6. Rebuilding apple.com's homepage using HTML & CSS

6.1 Introduction

- Software is needed almost everywhere today, and software/website development is a precise process involving different organized steps these days. . This class is fully devoted to explaining the real-life steps involved when a website or a software is developed. After understanding the processes involved in software/website development, you will then re-build apple.com's homepage using HTML and CSS.

6.2 Website, application and software development life cycle (SDLC)

- **What is Software Development Life Cycle (SDLC)?** It is the phases of work involved in developing software applications. These phases adhere to a specific standard that has to be followed to move in the right direction with the help of frameworks, methodologies, and languages involved. Every contributor to the development of a software must clearly understand her/his responsibility and the standards involved. As a website developer, you must understand the entire development process to deliver services with speed and performance.

- **The life cycle stages involved in web development**:

    - **1. Requirement analysis phase**: This stage involves understanding the client's requirements and expectations related to the software application or website. Defining software requirements gives teams what the goals of the customer are and how the website will be utilized to accomplish those objectives. Under this phase, the following activities are involved:

        - **Identifying purpose**: Identifying what the purpose of the software/website is. Meaning, we need to answer the questions if the website is there whether to provide information, sell product, sell services.

        - **Identifying goal**: Here, the question "What is the main goal building the website?" will be answered

        - **Identifying target audience**: It is during the website development process that we should identify type of people we would you like to visit the

website. Meaning, the development process should consider their age, gender and needs.

- **Scoping**: The scope defines the boundaries of the website development project, what features will be included within this scope, what is the delivery date is as well the required budget to deliver that scope. Defining the scope of the project is a very important process. This is because the goal of the client gradually expands or changes altogether during the design process and not only would be developing a website, but you might also end up developing a web app or including new features. Even if this adds extra work on the development process, the goal is to meet the needs of the client. Defining the scope of the project will start by preparing a realistic timeline for the project, can help to set boundaries and achievable deadlines.

- **2. Designing/planning phase**: This is the phase where the team makes software design and implementation decisions based on the information that has been gathered from phase one above. This can involve creating design documents, coding guidelines, and discussing the tools, practices, runtimes, or frameworks. This design phase lays a foundation for the development phase.

    - **Wireframe**: In simple terms, a sitemap is created in this phase with a detailed project plan to establish the basic structure of a website before visual design and content is added. **Note**: Developing the wireframe should consider users' needs.

    - **Content development**: A detailed list of all the areas of the website and the sub-topics will be designed and the content of the website will also be described at this stage.

    - **Note**: The client should be involved in the entire planning process so that the client has an idea about the blueprint of the project.

    - Once the design is approved, the development team begins the development phase.

- **3. Development phase**: This is the stage where you, as a software developer, come in. It is a stage where the software developers start building the website by crafting

code using the required technology while maintaining the very purpose of the website.

- **4. Testing phase**: Building software is not the end, there will be rigorous testing to make sure the website is running perfectly on the browser. Once the website development is completed, the quality assurance team will be involved to verify the functionality, device compatibility and performance of the website. There are always expected behaviors of the website and testers check if real behavior of the website matches the expected behavior. In addition, testers test the system for bugs, defects, and anything that affects the user experience negatively.
- **5. Launch phase**: Once the views and functionality are implemented and the website is approved for release, the next step is to launch to the server using FTP. This involves steps like registering a domain name, subscribing to a web hosting service, and deploying the website. You will learn the steps involved in deployment later at the end of phase 1 of your course under "Launching Your Website" section.
- **6. Maintenance phase**: Please note that the web development stages do not end once the website is deployed. The maintenance phase will occur once the website is operational. Maintenance involves modification of few features over some time. The modification request can come from user's feedback or the client. Modification can also be done because updating the content of a website on a regular basis is a strategy to grab potential visitors and repeat their visits.

6.3 Website development phase

- Under this section, we will single out the "Development stage" and discuss the process in detail as this is the stage where you, the website developer, get called into action.
- As discussed above, the development stage is the part where developers actually write code and build the application according to the earlier design documents and outlined requirements.
- At this stage, remember that the content of the website, the wireframe and design (including the images, sections and sub sections of the website) are already designed and ready. Your job is to convert all this into a website by writing code. In doing so, developers will follow any coding guidelines as outlined under the planning stage and use different tools such as

compilers, debuggers, and interpreters. It is the programmers/developers that will choose the right programming code to use. The process begins with first developing the home page followed by the interior pages.

6.4 Steps needed to take before building any website

- **Steps a web developer takes before building a website project**: These are basically the steps you, as a web developer, would take for any website development project. By the same token, these will be the steps you would take before starting to build the apple.com's homepage.
    - **Step 1**: Gather all the necessary components of the website. These components include:
        - The design/wireframe of the website
        - The contents of the website, including the texts and images
        - Refer our Apple website's requirements folder
            - https://www.evangadi.com/courses/full-stack/apple-html-css-replica/Apple-Requirments.zip
    - **Step 2**: Look at the design and try to draft out how to organize the pieces using containers. This is basically saying "think in terms of containers"
        - Make sure to think of every single piece on the design
        - Think about the nested containers too
        - Refer to our Apple website's "brainstorming the structure of our HTML" document:
            - https://www.evangadi.com/courses/full-stack/apple-html-css-replica/brain-storming-the-html-structure.txt
    - **Step 3**: Convert the initial draft of the structure you came up with into HTML
        - Refer to our Apple website's "converting the structure we thought out into HTML" document
            - https://www.evangadi.com/courses/full-stack/apple-html-css-replica/converting-the-thought-out-structure-into-html.txt

- **Step 4**: Give names to your containers to allow you to select them later when you want to style your containers. We have learned in our CSS section that you can give class and Id names for HTML elements to identify, select and apply styling to them.

- **Step 5**: Organizing your folder structure for your project. You will see below the most common/conventional way of organizing project folders.

    - **Create a project folder**: It is advisable if your folder name is somehow indicative of the project you are working for so that you can easily identify it from your other folders.

        - **Within your project folder, create a folder to contain your images**: Organize and put all the images you are going to need in this folder

        - **Within your project folder, create a folder to contain your CSS files**: Within this folder, include all the CSS files you will use for your project.

        - **Within your project folder, create a folder to contain your JavaScript files**: Within this folder, include all the JavaScript files you will use for your project.

        - **Within your project folder, create the main HTML document**: Here, create your HTML file and name as “index.html”

- **Step 6**: Start working on developing the website: this is where the actual coding begins. You start by working on the HTML and then go to styling.