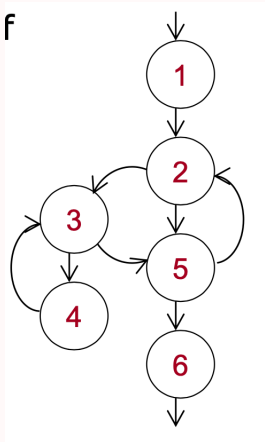


编译原理第十二次理论作业

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Given the following flow graph:



- Compute the dominators of all nodes.
- Find all back edges in the flow graph.
- Find all natural loops defined by each back edge.

1.

$D(1)=\{1\}$

$D(2)=\{1,2\}$

$D(3)=\{1,2,3\}$

$D(4)=\{1,2,3,4\}$

$D(5)=\{1,2,5\}$

$D(6)=\{1,2,5,6\}$

2.

$4 \rightarrow 3 \quad 5 \rightarrow 2$

3.

$\{3,4\}$ defined by $4 \rightarrow 3$

$\{2,3,4,5\}$ defined by $5 \rightarrow 2$