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Internet and Web Programming (CISC-3300-R01)

Fordham University

**Homework 1**

1. The process from a user entering a URL into their browser to viewing a webpage involves several steps:
   1. **User Inputs URL (Uniform Resource Locator):** The process begins when a user enters a URL into their web browser. A URL is a web address that identifies a specific resource on the internet.
   2. **Domain Name System (DNS) Resolution:** The browser needs to translate the human-readable domain name (like [www.example.com](http://www.example.com/)) into an IP address that the computer understands. This translation is done by DNS servers. DNS is like the internet's phonebook, mapping human-friendly names to IP addresses.
   3. **ISP (Internet Service Provider):** The user's request then travels through their Internet Service Provider, which is the company that provides them with internet access. The ISP routes the request towards the destination server.
   4. **Request Reaches Web Server:** The request now travels across the internet, passing through multiple routers and networks until it reaches the web server hosting the requested website.
   5. **Web Server Processes Request:** The web server receives the request, processes it, and retrieves the requested web page. The server might interact with databases, execute scripts, or gather other resources required for the webpage.
   6. **Web Server Sends Response:** The web server sends the requested webpage back to the user's browser through the same path it came.
   7. **Browser Renders Page:** The browser receives the response, which includes HTML, CSS, JavaScript, and other assets. The browser then interprets these resources to render the webpage, displaying it to the user.
2. HTML is a standard markup language used to create and design documents on the web. It is a fundamental technology that structures the content of web pages. HTML uses markup tags to describe the elements and their hierarchy within a document. These tags are used to define different parts of a webpage, such as headings, paragraphs, links, images, forms, and more.
3. The Fordham University website has a clear and concise structure that is easy to navigate. The main navigation bar is located at the top of the page and provides links to all of the most important sections of the website, such as About, Academics, Admissions and Aid, Research, Student Life, and Resources. There is also a search bar at the top of the page that allows users to search for specific information.  
     
   The left-hand side of the page contains a list of quick links to popular pages, such as the Virtual Tour, Maps & Directions, Undergraduate Outcomes, and Diversity / Inclusion. The right-hand side of the page contains a list of social media links, as well as links to the Fordham University Press, the Fordham Antiquities Museum, and the Public Safety department.  
     
   The bottom of the page contains a footer with links to additional resources, such as the Academic Calendar, the Jobs at Fordham page, and the Fordham University Privacy Policy.
4. In HTML (Hypertext Markup Language), elements, tags, and attributes are fundamental concepts that define the structure and presentation of content on a web page:
   1. **HTML Element:**
      1. An HTML element is a building block of an HTML document.
      2. It consists of a start tag, content, and an end tag. The content is the information or structure you want to define or display on the webpage.
      3. Example: **<p>This is a paragraph.</p>**
   2. **HTML Tag:**
      1. An HTML tag is a set of characters enclosed by angle brackets (< >).
      2. Tags are used to define HTML elements. They indicate the beginning and end of an element.
      3. Example: **<p>** is the start tag, and **</p>** is the end tag for a paragraph element.
   3. **HTML Attribute:**
      1. HTML attributes provide additional information about HTML elements.
      2. They are always included in the opening tag and are used to modify the element's behavior or provide additional characteristics.
      3. Example: In **<a href="https://www.example.com">**, **href** is an attribute, and it specifies the hyperlink reference.
5. See aboutme.html