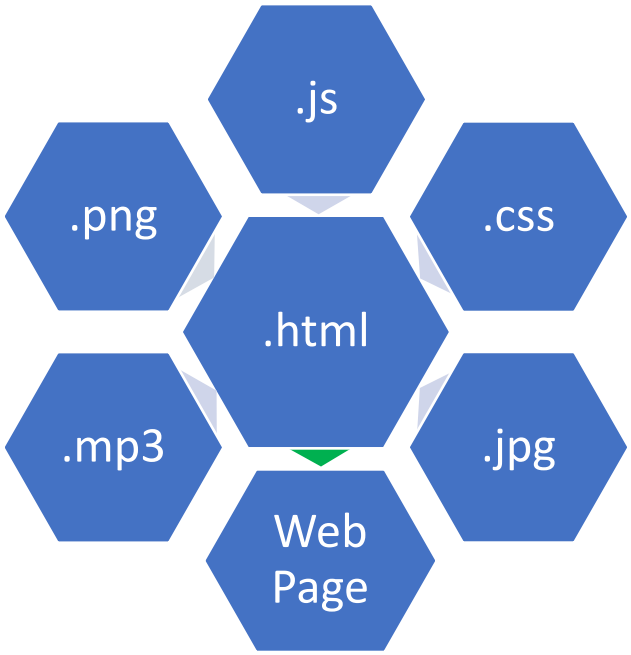
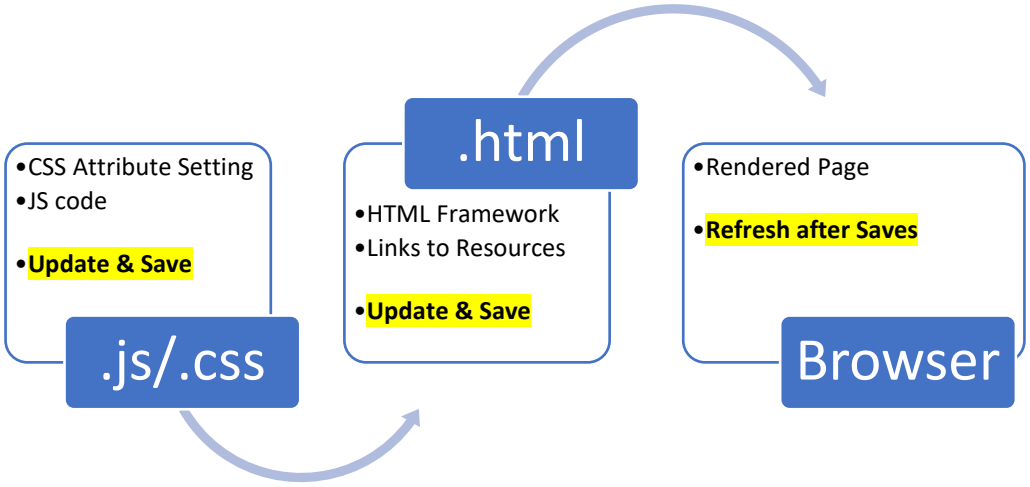
- Understand the course, expectation, policies and procedures
    - Design Course for Applying what is being learnt in theory classes
        - A thorough understanding of HTML/CSS is fundamental skill for all web designers – your careers depend on it
        - An understanding of HTML/CSS is necessary for web developers
    - Expectations:
        - Participation
        - Hours – 3 hrs Class + 2 hrs www time → 5 hrs Homework/Study time
        - Independent Study
        - Effort
        - Honesty and Integrity
        - Responsibility is yours
- Web Design
    - Web Design is the visual aesthetics and page layout of a website.
    - Designers work closely with developers when they need to create dynamic and interactive pages
    - Designers have no need for developers when they are creating static pages without interactivity
    - Web Design has a large Graphic Design element, but differs in purpose and application
    - Web designers are problem solvers, which requires
        - Understanding the problem
        - Understanding the nature and purpose of the business
        - Understanding the business' vision and values
        - Understanding the style, personality and characteristics of the business or project
        - Understanding requirements, limitations, and expectations
        - Understanding the business' branding and dominant colour theme
    - Web Designers are responsible for creating the design and documentation for a web project
    - Designers are responsible for taking their design from concept to wireframe to prototype to HTML/CSS implementation
    - The difference between a Graphic Designer and a Web Designer is
        - Their medium – Print vs Web
        - Their training
        - Application of their Design – basic HTML/CSS structures (or the backbone) of a page
    - Web Designers have to take into consideration modern design processes like Single Page Applications, Responsive Designs, Progressive Web Applications, and Mobile Designs; as well as human factors such as usability, User Experience (UX), Flow, Rhythm, Balance, Colour, Typography, Communication and subtle elements like Character, Personality and Appeal
    - Designers can choose a "Mobile-First Approach" (most common today) or a "Desktop-First Approach" (still valid, but less trendy)
    - These differences give entry-level web designers an advantage over entry-level graphic designers when competing for a web design job – but a disadvantage if the company has a bias towards graphic designers
- Overview of the www
    - www vs internet
        - Internet is the physical layer (actual cables and infrastructure) – the network
        - www is the software layer – a service that sits on top and can make use of it
    - Client/Server Technology
        - Clients and Servers are software that is sitting on top of the physical layer and support
        - Clients request information and Servers provide the information requested
        - In essence, Client-Server represents a relationship between tow computer programs
        - Because there are multiple computers from all over the world, communication is controlled via the communication layer protocols

