

# 代码优化作业3

丁元杰 17231164

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## 14.6

到达定义流:

$$\begin{aligned} gen[B1] &= \{ \langle B1, 1 \rangle, \langle B1, 2 \rangle, \langle B1, 3 \rangle \} \\ kill[B1] &= \{ \langle B1, 1 \rangle, \langle B1, 2 \rangle, \langle B3, 1 \rangle \} \\ gen[B2] &= \{ \langle B2, 1 \rangle \} \\ kill[B2] &= \{ \langle B1, 1 \rangle, \langle B1, 2 \rangle, \langle B3, 1 \rangle \} \\ gen[B3] &= \{ \langle B3, 1 \rangle, \langle B3, 2 \rangle \} \\ kill[B3] &= \{ \langle B1, 1 \rangle, \langle B1, 2 \rangle, \langle B3, 1 \rangle \} \\ gen[B4] &= \{ \langle B4, 1 \rangle \} \\ kill[B4] &= \{ \langle B1, 1 \rangle, \langle B1, 2 \rangle, \langle B3, 1 \rangle \} \end{aligned}$$

迭代后结果:

$$\begin{aligned} in[B1] &= \{ \} \\ out[B1] &= \{ \langle B1, 1 \rangle, \langle B1, 2 \rangle, \langle B1, 3 \rangle \} \\ in[B2] &= \{ \langle B1, 1 \rangle, \langle B1, 2 \rangle, \langle B1, 3 \rangle \} \\ out[B2] &= \{ \langle B2, 1 \rangle, \langle B1, 3 \rangle \} \\ in[B3] &= \{ \langle B1, 1 \rangle, \langle B1, 2 \rangle, \langle B1, 3 \rangle \} \\ out[B3] &= \{ \langle B3, 1 \rangle, \langle B3, 2 \rangle, \langle B1, 3 \rangle \} \\ in[B4] &= \{ \langle B2, 1 \rangle, \langle B3, 1 \rangle, \langle B3, 2 \rangle, \langle B1, 3 \rangle \} \\ out[B4] &= \{ \langle B1, 3 \rangle, \langle B2, 1 \rangle, \langle B3, 2 \rangle \} \end{aligned}$$

使用-定义链数据流:

$$a:L1 = \{< B2,1 >\}$$

$$b:L2 = \{< B1,1 >, < B1,3 >, < B2,1 >, < B4,1 >\}$$

$$L3 = \{< B3,1 >, < B3,2 >, < B4,1 >\}$$

$$c:L4 = \{< B1,2 >, < B2,1 >, < B4,1 >\}$$

$$L5 = \{< B1,2 >, < B3,2 >, < B4,1 >\}$$

$$d:L6 = \{< B1,3 >\}$$

$$L7 = \{< B3,1 >\}$$

$$e:L8 = \{< B4,1 >\}$$