Final Exam Study Guide

Chapter 4

* How addition, subtraction, Negation affects the Flags for signed and unsigned numbers. (section 4.2)
* Data related operator – OFFSET (Section 4.3.1), PTR (Section 4.3.3), TYPE (Section 4.3.4), LENGTHOF (Section 4.3.5), SIZEOF (Section 4.3.6)
  + Indexed operand to access array items
* Jump instruction (Section 4.5.1)
* Loop instruction (section 4.5.2)

Chapter 6 – Conditional Processing

* Boolean instructions
  + - AND, OR, XOR, NOT, TEST, CMP and their effect on CPU Flags
* Conditional jumps based – (Section 6.3)
  + Flags
  + Equality
  + Unsigned comparison
  + Signed comparison
* Conditional structures –
  + If else,
  + Compound expression, short circuit evaluation
  + While loop

Chapter 7 – Integer Arithmetic

* Various shift instructions
* MUL, IMUL, DIV, IDIV instructions in details
* Evaluate expression with multiplication and division (see examples in Discussion sessions)

Chapter 5 – Procedures

* Stack operations – push and pop
* Creating procedures
* CALL and RET instructions
* Nested procedure call

Chapter 8 – Advanced Procedure

* Stack frame
  + Stack Parameters
  + Passing Arguments
  + Accessing Stack Parameters
  + Cleaning Up the Stack
  + Saving and Restoring Registers

Chapter 12 –

* Binary floating point to decimal floating-point conversion
* Floating point binary representation
* IEEE Floating point representation
* Normalized binary floating-point numbers
* Converting a single precision to decimal, decimal to single precision