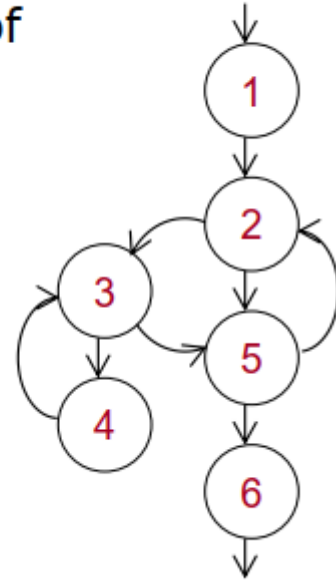


编译原理 第12次作业

Exercise 12.1

○ 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.



答:

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. $4 \rightarrow 3$ $5 \rightarrow 2$

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

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