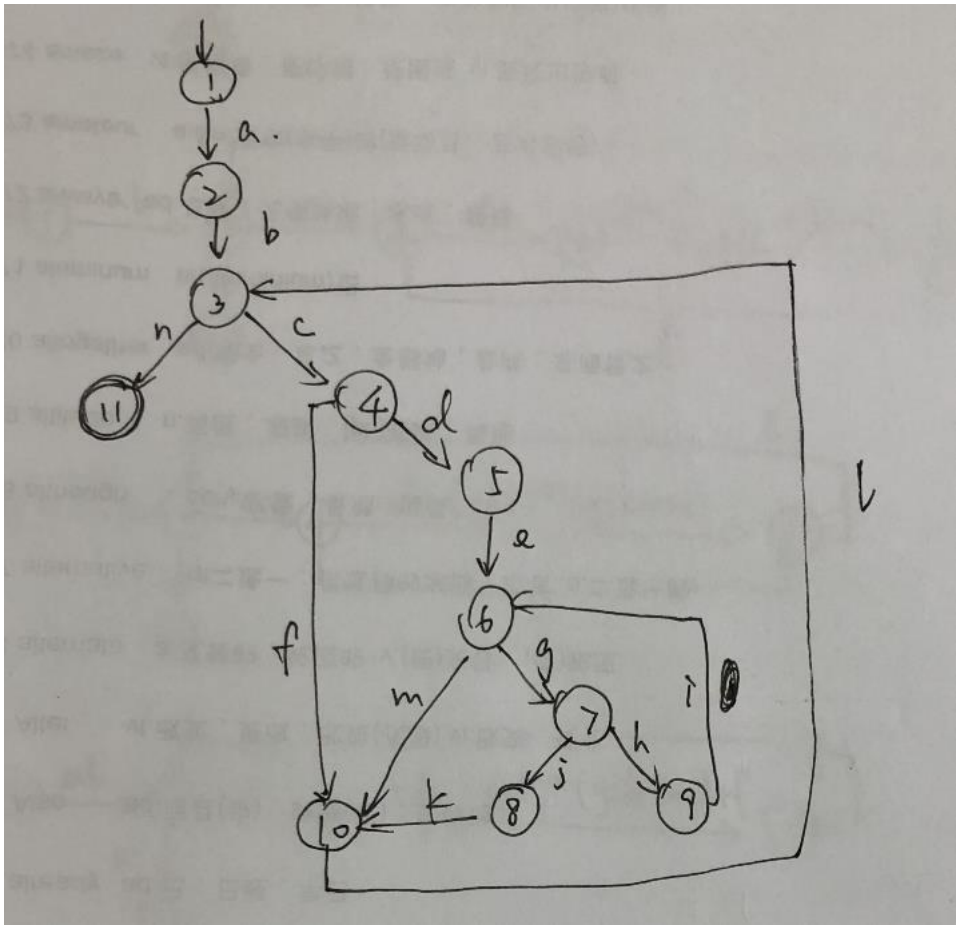


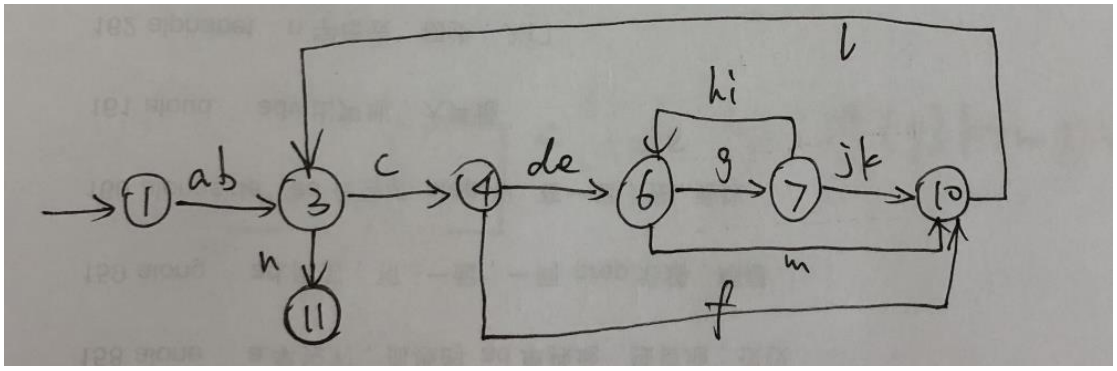
Figure 2.12. A graph showing an example of du-paths.

