# REVIEW LESSON

# Concept Covered On the Midterm

- Computer Hardware
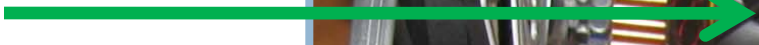- Networking
- HTML
- Dreamwearver

# Computer Hardware

# Components of the computer

- Hard drive (HDD)
- Optical Drive (CR-Rom)
- Memory (RAM)
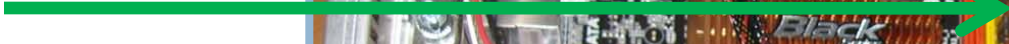- Processor (CPU)
- Power Supply
- CMOS Battery

# Inside Parts of a Computer



CPU+
Heat sink

RAM

Video Card

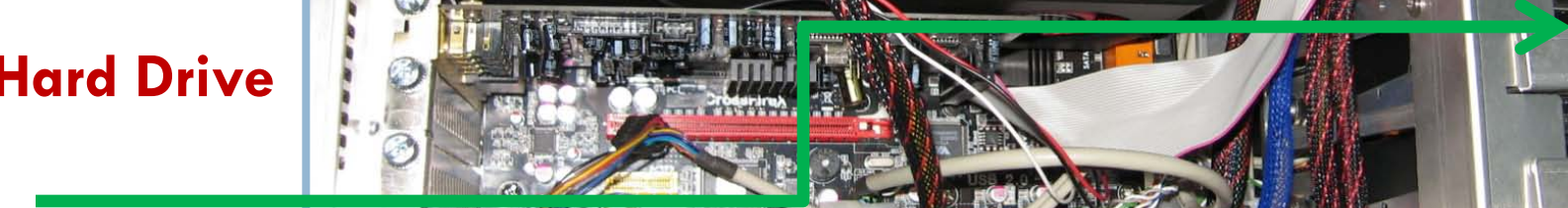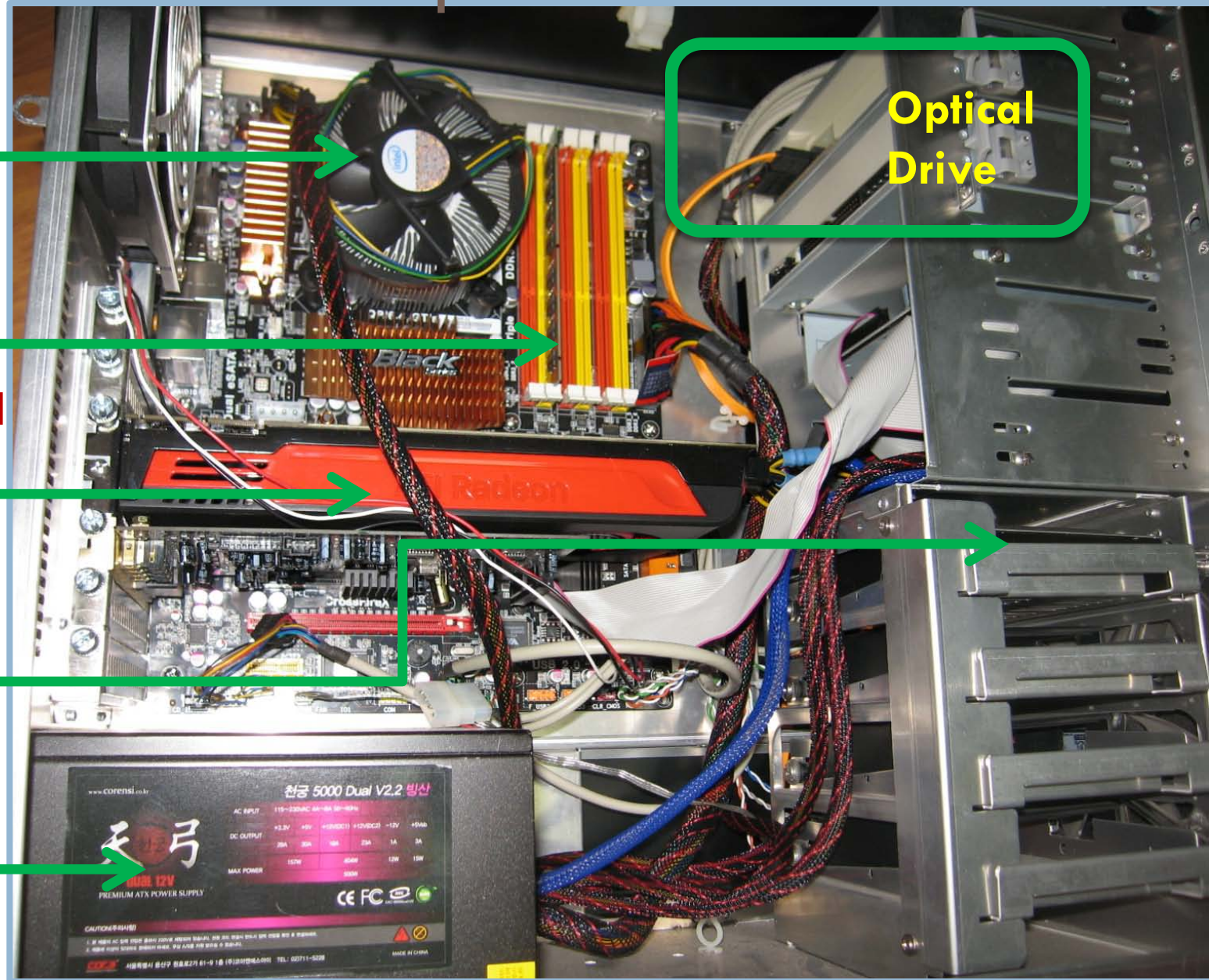Hard Drive

Power
Supply

Optical
Drive
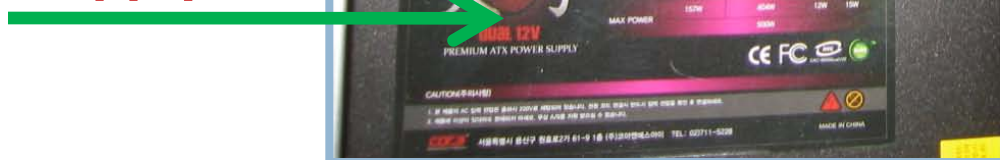
# The CPU

What is it?

# The Central Processing Unit

- Most important memory chip on the computer
- Does most of the data processing (calculations)
- It is responsible for managing the activities of the entire system
- Speed is measure in gigahertz (GHz)
  - 1 GHz can do 1 billion instructions per second.

# CPU

- Made up of three main parts
  - Arithmetic Logic Unit (ALU)
  - Registers
  - Control Unit

# Registers

**ALU**

R$_0$

R$_1$

R$_2$

R$_3$

R$_4$

R$_n$

**Control Unit**

PC

IR

# CPU to RAM
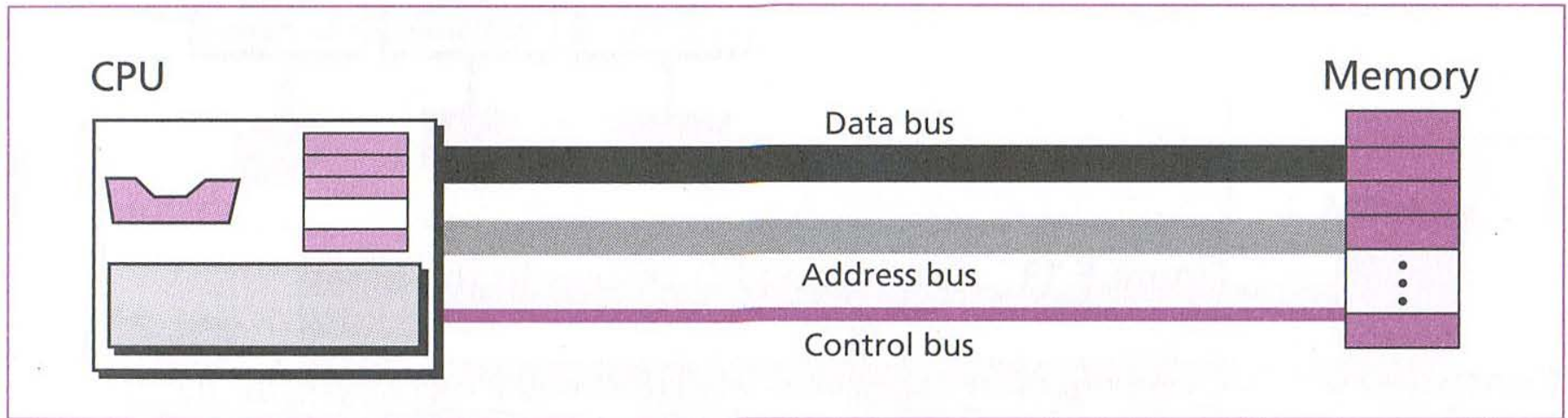
# Control Unit

- Directs all activities of the computer
- Manages interactions between parts of the computer system
- Basic programming instructions

