1. Number system – Chapter 1
   1. Unsigned, signed, 2’s complement
   2. Hex-decimal-binary
   3. Familiar with ASCII values too
2. Computer organization – Chapter 2
   1. Architecture
   2. Function of the clock
   3. Basic organization
   4. Instruction-execution cycle
   5. Reading and writing to memory
      1. Cycles
      2. Synchronous read/write occurs
   6. Cache: Cache hit, cache miss
   7. Protected mode, real-address mode, system management mode
   8. Registers
   9. Status flags
   10. Segmented memory, linear address computation for real address mode
   11. Paging
3. Fundamentals – Chapter 3
   1. Adding and subtracting integers
   2. Assemble-link-execute cycle
   3. .lst file
   4. Map file
   5. Data definitions
      1. Little endian order
      2. =, EQU, $
4. Data transfers, addressing, arithmetic – Chapter 4
   1. Immediate, Register-Register
   2. Memory: Direct, indirect, offset, base index, base index w. display
   3. Movsx, movzx
   4. Inc, dec, add, sub, neg
   5. Flags
      1. Impact of arithmetic on flags
   6. Offset operator, type, ptr, lengthof, sizeof, label directive
   7. Jmp, loop
5. HW5 – Addressing modes
6. Review HWs and solutions, class notes/lectures, book, problems in the book, ignore 64-bit architecture
   1. 1.7.1, 2.5.2, 2.8