CSE 471 L. Snyder

Review Questions

1. What is the meaning of: `SR ← Mem[MAR]` ?

2. Explain how a microprogrammed computer executes ISA instructions.

3. Explain the difference between "vertical microcode," and "horizontal microcode."

4. The three broad classifications of computers used in this course -- L/S, R/M and R+M differ in several essential features. State the properties of the three classes, give a "type machine" for each class, and identify points on which they differ.

5. Explain the difference between 1's complement and 2's complement representations.

6. Floating point representations vary widely. Express 31.25 in IBM S/390, VAX and IEEE Standard floating point.

7. Write a "two operand" and a "three operand" assembly language programs to compute the area of a triangle given by pairs of single precison floating point numbers that are the cartesian coordinates (1st quadrant) of its vertices.

8. Set up a sample user ID, segment table and page table, and illustrate the conversion of a virtual address to a 24-bit physical address, using the simple mapping scheme in Figure 1.24.

9. Illustrate timing for a 4 instruction sequence from one of your programs in problem 7.