# ALU (Arithmetic Logic Unit)

- Responsible for the logical and mathematical operations in the system

# Registers

- Storage/memory
- Scratch pad for calculations
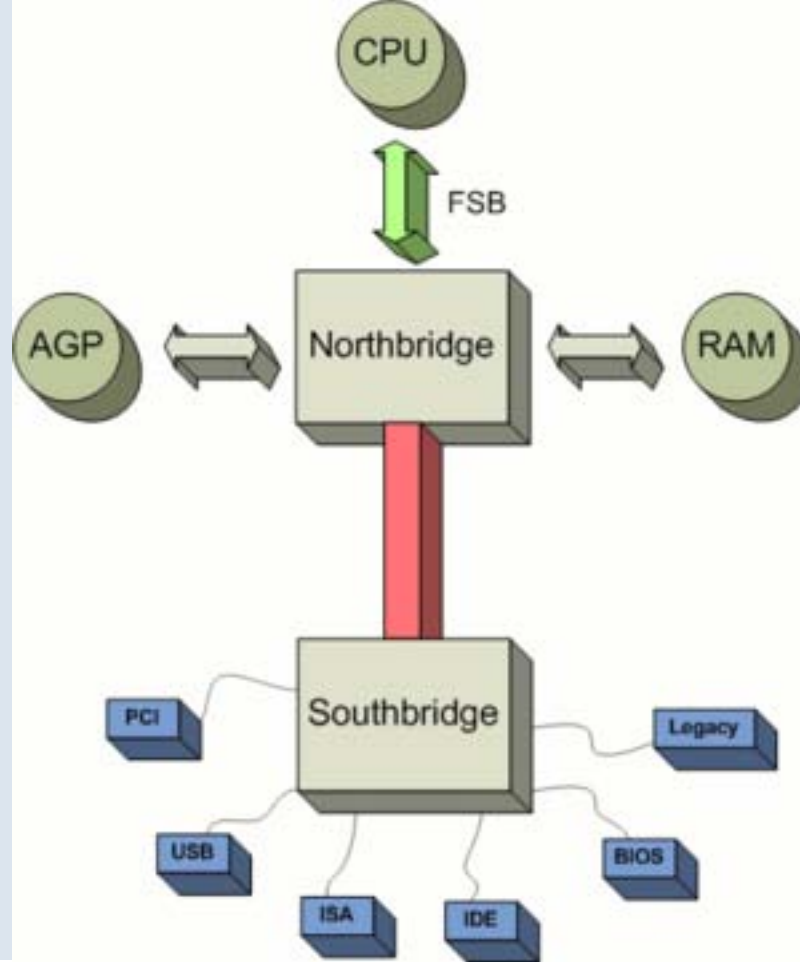
# South Bridge & North Bridge

# South Bridge

- A south bridge chipset handles all of a computer's I/O functions, such as USB, audio, …
- Not connected directly to the CPU
- Works together with the North bridge

# North bridge

- Communicates with the computer processor and controls interaction with memory, the Peripheral Component Interconnect (PCI)
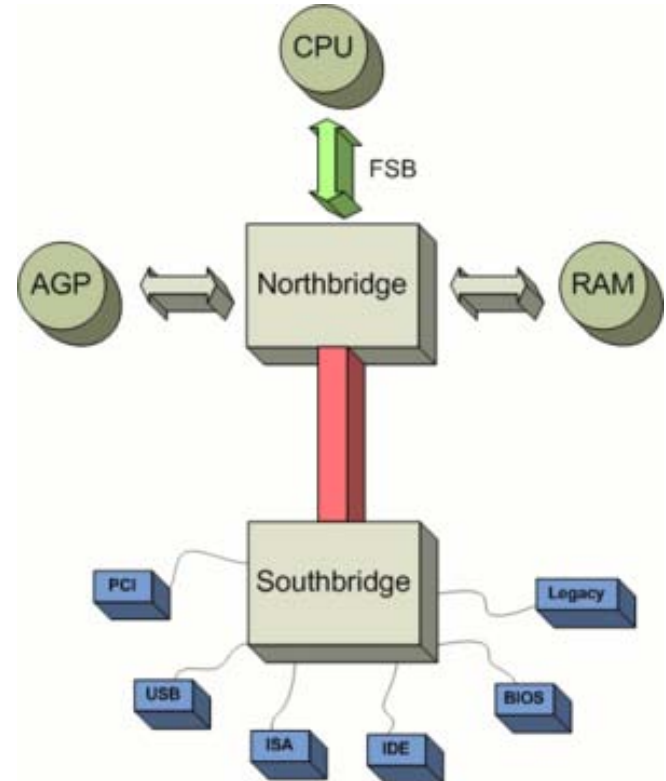
# Airflow

