1. Buses
    a. Key characteristic of bus

    b. Functional groups
        i. Data lines
        ii. Address lines

        iii. Control lines

    c. Types of buses
        i. Dedicated

        ii. Time multiplexed

2. Bus hierarchies
    a. Remember, shared transmission medium
    b. Multiple bus hierarchies

        i. Traditional

        ii. High performance

        iii. For high performance, place important devices closer to CPU

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3. Bus specifics
    a. Bus width

    b. Bus clock time

        i. Example below, want to determine throughput (bits / second) of a bus
            1. 32-bit bus, 1 GHz input clock
            2. Bus cycle takes at least 100 input cycles

    c.   How to arbitrate a bus

    d.   Methods of bus arbitration
         i.   Centralized

         ii.   Distributed

    e.   Timing mechanisms
         i.   Synchronous

         ii.   Asynchronous