Jose Ramos

Kristen Sparrow

Microcomputers - CIS 225

Assignment 2

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**Define the following key Microcomputer Terms:**

1. **Microprocessor**: It is the part of a computer that contains all the functions of a central processing unit.
2. **Bus**: The bus is a communication system that transfers data between components inside a computer.
3. **I/0**: “I” represents input, and “0” represents output.
4. **Binary instructions**: It is the way that a computer reads instructions. It is represented in 0s and 1s.
5. **Machine Language**: It is a computer programming language which consists of binary or hexadecimal instructions that a computer can respond to directly.
6. **Microcode**: It is a very low-level instruction set which is stored permanently in a computer or peripheral controller and controls the operation of the device.
7. **Address Bus**: It is used to transfer data between devices. The devices are identified by the hardware address of the physical memory (the physical address). The address is stored in the form of binary numbers to enable the data bus to access memory storage.
8. **Data Bus**: A data bus is a bus designated to transfer data to and from the memory of a computer, or into or out of the central processing unit (CPU) that acts as the device's "engine." It can also transfer information between two computers.
9. **Processor Size**: It refers to the memory space that a processor may have. Processors size are multiples of a “Word size”, that is equal to 16 bits.
10. **Byte** = 8 bits.
11. **Nibble** = 4 bits.
12. **Word** = 16 bits.
13. **Memory word**: a “word” is a unit that a machine uses when working with memory. Depending on the memory word size of a computer will process that amount of bits at once.
14. **Buffer**: it is a region of physical memory storage used to temporarily store data while it is being moved from one place to another.
15. **Latch** – a storage device that can store 1 bit. The latch includes 8 latches on 1 chip that can store 8 bits –used to receive information
16. **Mnemonics**: is an abbreviation for an operation.
17. **Assembly Language**: machine instructions represented in mnemonics.
18. **Assembler**: is a program that takes basic computer instructions and converts them into a pattern of bits that the computer's processor can use to perform its basic operations.
19. **Register**: is one of a small set of data holding places that are part of the computer processor.
20. **Opcode**: Opcode means “operation code”. It is the portion of a machine language instruction that specifies the operation to be performed.
21. **Operand**: is the part of a computer instruction which specifies what data is going to be manipulated or operated on the instruction.