# Airflow



Airflow Option 1
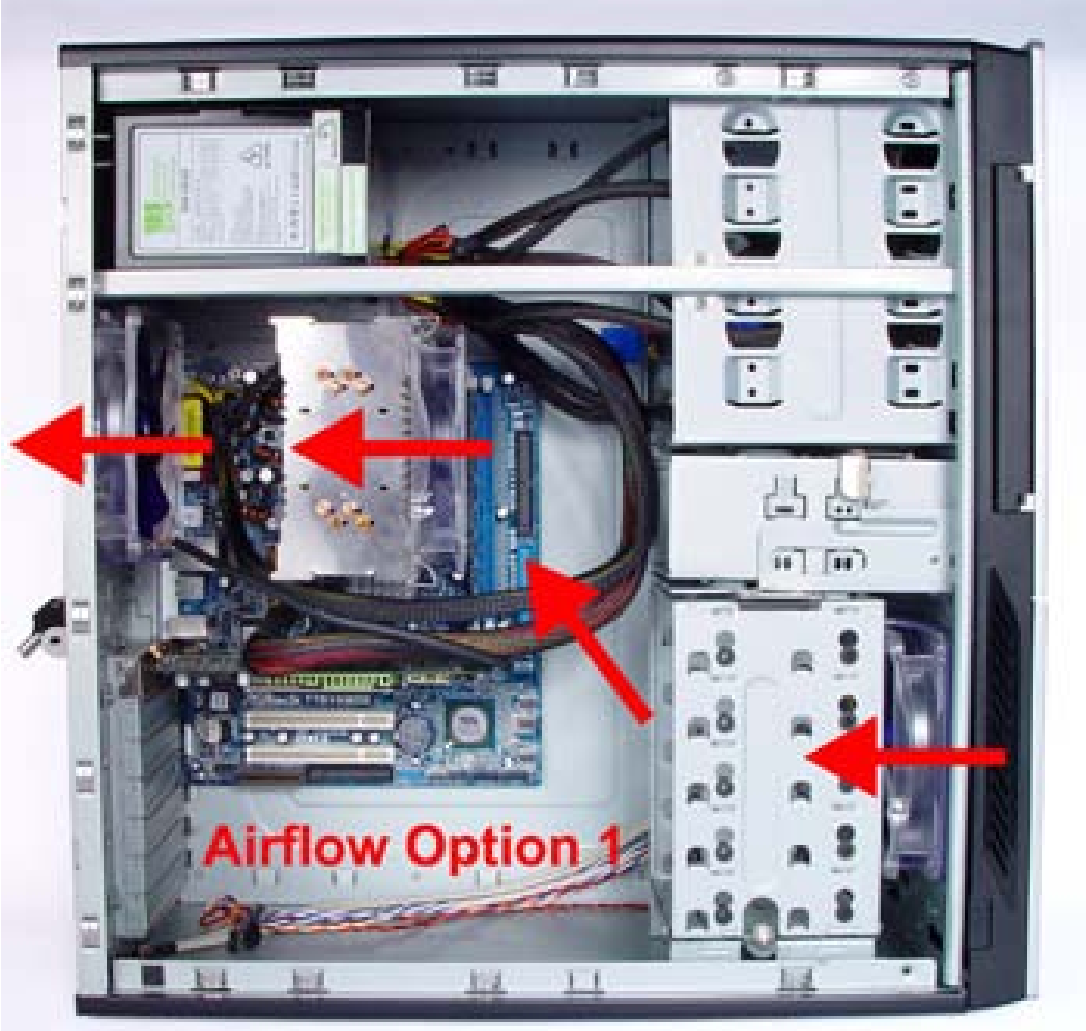
# Airflow
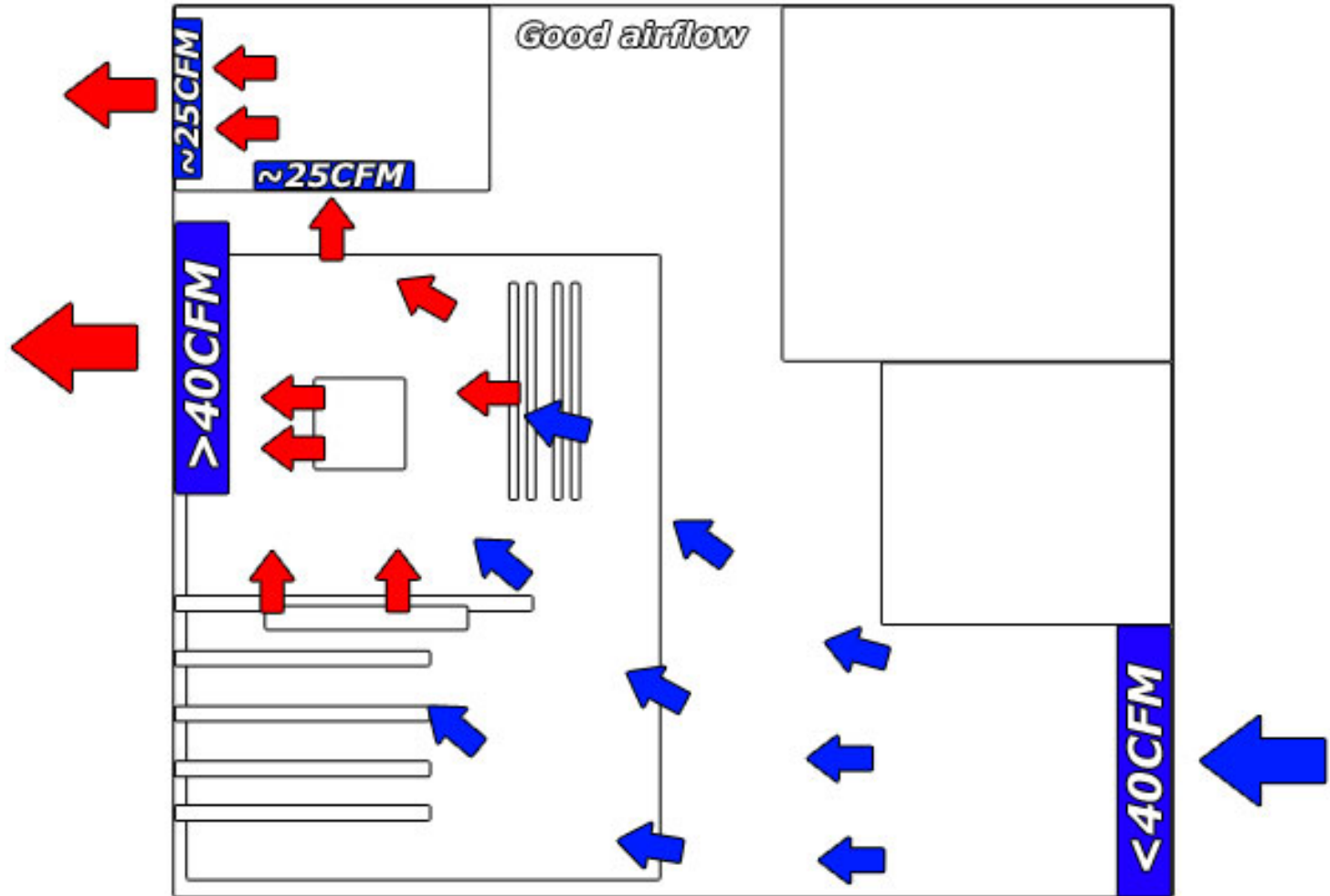
# BIOS / CMOS

# BIOS

□ What does it stand for?

　□ Basic Input Output System

□ What does it do?

　□ It is responsible for informing the processor of the devices present and how to communicate with them.

# BIOS

- Whenever the processor makes a request of a component, The Bios steps in and translates the request in instructions that the component can understand

# CMOS

- What does it stand for?
  - Complementary metal-oxide semiconductor
- What does it do?
  - Retains settings such as, time, keyboard settings, and boot sequence
  - Saves these settings even if there is no power because it uses a battery

# How does this effect your computer when you turn it on?

- POST (power on self test)
- Firstly, during post the BIOS checks for the presence and function of each component it is programmed to manage.
- Next, The Bios Retrieves the settings from the CMOS
- Finally, the Bios searches for an OS and hands control off to it

# Networking

# In this unit learned

- Define network
- Identify 3 categories of networks
- Identify network hardware
- Describe the server client relationship
- Identify network software
- Identify and describe 4 types of network topology
- Identify and explain the difference between an internet and the Internet
- Identify different types of internet connections
- Compare the internet and the web
- Identify and work with 5 different web browsers
- Identify web browser components
- Compare websites and web pages
- Identify and describe different types of web sites
- Identify elements of a web page
- Identify 3 types of hyperlinks
- Summarize the importance of hyperlinks
- Identify ethics involved with surfing the net and developing web pages

# Network

- A network is a combination of hardware and software that allows computers to:
    - A. exchange data from one location to another
    - B. share software and devices

# 3 Categories of Networks

1. ......
2. ......
3. ......

# 3 main categories of networks

- Go online and learn what they are.

| LAN<br>**Local Area Network** | WAN<br>**Wide Area Network** | MAN<br>**Metropolitan Area Network** |
|---|---|---|

# 3 Main Categories of Networks:

LAN - Local Area Network

☐ Connects computers at a single location
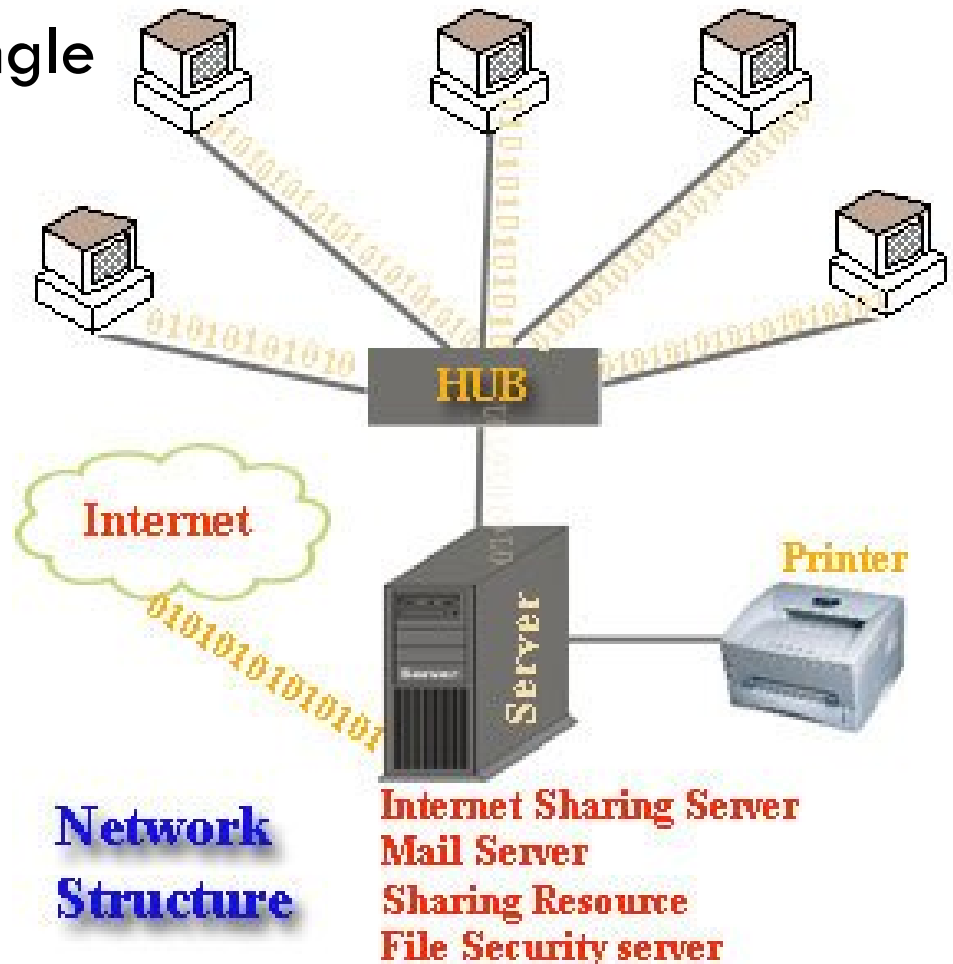
# 3 Main Categories of Networks:

