G51CSA Lecture Notes #4

Reading: Main text, Chapter 3 + Chapter 2 in reference B and relevant Chapters in reference C

1. Computer Components

    *   von Neumann Architecture
    *   CPU
    *   Memory
    *   I/O

2. Bus Interconnection

    *   Device interfaces
    *   Address Bus
    *   Data Bus
    *   Control Bus

3. Instruction Execution

    *   Instruction Fetch
    *   Instruction Execution
    *   Interrupts

4. Bus Systems

    *   Bus Types: Dedicated (Non-multiplexed) and Multiplexed
    *   Arbitration Methods: Centralised; Distributed
    *   Timing: Synchronous; Asynchronous
    *   PCI