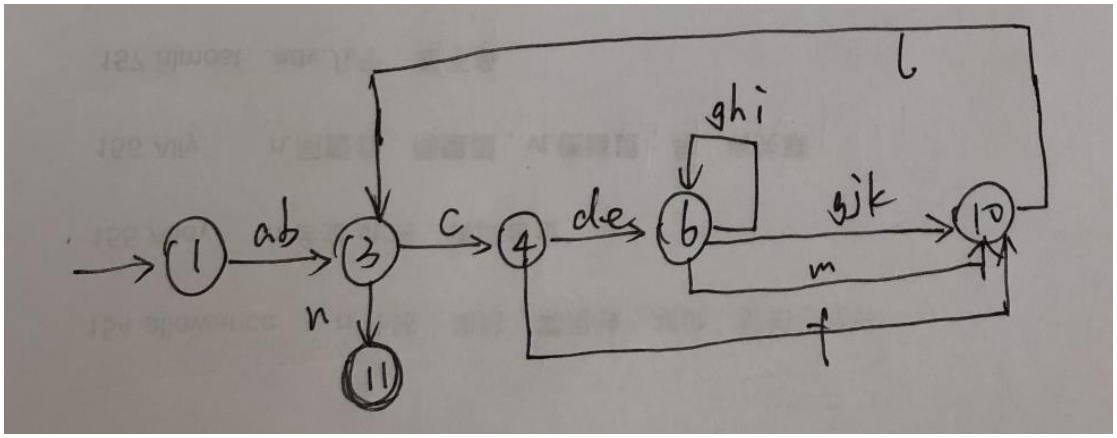
Solution:

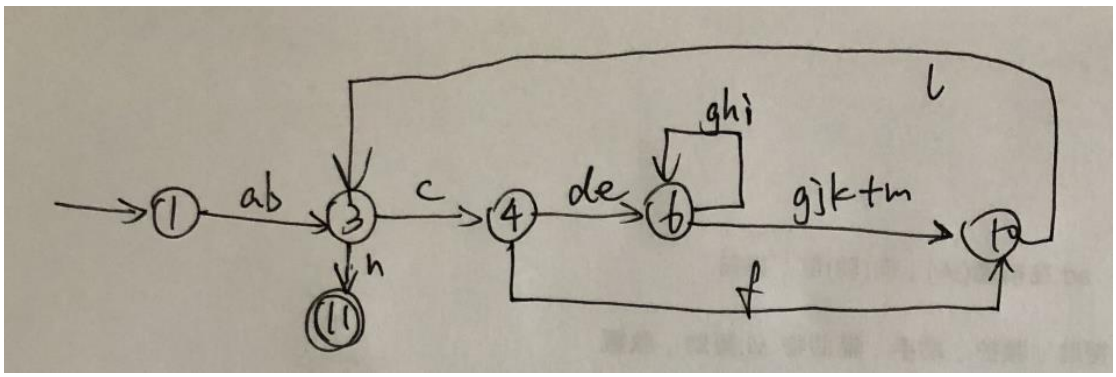
Derive the graph into the following graph for distinct solution:

