ESE-2005 Lab 7 Assembly language

Exercise

1. The ARM architecture has a register set that consists of 16 32-bit registers. Is it possible to design a computer architecture without a register set? If so, briefly describe the architecture, including the instruction set. What are advantages and disadvantages of this architecture over the ARM architecture?

2. Consider memory storage of a 32-bit word stored at memory word 32 in a byte-addressable memory.

   a) What is the byte address of memory word 32?

   b) What are the byte addresses that memory word 32 spans?

   c) Draw the number 0xFF223344 stored at word 32 in both big-endian and little-endian machines. Clearly label the byte address corresponding to each data byte value.