## WAN - Wide Area Network

☐ Connects computers over a large area

☐ The internet
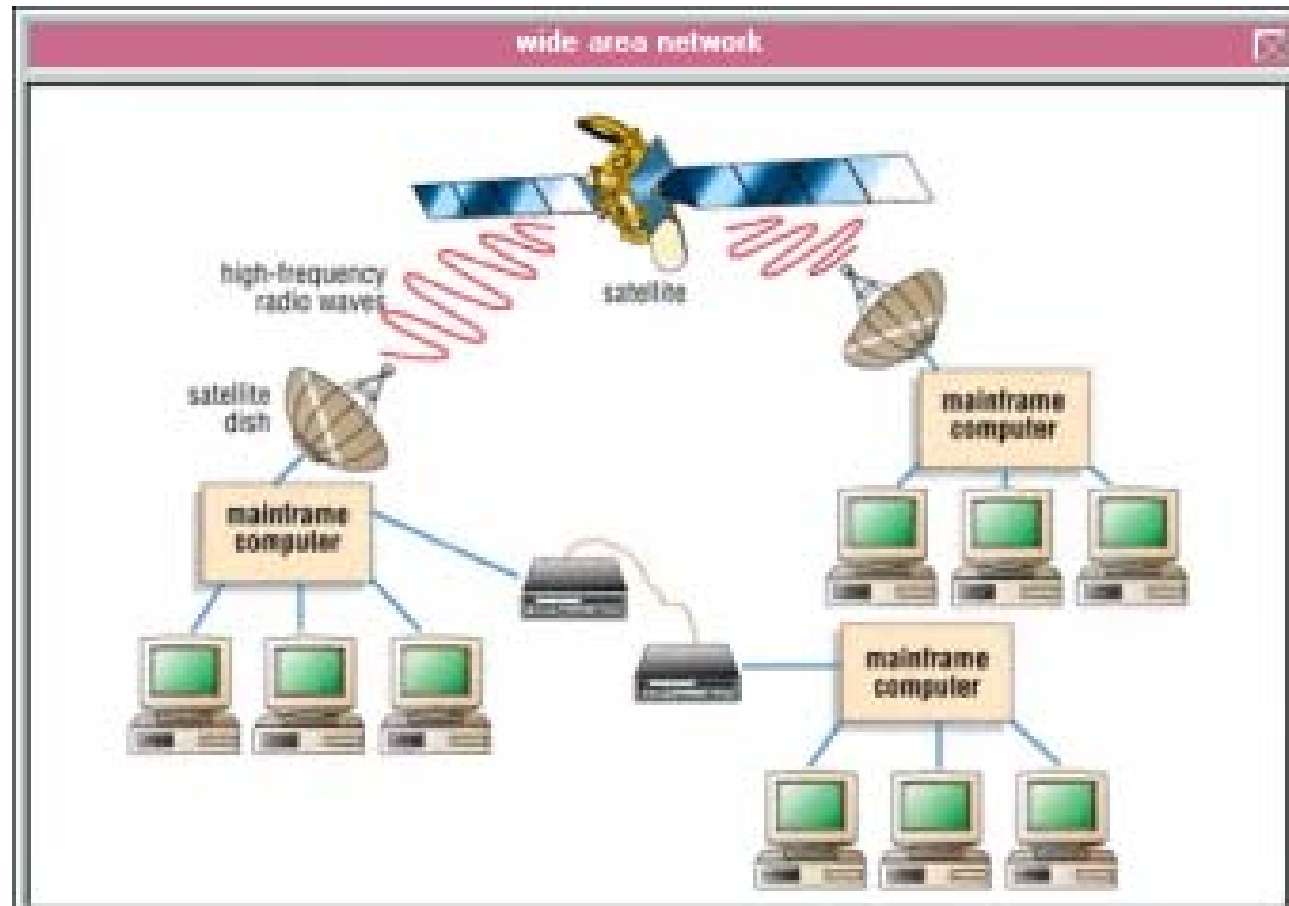
# 3 Main Categories of Networks:

MAN - Metropolitan Area Network

☐ A MAN, is a network with a size between a LAN and a WAN.

☐ It normally covers the area inside a town or a city.



Metropolitan Area Network (MAN)
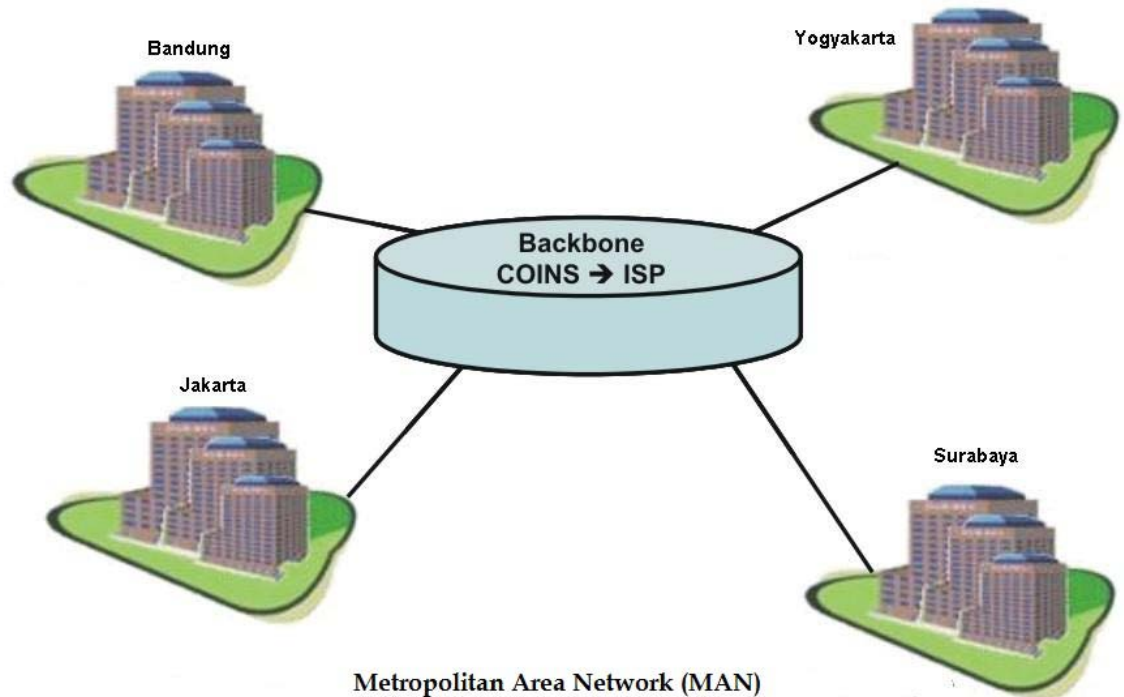
# internet VS The Internet

……..? What? Isn't it the same thing?

# internet VS The Internet

| internet | Internet |
|---|---|
| □ Two or more networks that are connected together | □ The most important and largest internet is the Internet (Uppercase "I") |
| □ they become an internetwork or "internet" | □ It is the connection of hundreds of thousands of connected networks |

# 4 Network Topologies

1. ….
2. ….
3. ….
4. ….

| Star | Bus | Ring | Mesh |
|---|---|---|---|
| -Connect through a central location (hub)<br><br>-Pros<br>-Cons | -Connect through a man line called a bus<br><br>-Pros<br>-Cons | -Computers are connected to the computers on either side.<br><br>-Pros<br>-Cons | -Every computer is connected to every other computer<br><br>-Pros<br>-Cons |

# Network Hardware

The physical parts that connect computers together

1. Servers/Clients
2. Modems
3. Network Interface Cards
4. Routers

# Server/Client

□ **Server:** a powerful central computer. Responds to requests from individual computers.