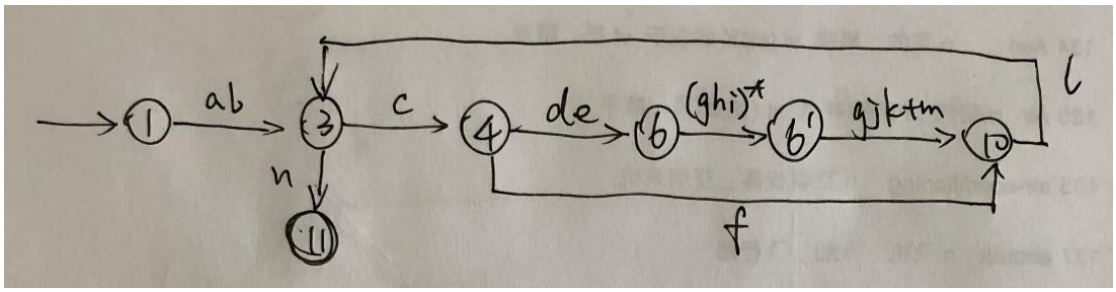


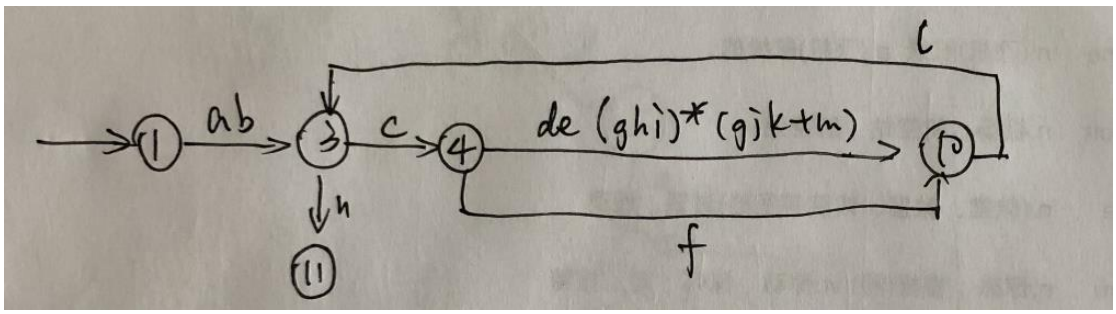
Then simplify it:

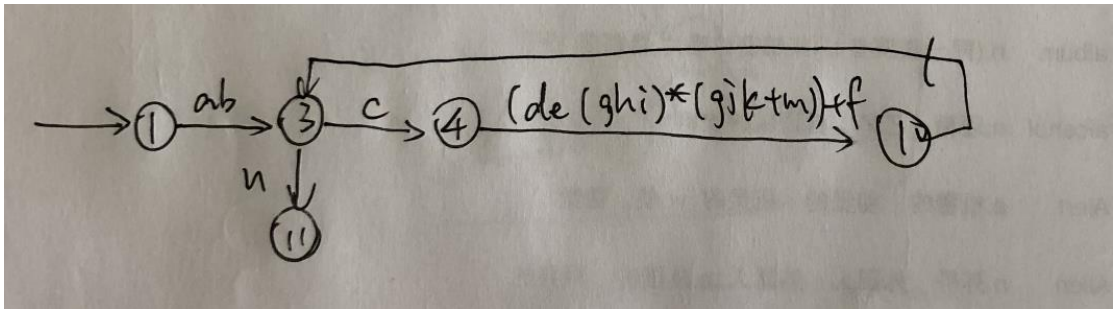


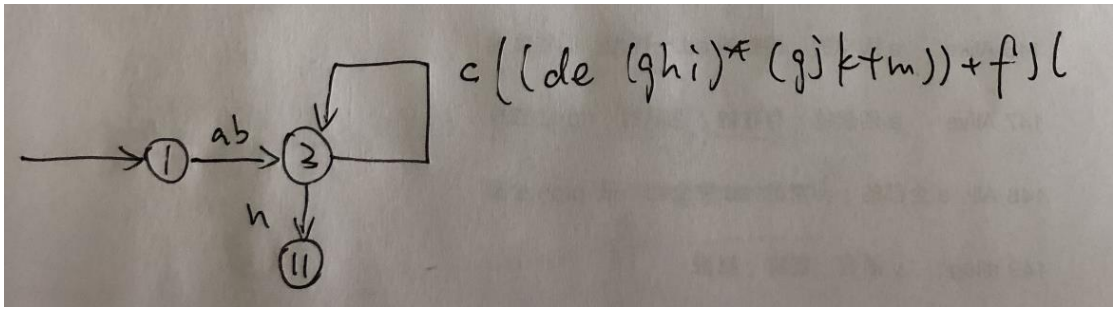












Path expression: ab[c((de(ghi)*(gjk+m))+f)l]*n

The maximum number of paths: ab[c((de(ghi)*(gjk+m))+f)l]*n

The minimum number of paths: 3