Chapter 1

* Section 1.3 Data representation –
  + Binary
  + Decimal
  + Octal
  + Hexadecimal
  + Number conversion between any two number systems
  + Signed binary integers and 2’s Complement
  + Addition and subtraction – binary, hexadecimal, octal
  + Section 1.3.6

Chapter 2

* Components of a micro-computer (Book section 2.1.1)
  + ALU
  + Control Unit
  + Clock
* Instruction execution cycle (Book Section 2.1.2)
  + How a single instruction executed through Instruction execution cycle
* Memory Read/Write operations
  + Steps of reading and writing into memory
* 32-bit General purpose registers
  + Make sure you understand their special usage
  + Also, their 8-bit, and 16-bit names
* 32-bit Control flags
  + How these flags change after executing an arithmetic operation.
* Input/output systems
  + How an application program process Input/ Output operations

Chapter 3 (Go through the topics in details)

Lots of examples are shown during Lectures

Topics:

* Basic Language elements
  + **Integer constants**
  + Integer expressions
  + Character and string constants
  + Reserved words and identifiers
  + Directives
  + Instructions
* Example: Addition and subtraction of integers
  + Meaning and purpose of the directives
* Assembling, Linking and Running programs
  + Listing files
* Defining Data (Book section 3.4)
  + Understand how data type works
  + Strings
  + DUP operator
  + Little endian, big endian order
* Symbolic constants
  + How to compute array size and string size

Chapter 4

* Mov, movzx, movsx, xchg instruction in details.
* What are the valid mov instructions
* When do you use movzx and movsx
* Xchg value between two variables.