□ **Client:** an individual computer on the network

# Modems

□ Enables a computer to send and receive signals through telephone wires or cables

□ It translates the digital computer signals into analog signals for standard telephone lines

# Network Interface Card

- Allows the client computer to connect to the network
- The place where you plug the network cable into the client computer
- Ethernet card
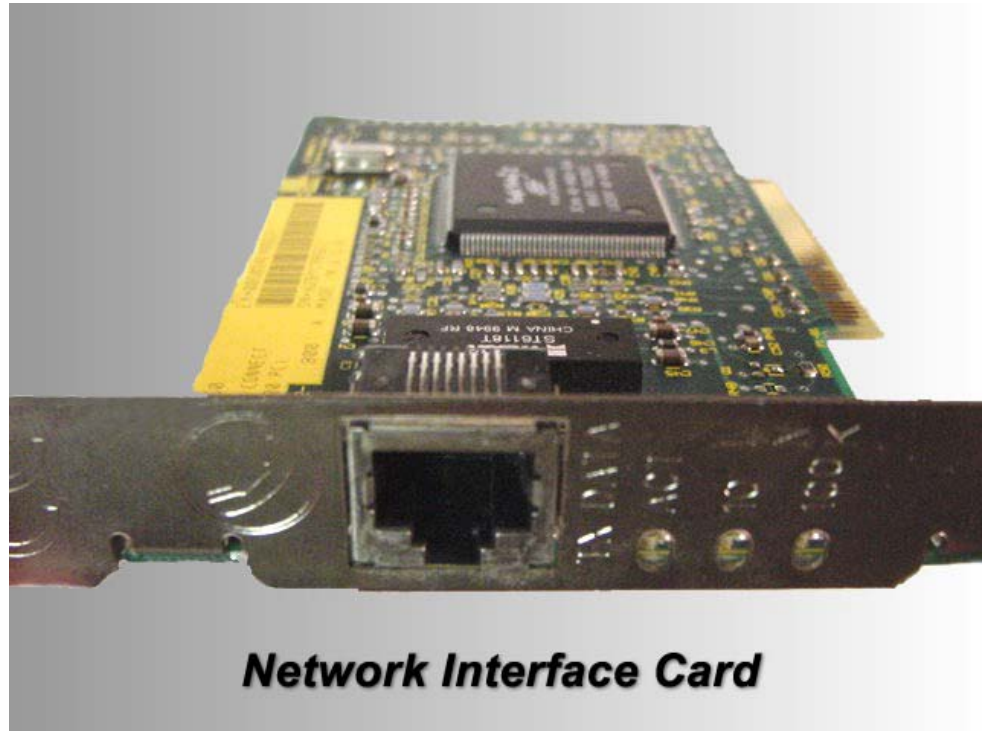


**Network Interface Card**

# Router

- Used to join two or more LANs together
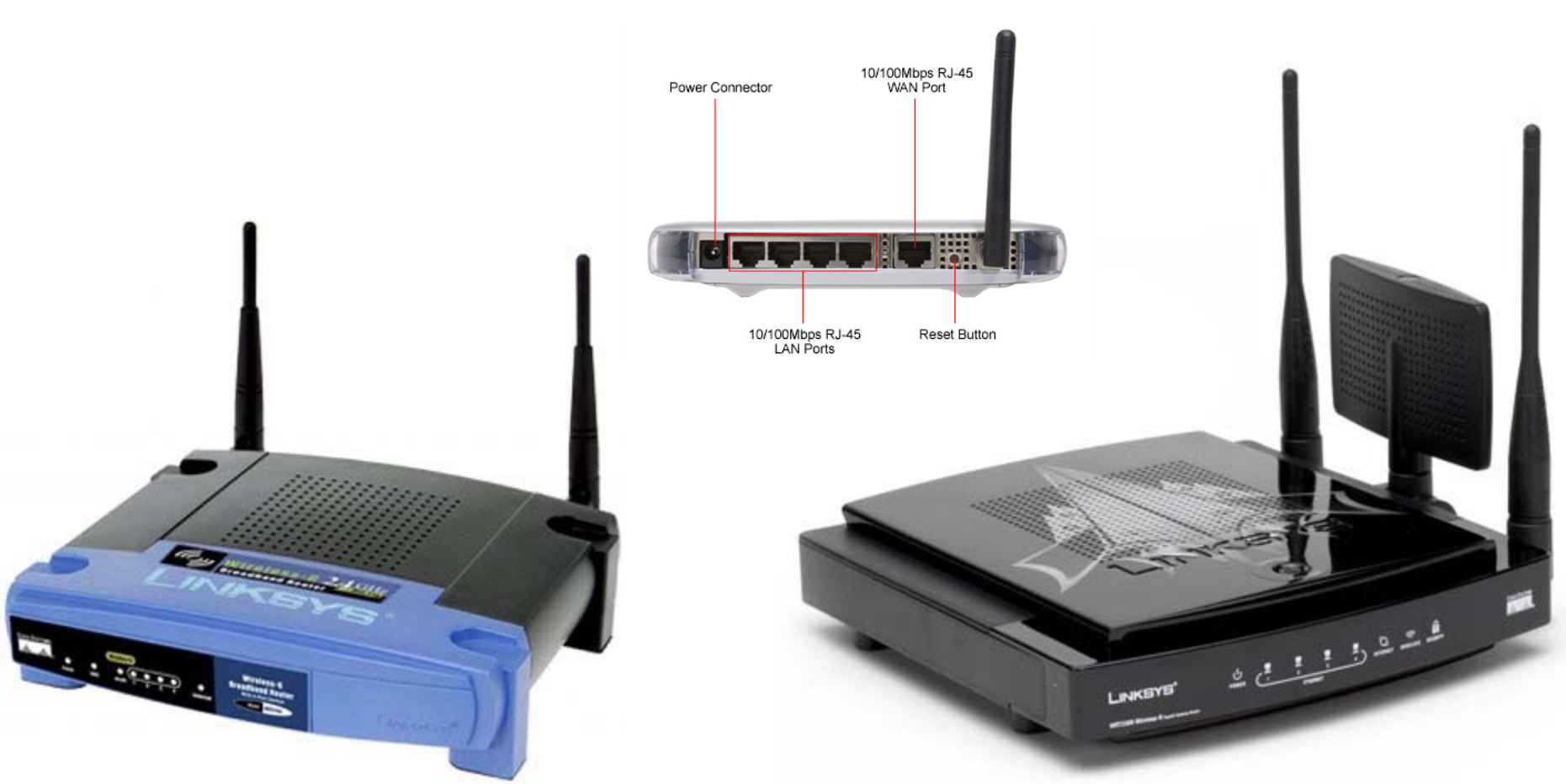
# 3 Main Types of Connections:

- Dial – up
- Broadband
    1. Cable
    2. DSL
    3. ISDN
- Wireless

Its all about bandwidth

Why is this important to you, as a web designer?

# Bandwidth

- The amount of data that can be transmitted to your computer via the internet
- The higher the bandwidth the, the faster the data can be transmitted

# The Internet VS World Wide Web

- Internet
  - The physical hardware connected together to create the massive world wide network. Network is made up of Computers/Routers/Cables
- World Wide Web
  - Includes software that sends information along the internet's hardware. Files on the www contain information such as text, video, or animations. Files are joined together like a giant web.

# Web browsers

☐ IE/Firefox/Chrome/Opera/Safari

**As a web designer, why is it important to know what the most popular web browsers are?**

☐ You need to know what browsers the visitors to your site will use. Not all browsers are the same. They will each display your web site a little differently. You need to design your website so that it will look good on all browsers.

