Fetch Stage

Step 1

Memory

300	1	9	4	0
301	5	9	4	1
302	2	9	4	1
	.			
940	0	0	0	3
941	0	0	0	2

CPU Registers

3 0 0   PC
  AC
1 9 4 0   IR

Execute Stage

Step 2

Memory

300	1	9	4	0
301	5	9	4	1
302	2	9	4	1
	.			
940	0	0	0	3
941	0	0	0	2

CPU Registers

3 0 1   PC
0 0 0 3   AC
1 9 4 0   IR

Step 3

Memory

300	1	9	4	0
301	5	9	4	1
302	2	9	4	1
	.			
940	0	0	0	3
941	0	0	0	2

CPU Registers

3 0 1   PC
0 0 0 3   AC
5 9 4 1   IR

Step 4

Memory

300	1	9	4	0
301	5	9	4	1
302	2	9	4	1
	.			
940	0	0	0	3
941	0	0	0	2

CPU Registers

3 0 2   PC
0 0 0 5   AC
5 9 4 1   IR

$3 + 2 = 5$

Step 5

Memory

300	1	9	4	0
301	5	9	4	1
302	2	9	4	1
	.			
940	0	0	0	3
941	0	0	0	2

CPU Registers

3 0 2   PC
0 0 0 5   AC
2 9 4 1   IR

Step 6

Memory

300	1	9	4	0
301	5	9	4	1
302	2	9	4	1
	.			
940	0	0	0	3
941	0	0	0	5

CPU Registers

3 0 3   PC
0 0 0 5   AC
2 9 4 1   IR

Figure 1.4 Example of Program Execution
(contents of memory and registers in hexadecimal)