COMPUTER AND INFORMATION TECHNOLOGY

Course Code:510113
BBA -2nd Semester

Chapter 2

Fundamental of Computer Hardware

Lecture 06

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2.11 Display Adapter

A plug-in card in a desktop computer that performs graphics processing. Also called "graphics card".

1. The Graphics Pipeline:

The display adapter perform two operations. The first is the graphics rendering, which moves the graphics data through a pipeline that creates the image frame and adds texture and shading.

2. Analog and Digital Output:

The second and more elementary purpose is to continuously convert the graphic pattern that have been rendered in the memory frame buffers into signals for the monitor's screen.

2.12 Pixel and Resolution

1. Pixel:

Every photograph, in digital form, is made up of pixels. They are smallest unit of information that makes up a picture

2. Resolution:

The number of pixels in an image is sometimes called the resolution. If we are using the term to describe pixel count, one convention is to express resolution as the width by the height, example 1280*1024.

3. Measurement and Picture Quality:

Image resolution describes the amount of detail that an image contains. The term can be applied to digital images, film images, and prints. The bottom point is that higher resolution means more image detail.

2.16 Keyboard Buffer

A keyboard buffer is a very small partition of memory that is usually stored in the computer memory in random access memory and captures all the keystrokes made on a keyboard.

Once the keystroke is processed, the buffer removes that keystroke memory.

2.17 How Does a Keyboard Buffer Function

How does a keyboard function:

- ✓ When a key is pressed a tiny chip called keyboard controller notes that a key has been pressed.
- ✓ The code of that key is placed into the keyboard buffer
- ✓ The keyboard controller send a signal to the compute's operating systems to notify
- ✓ The operating system reads the memory location in the keyboard buffer
- ✓ The operating systems then passes the code to the CPU
- ✓ The CPU then process the code

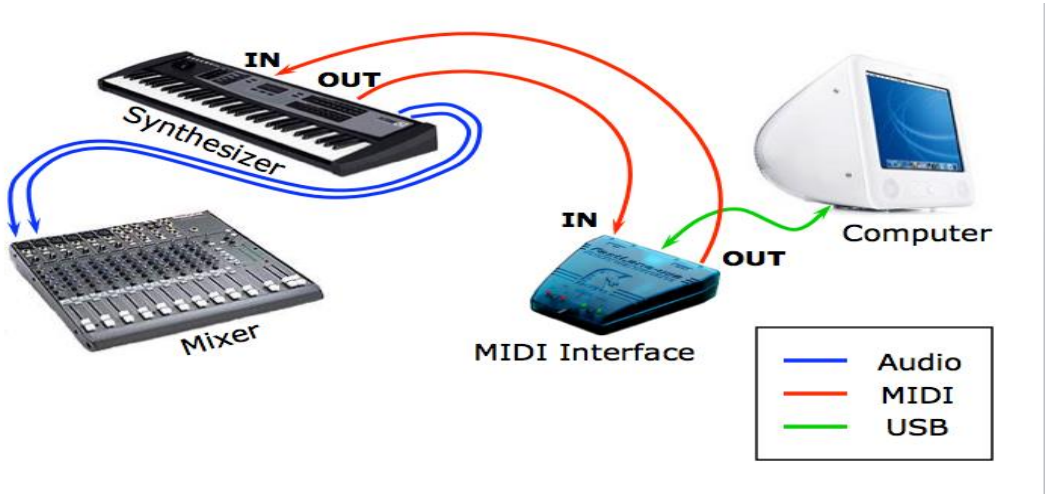
2.18 Connector Code Meaning and Resolution

Code	Description	Resolution
VGA	Video Graphics Array	640*480
SVGA	Super Video Graphics Array	300*600
XGA	Extended Graphics Array	1024*768

2.19 MIDI

MIDI stands for "Musical Instrument Digital Interface". It is connectivity standard that musicians use to hook together musical instruments and computer equipment.

Using MIDI, a musician can easily create and edit digital music tracks. The MIDI system records the notes played, the length of the notes, the dynamics, the tempo, the instrument being played, and hundreds of other parameters, called control changes.



2.20 Components of Multimedia PC:

A multimedia PC is made of the same basic components as any other PC. But it has better parts than entry level.

1. Processor
2. Memory
3. Graphics Card
4. Sound Card
5. Optical Drive
6. Hard drive

2.22 Classification of Memory Devices:

Following list gives a few classification of memory devices:

1. Primary memory and secondary memory
2. Volatile and non-volatile memory
3. Read only and writeable storage
4. Random access and sequential access storage
5. Magnetic storage
6. Optical storage
7. Semiconductor storage

2.23 Memory used in Different Stages

1. **Primary memory**

Primary memory is the storage devise that is directly connected to the CPU and store data temporarily during execution. RAM is the example of primary memory.

2. Secondary memory

It is usually used for more permanent storage of data.

- Floppy disk
- Hard disks
- Optical disk

3. Tertiary storage

non directly connected to the computer. The tertiary storage mechanism usually used for storage of large volume of data such as backup .

2.24 Volatile and Non-volatile storage

Volatile memory needs constant power in order to retain the stored data. Once the power goes out, the data is also lost instantly.

Non-volatile is ideal for storing data for long term storage. It does not lost it data if power supply goes off.

2.24 Read only and Writeable Storage

1. ROM- Read Only Memory
2. PROM- Programmable Read Only Memory
3. EPROM- Erasable Programmable Read Only Memory
4. EEPROM- Electrically Erasable Programmable Read Only Memory