# Browser Functions

□ A browser has two important functions

1. It translates the text-based Hypertext Markup Language(HTML) used to create web pages into a graphical web page

2. It lets the user move (navigate from one Web page to another.

# Web Sites VS Web pages

- Web Site
  - Is a group of related files organized around a common topic

- Web Page
  - Is a single file within a web site which has a unique name

# Types of Websites

1. Commercial
2. Portal
3. Information
   1. Government
   2. Public Interest
4. Media
5. Personal/Blogs
6. Social Networking

# Commercial

☐ **Commercial**

◻ To sell or promote a company's product or services

☐ Two types of commercial sites

1. **E-Commerce**
2. **Corporate Presence Sites**

# Commercial: E-Commerce

- Buying and selling of goods and services over the internet.
- Different from a traditional store. You don't have to leave home
- Requires a credit card for purchases

Examples:

Ebay

Amazon

# Commercial – Corporate Presence

- ☐ Some commercial websites do not sell anything
- ☐ They provide information about the company's products and services
- ☐ Illustrate the company's history
- ☐ Promote a positive image of the company

Examples:

Exon

HP

# Portal

- Provide a variety of services that people use everyday

- People can access a variety of information from 1 location

# Information

- Provide people with useful unbiased information (encyclopedia)

1. **Government**

2. **Public Interest**

Examples:

LOC

# Media

- Provide people with useful information

1. **News**

# Personal / Blogs

- Allow people to share their interests or news about themselves with others
- Share information about hobbies or personal interests

# Warning

- Don't make it too personal, anyone can visit your site.
- Don't put your email or contact information on your website.
- Protect your family and yourself

Example

# Social Networking

☐ Is an online service or site that focuses on building and reflecting of social networks or social relations among people, who, for example, share interests and/or activities.

☐ Example

# 4 Elements of a web page

1. **Text**
2. **Graphics**
3. **Multimedia**
4. **Hyperlinks**

# Elements of a web page – Text

- Words / letters/ numbers other symbols


- Provide information
- Labels for pictures
- Describes navigation buttons
- Provides links
- Let's see

# Elements of a web page – Graphics

- Drawings / charts / diagrams / paintings / photographs / navigation buttons

- Illustrate information

- Attract views' attention

- Provide visual interest

- <u>Act as Navigation buttons</u>

# Elements of a web page - Multimedia

- Integration of elements such as graphics , text , audio, video, animation, and interactivity

- Animation – movement of graphics or text
- Interactivity – It responds to the users commands

- Let's See

# Elements of a web page - hyperlinks

- Connects one web page to another
- Hyperlink can be a word/sentence/graphic
- Most are underlined and are a different color than the text on the page
- Graphic links are usually in the shape of a button, or photograph
- See ← This is a hyperlink

# Hyperlinks – 3 Types

1. **Internal**
   1. Another Webpage in the same site
2. **External**
   1. Takes you to another website
3. **Intrapage**
   1. Moves you to another spot on the same webpage

# Web Privacy Issues – Vocabulary

- ☐ Online profiling
- ☐ Cookies
- ☐ Web beacons
- ☐ Spyware

# Online Profiling

- Surfing the web is not anonymous

- Websites collect data about the users that visit their sites.

- They create a profile of you when you visit their site. They do it for marketing reasons.

-  They use methods such as cookies and web beacons

# Cookies

- A cookie is a text file created by the server computer when a user enters information on a site.
- It is saved on the users computer and is used every time the user visits a site.
- Sometimes it is a necessary evil

# Web Beacons

- Are small transparent graphics on a web pages or in e-mails that are used with cookies to collect data about users

- Collect your IP Address \ URL of sites visited \ time visited \ web page viewed \ type of browser \ cookie file

- Turning off the browser's cookies will prevent Web beacons from tracking the user's activity.

# Spyware

- Software that uses the web to gather personal information about a user.
- It is usually downloaded and installed with another file.
- For example:
- You do to a website looking for a password to get your illegal copy of windows 7 working. The website gives you a link and says that you can download the password. BAMB! You just downloaded a password that probably doesn't work and you now have spyware on your computer. Yahhhhoooo!

# Evil Code = Sick Computer

## A virus

- A program or a series of instructions that replicates itself. As it copies itself, it slows down the computer, deletes data, changes settings, destroys hardware.

## Trojan Horse

- A program that appears to be a good program but actually hurting your computer. It is copying files, deleting files, changing settings, recording personal information and sending it to the author. Allowing the author to take control of your computer

# Protect Yourself

- Get an anti-virus & internet security program
- Update it regularly
- Use only trustworthy programs
- Don't open email from people you don't know
- Don't download from sites
- Regularly erase cookies from your computer
- Generally - if it is free……..don't trust it

# Ethical Responsibility of the web designer

- Computers only do what people tell them to do
- As a web designer you have a responsibility to present accurate and up to date data on your site.
- You also have a legal obligation to not break any laws with your website – Downloads/Pirated Software
- Don't help people break laws

# HTML
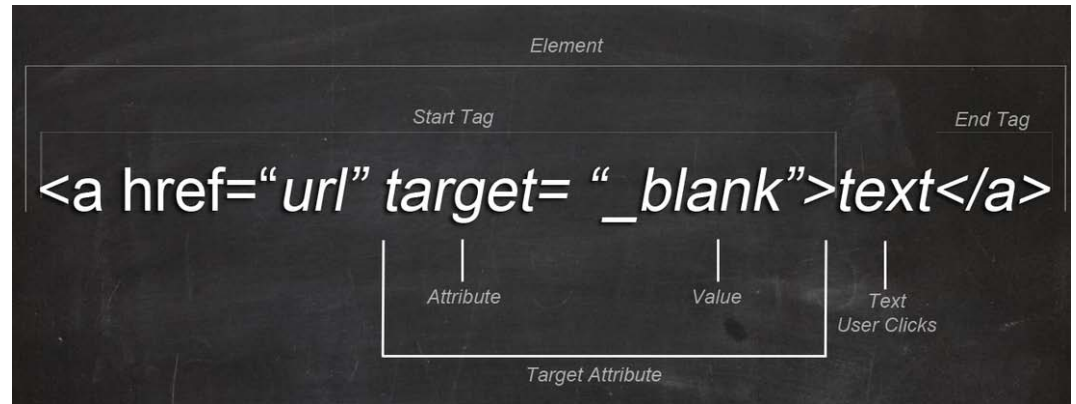
# Unit Concepts

- HTML
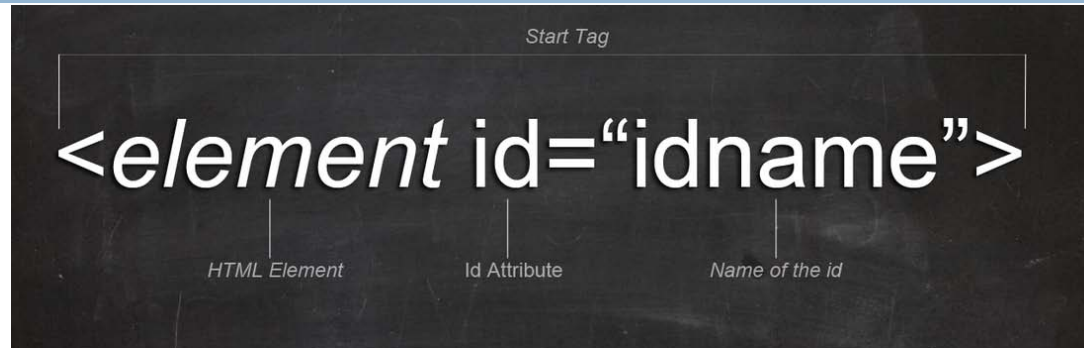- Hyperlinks
- Id
- CSS
- Div tags

# HTML

- <!DOCTYPE html>

- 4 document tags

- Check all of the HTML Basics on [class site](class site)

# HTML - Hyperlinks

- 3 types
  - Internal
  - External
  - Intra-Page
- Target Attribute
- 4 states

# Id Attribute



- Gives a unique name to an HTML element on a page
- [Practice](Practice)

# Intrapage hyperlink

```
<body>
<h1><a id="top">Is World Peace Attainable?</a></h1>
<nav><ul>
      <a href="#section1">Is it Our Nature to Make War?</a></li>
   <li><a href="#section2">Is Peace Profitable?</a></li>
      <a href="#section3">Can One Person Make a Difference?</a></li>
```

1

2

- 1st make the id

- 2nd make a hyperlink to that id

HTML →

CSS ←

# Cascading Style Sheets -CSS

- Cascading Style Sheets (CSS) allow you to specify styles for various Web page elements
- A style is a rule that defines the appearance of a Web page element.
  - you can change the appearance of a Web page or pages by changing characteristics such as font family, font size, margins, and link specifications, as well as visual elements such as colors and borders.

