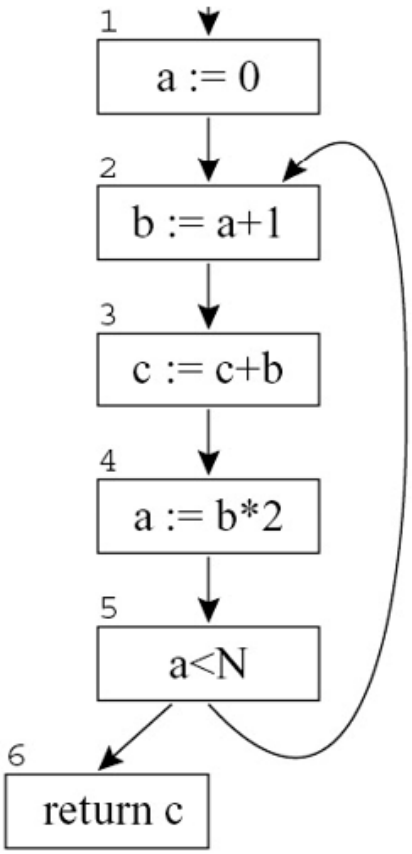
Reaching Definition Analysis Exercise



Kill and gen functions:

l	$Kill_{RD}(l)$	$Gen_{RD}(l)$
1	{(a,?),(a,1),(a,4)}	{(a,1)}
2	{(b,?),(b,2)}	{(b,2)}
3	{(c,?),(c,3)}	{(c,3)}
4	{(a,?),(a,1),(a,4)}	{(a,4)}
5	**Ø**	**Ø**
6	**Ø**	**Ø**

Equations:

$RD_{entry}(1) = \{(a,?),(b,?),(c,?)\}$

$RD_{entry}(2) = RD_{exit}(1) \cup RD_{exit}(5)$

$RD_{entry}(3) = RD_{exit}(2)$

$RD_{entry}(4) = RD_{exit}(3)$

$RD_{entry}(5) = RD_{exit}(4)$

$RD_{entry}(6) = RD_{exit}(5)$

$RD_{exit}(1) = (RD_{entry}(1) \setminus \{(a,?),(a,1),(a,4)\} \cup \{(a,1)\}$

$RD_{exit}(2) = (RD_{entry}(2) \setminus \{(b,?),(b,2)\} \cup \{(b,2)\}$

$RD_{exit}(3) = (RD_{entry}(3) \setminus \{(c,?),(c,3)\} \cup \{(c,3)\}$

$RD_{exit}(4) = (RD_{entry}(4) \setminus \{(a,?),(a,1),(a,4)\} \cup \{(a,4)\}$

$RD_{exit}(5) = RD_{entry}(5)$

$RD_{exit}(6) = RD_{entry}(6)$

Smallest solution:

l	$RD_{entry}(l)$	$RD_{exit}(l)$
1	{(a,?),(b,?),(c,?)}	{(a,1),(b,?),(c,?)}
2	{(a,1),(b,?),(c,?),(a,4),(c,3),(b,2)}	{(a,1),(c,?),(a,4),(c,3),(b,2)}
3	{(a,1),(c,?),(a,4),(c,3),(b,2)}	{(a,1),(a,4),(c,3),(b,2)}
4	{(a,1),(a,4),(c,3),(b,2)}	{(a,4),(c,3),(b,2)}
5	{(a,4),(c,3),(b,2)}	{(a,4),(c,3),(b,2)}
6	{(a,4),(c,3),(b,2)}	{(a,4),(c,3),(b,2)}