

**Assignment No. 1 (Marks=10; Due Date: 17-01-2021)**

**Question No. 1:**

The hypothetical machine shown in Figure 1 also has two I/O instructions:

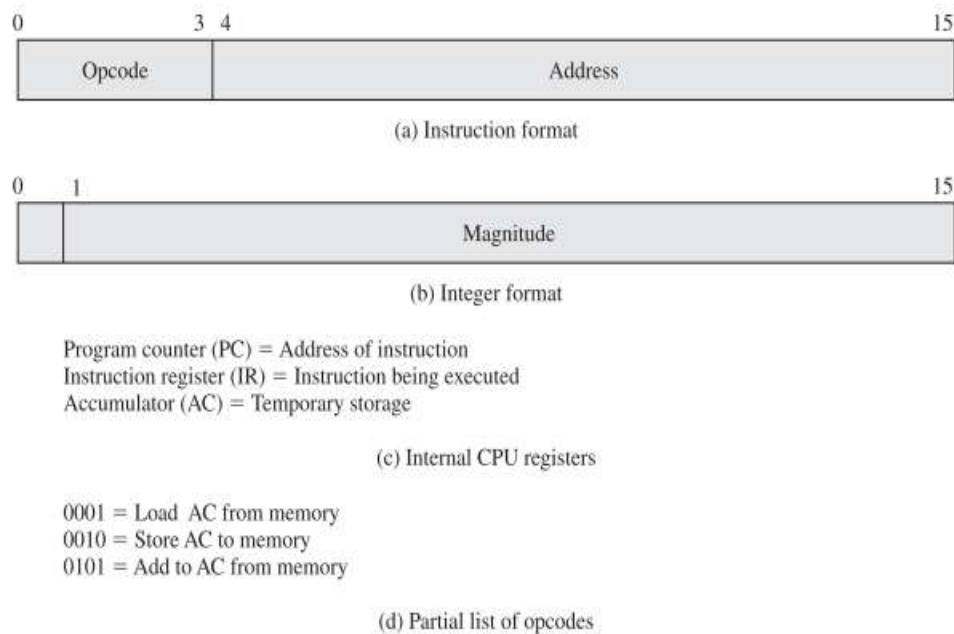


Figure 1: Characteristics of Hypothetical Machine

1. 0011 Load AC from I/O
2. 0111 Store AC to I/O

In these cases, the 12-bit address identifies a particular I/O device. Show the program execution (using the format of Figure 2) for the following program:

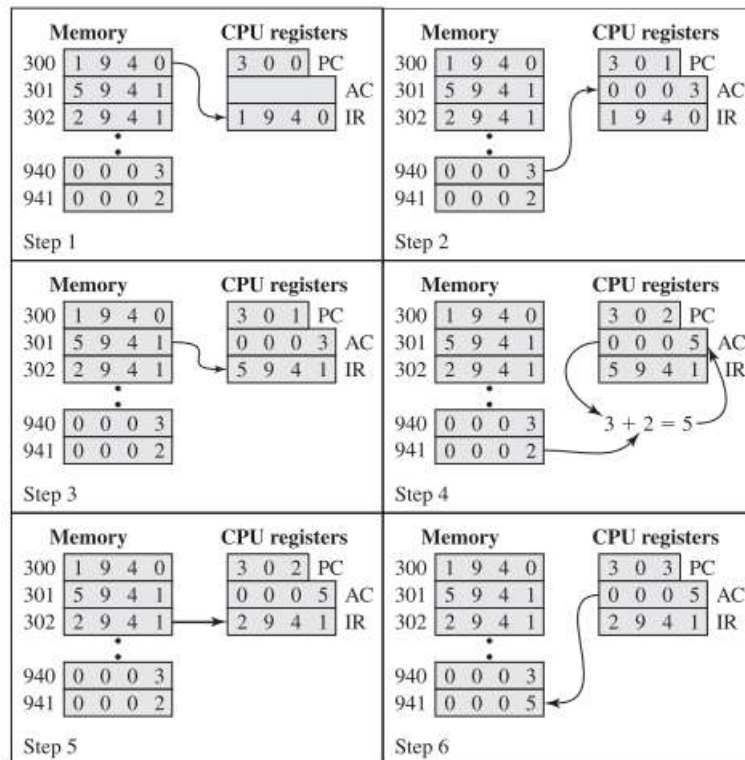


Figure 2: Example of Program Execution

1. Load AC from device 5.
2. Add contents of memory location 940.
3. Store AC to device 6.

Assume that the next value retrieved from device 5 is 3 and that location 940 contains a value of 2.