- HTML = Structure
- CSS = Formatting

# CSS Con't

- CSS rules are used to give HTML documents a consistent appearance
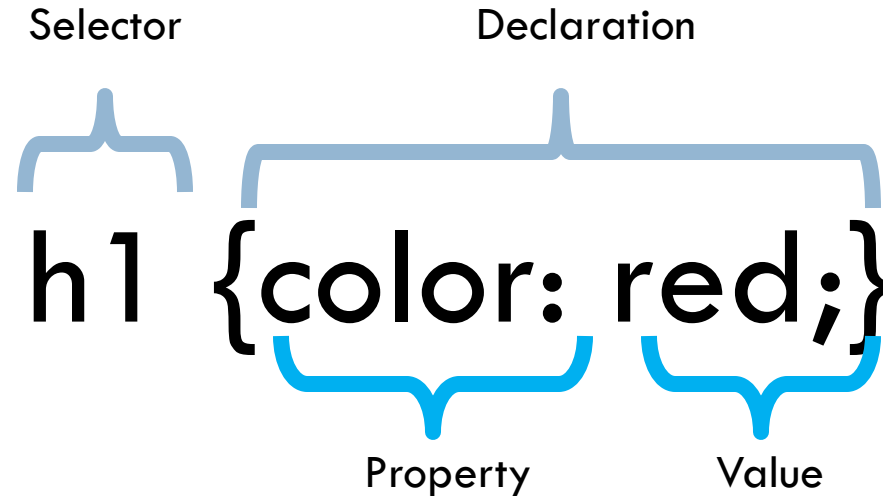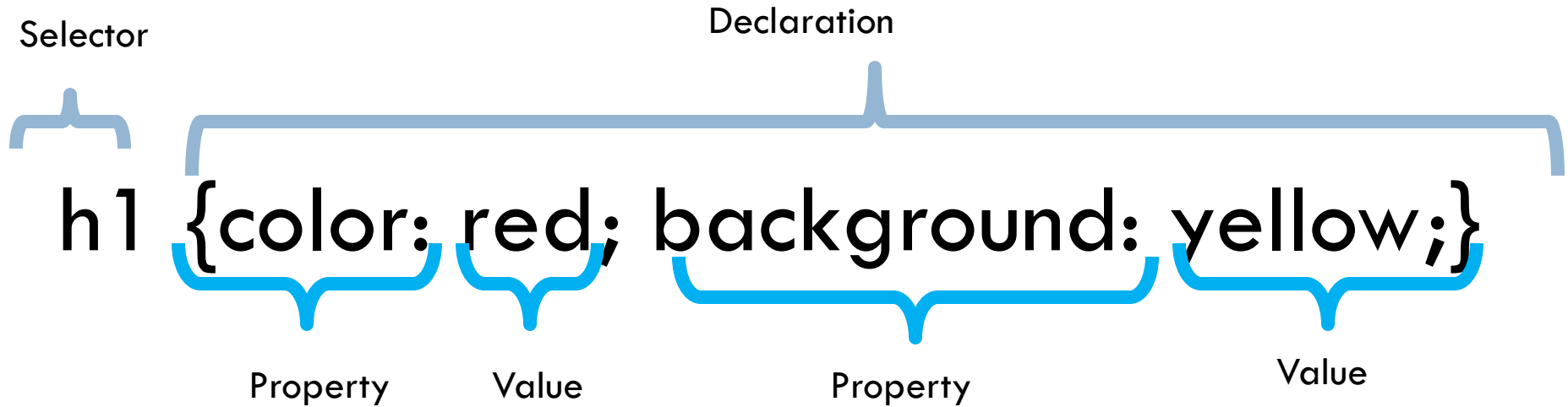- They override the browser settings for displaying tags

# 3 Types

**Embedded**

**Inline**

**External**

# Constructing A Style Rule

Selector               Declaration

h1 {color: red;}

Property        Value

# Constructing A Style Rule

Selector

Declaration

h1 {color: red; background: yellow;}

Property

Value

Property

Value

# CSS - Embedded

- An embedded style sheet is written in the head of the document

**Tag**

- `<style type="text/css">`
- *Rules*
- `</style>`

- Example:

```
<style type="text/css" >
h1 {Color: #ff0000;}
h2 {color: #800000;}
P {font family: "arial", serif; font-size: 14px;}
</style>
```

# CSS - Linked

- CSS is saved in a separate CSS file
- Linked in the head section of a page
- Linked style sheets are saved with a .css extension

**Tag**

<link rel="stylesheet" type="text/css" href="style.css" >
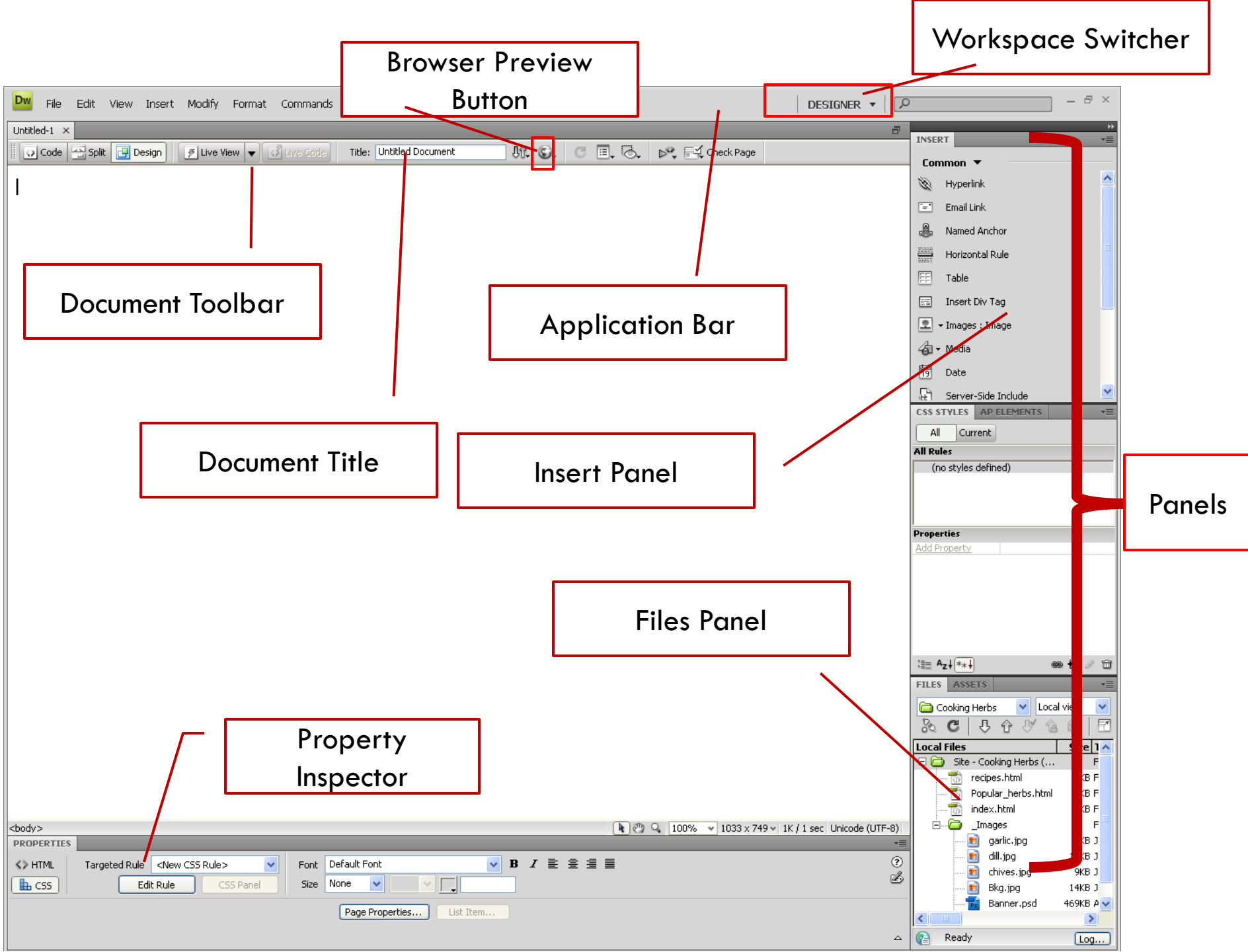
# Div tags