        - This Client-Server relationship is not exclusive to the www and internet application
            - most businesses will have some level of local network that has a central repository (server) to enable easy file sharing – these local networks are known as LANs (Local Area Networks);
            - Some businesses have multiple buildings across a wider area or across a city – these networks are known as WANs (Wide Area Networks);
            - Some businesses are very large (ie: cities, governments, etc.) and are spread out across a city, county, province or even country – the networks are known as MANs (Metropolitan Area Networks);
            - All of these are representative of private networks – the internet, while similar in topology at the physical layer, is different in that it is a public network with the main, physical cabling owned and controlled by governments.
    - Basic Anatomy of Networking
        - Hardware
            - Servers Machines (power computers)
            - Client Machines (desktop computers)
            - Routers (smart, routed/targeted) / Hubs & Relays (pass-through, broadcast)
            - Modems
            - Cables/Transmitters/Receivers
            - Towers
        - Software
            - Computer Operating Systems
            - Server Software – can run on Server Machines, Client Machines, or Storage Devices
            - Client Software (Browsers) – usually on Client Machines and other devices such as Tablets/Phones
            - Router Software – for reading headers and deciding where to relay the package
            - Modem Software – to **Mo**dulate/**Dem**odulate packages for transmission
            - Firewalls – an attempt to block unwanted/unauthorized transmissions
                - Can be part of the router software
                - Can be part of the desktop software
                - Can have a dedicated device (computer) that it runs on
                - Can be handled by the ISP (Internet Service Provider)
        - Protocols – all connectivity and communications require protocols (rules)
            - http (hypertext transfer protocol)
            - https (hypertext transfer protocol secure)
            - smtp (simple mail transfer protocol)
            - POP3 (post office protocol)
            - IMAP4 (Internet Message Access Protocol)
            - ftp (file transfer protocol)
            - tcp/ip (transmission control protocol / internet protocol)
            - SSH (secure shell)
            - SSL (secure sockets layer)
        - Layers
            - 1 Physical
            - 2 Data Link
            - 3 Network
            - ¾ Protocol
            - 4 Transport
            - 5 Session
            - 6 Presentation
            - 7 Application

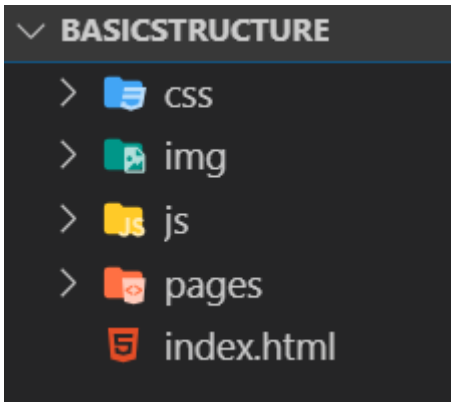
- What is a web page?
  - A collection of files containing instructions and files that are assets
  - Instructions tell the browser how to render (paint) the page on the screen
  - At the very base level, at least one file is required
    - An HTML file; or
    - An ASP/ASP.net file; or
    - A PHP file; etc.
  - More typically, a web page is a collection of files such as:
    - HTML files; and
    - CSS files; and
    - JS files; and
    - JPG files; and maybe some
    - SVG files, or MP3 files, or PNG files, etc.
  - These files get linked to the main file (usually an HTML file, but sometimes a CSS file) within the instructions entered into that file and combine to form a web page



