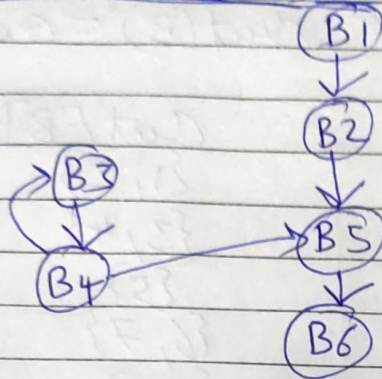


CD CATZ - Q.4a)
Q.4a)

CD CATZ - Q.4a)



	In	Out
B1	0	B2
B2	B1	B5
B3	B4	B4
B4	B3	B3, B5
B5	B2, B4	B6
B6	B5	0

B1 : (1) $A = 1$

(2) $B = 2$

B2 : (3) $C = A + B$

(4) $D = C - A$

B3 : (5) $D = B * D$

B4 : (6) $D = A + B$

(7) $E = E + 1$

B5 : (8) $B = A + B$

(9) $E = C - A$

B6 : (10) $A = B * D$

(11) $B = A - D$

Step 1: Calculate Gen & Kill

Block	Gen	Kill
B1	In B {1, 2}	Out B {8, 10, 11}
B2	{3, 4}	{5, 6}
B3	{5}	{4, 6}
B4	{6, 7}	{4, 5, 9}
B5	{8, 9}	{2, 7, 11}
B6	{10, 11}	{1, 2, 8}

Step 2: $In[B] = \emptyset$, $Out(B) = Gen(B)$

Block	$In[B]$	$Out[B]$
B 1	\emptyset	$\{1, 2\}$
B 2	\emptyset	$\{3, 4\}$
B 3	\emptyset	$\{5\}$
B 4	\emptyset	$\{6, 7\}$
B 5	\emptyset	$\{8, 9\}$
B 6	\emptyset	$\{10, 11\}$

Step 3: $Out[B] = In[B] - Kill[B] \cup Gen[B]$

Block	$In[B]$	$Out[B]$
B 1	\emptyset	$\{1, 2\}$
B 2	$\{1, 2\}$	$\{1, 2, 3, 4\}$
B 3	$\{6, 7\}$	$\{5, 7\}$
B 4	$\{6, 7\}$	$\{6, 7\}$
B 5	$\{3, 4, 6, 7\}$	$\{3, 4, 6, 8, 9\}$
B 6	$\{8, 9\}$	$\{9, 10, 11\}$

Step 4: $Out[B] = In[B] - Kill[B] \cup Gen[B]$

Block	$In[B]$	$Out[B]$
B 1	\emptyset	$\{1, 2\}$
B 2	$\{1, 2\}$	$\{1, 2, 3, 4\}$
B 3	$\{6, 7\}$	$\{5, 7\}$
B 4	$\{5, 7\}$	$\{6, 7\}$
B 5	$\{1, 2, 3, 4, 6, 7\}$	$\{1, 3, 4, 6, 8, 9\}$
B 6	$\{3, 4, 6, 8, 9\}$	$\{3, 4, 6, 9, 10, 11\}$

Step 5: $Out[B] = In[B] - kill[B] \cup gen[B]$

Block	$In[B]$	$Out[B]$
B 1	\emptyset	$\{1, 2\}$
B 2	$\{1, 2\}$	$\{1, 2, 3, 4\}$
B 3	$\{6, 7\}$	$\{5, 7\}$
B 4	$\{5, 7\}$	$\{6, 7\}$
B 5	$\{1, 2, 3, 4, 6, 7\}$	$\{1, 3, 4, 6, 8, 9\}$
B 6	$\{1, 3, 4, 6, 8, 9\}$	$\{3, 4, 6, 9, 10, 11\}$