- Used to separate your page into sections
- <div id="header">
- </div>
- [Try it](#)

# DreamWeaver

# Topics covered

1. **What is Dreamweaver**
   a) WYSIWYG
      i. Advantages
2. **Welcome Screen**
3. **Workspace**
   a) Panels
   b) Toolbars
   c) Different views
      i. Code
      ii. Split
      iii. Design
   d) Property Inspector
      i. Html/CSS
      ii. Context Sensitive
      iii. Page Properties button
4. **Site definition box**
   a) What it does
   b) Root folder

1. **Creating a new page**
   a) How
      i. Welcome Screen
      ii. File ➜ New
      iii. CTLN + N
   b) Naming Rules
   c) Index page
2. **Document Title**
3. **Adding an image**
   a) Alternate Text
4. **Preview a page in a browser**
   a) F12
5. **HYPERLINKS**
   1. Internal vs External
   2. Open in a new window

Workspace Switcher

Browser Preview Button

Document Toolbar

Application Bar

Document Title

Insert Panel

Panels

Files Panel

Property Inspector

# Dreamweaver Formatting
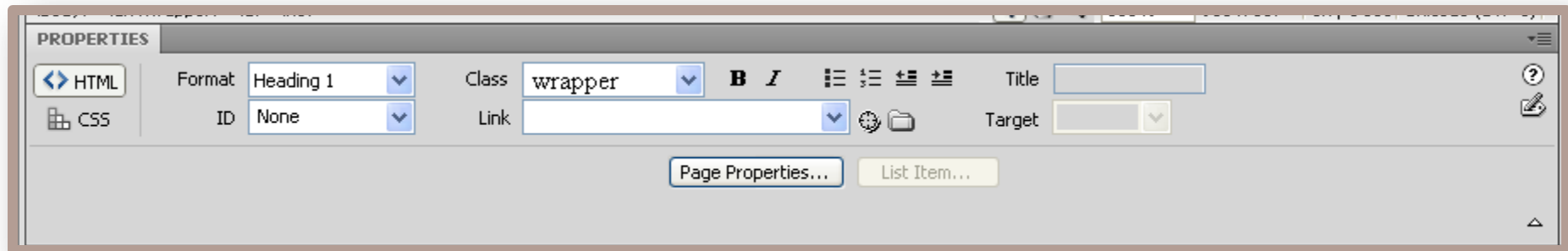
- Two Types of formatting
  - HTML: Structure
  - CSS: Formatting

# Review – HTML VS CSS

- Think of HTML formatting as the structure of a house (Foundation, walls, rooms)
- Think of CSS formatting as the interior decoration. (paint, carpeting, color, style, placement of furniture)

# Review



□ Property Inspector
  ◘ HTML
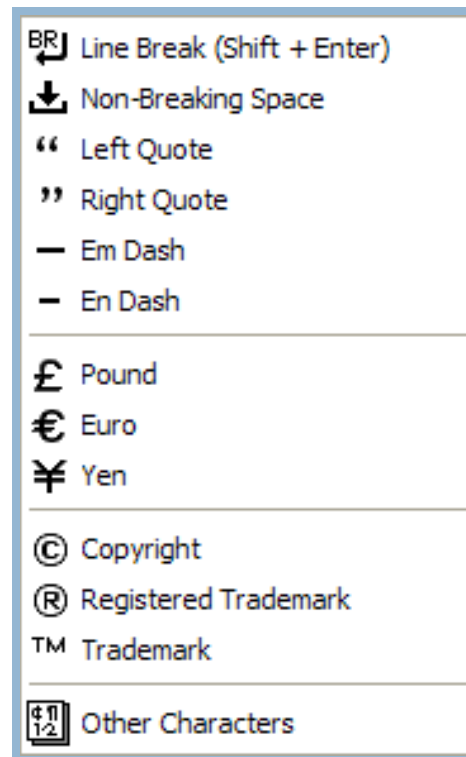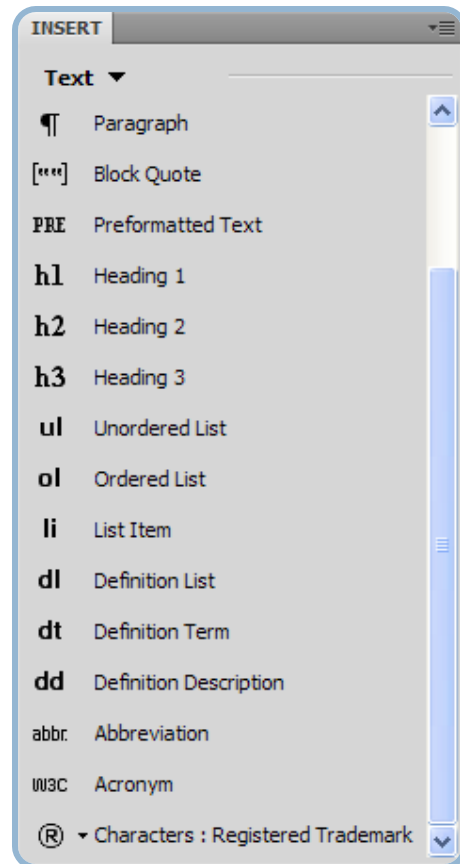  ◘ CSS

# Review - HTML

- HTML Formatting (structure)
  - Headings
  - Ordered / Unordered lists
  - Formatting with **Bold** and *Italic*

# Review – Cut and Paste

- 4 different kinds of cut and paste
- Paste Special
  1. Text
  2. Text with structure
  3. Text with basic formatting
  4. Text with full formatting

# Review – Inserting symbols

☐ Insert panel ➔ Text ➔ symbol

# Review - CSS

- Why CSS?
  - Faster to download
  - Easier to update site
  - Does more that HTML

# Review - CSS

- STYLES
  - It is simply a rule that describes how to format a certain HTML tag, image or other element on your page

# Internal And External Styles

1. **Internal** ➔ Are added to the top of a page in the head section.
   Affect only the page they are in.

2. **External** ➔ Is a separate file that contains only styles, no HTML. Is linked to many pages.
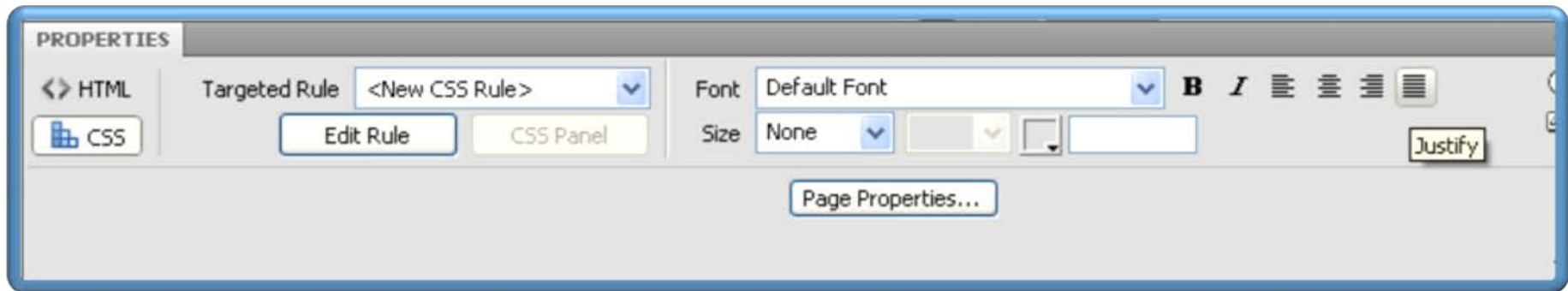
# Types of Styles

- **ID:** Format a unique element on a page. Can have only one per page

- **Tag:** Applies globally to an individual HTML tag. It will change all of the instances of that tag.

# Review - CSS

- Create a rule
  - CSS panel (more options)
  - Property Inspector (Text Formatting)

# Property inspector - CSS



- Lets you quickly create css styles for formatting text.
- For Example: Choosing a font, and size.

# Css Rule Definition Box

- Used to set the properties for CSS styles

- **Type:** Set formatting options that affect type

- **Background**: Giving an element a background color

- **Block:** More formatting options for how text appears

- **Box:** Setting margins and padding

- **Border:** Putting a border around an element