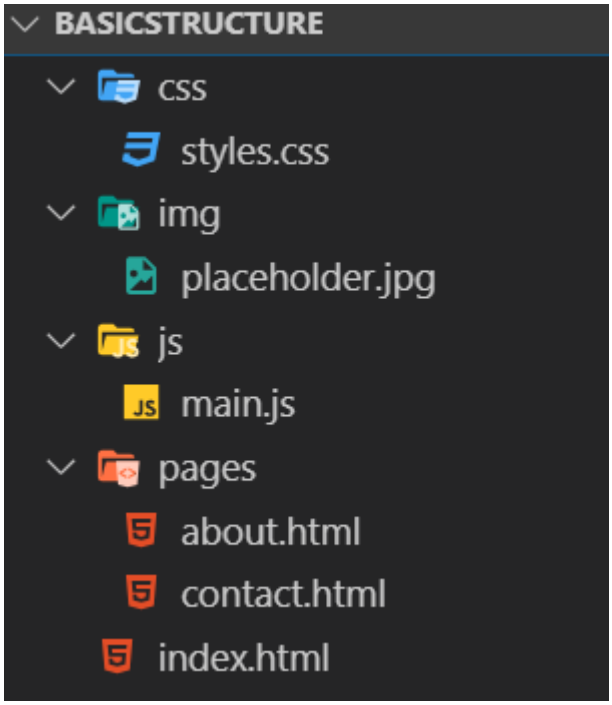
  - Basic Workflow for web design:



- File and Folder Structure, Organization, and Absolute vs Relative Paths
  - File and Folder Structure

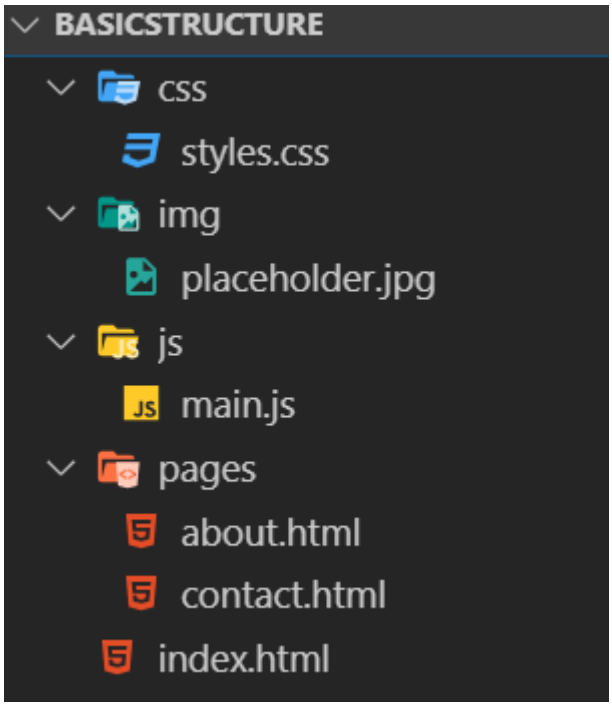


  - Organization



  - Absolute vs Relative Paths
    - Paths are pointers to resources – in the web world paths include:
      - URL – the basic path to the website, which includes the domain name
      - Paths to resources like the .js file and the .css file
      - Paths to other pages or other websites
    - Absolute Paths
      - Absolute paths start at the root of a computer and include every folder that you have to drill into in order to reach the resource
      - This is not very practical since in most instances, web designers and developers do not have rights or access to the root of a server
      - Absolute paths are typically not used, it's an industry standard to avoid them
    - Relative Paths
      - This is industry standard
      - Paths still include all the folders that you have to drill into in order to reach the resource, but they start from the root of the domain, instead of the root of the server
      - This is what you must become accustomed to

- Relative Path Worksheet



  - Assume that we are inside the “index.html” file – how would we reach the “main.js” file?

    “js/main.js”

  - Assume that we are inside the “index.html” file – how would we reach the “styles.css” file?

    “css/styles.css”

  - Assume that we are inside the “index.html” file – how would we reach the “about.html” file?

    “pages/about.html”

  - Assume that we are inside the “about.html” file – how would we reach the “contact.html” file?

    “contact.html”

  - Assume that we are inside the “about.html” file – how would we reach the “styles.css” file?

    “../css/styles.css”

  - Assume that we are inside the “about.html” file – how would we reach the “index.html” file?

    “../index.html”

- Basic HTML Page

index.html > ...

```
1   <!DOCTYPE html>
2   <html lang="en">
3       <head>
4           <meta charset="UTF-8">
5           <title>Sample Page</title>
6       </head>
7       <body>
8
9       </body>
10  </html>
```