**BASIC KNOWLEDGE**

**Git**

* What is Version Control System?

A Version Control System (VCS) is a software tool that helps manage changes to source code, documents, or any other set of files. It allows multiple developers to collaborate on a project by tracking and recording modifications made to the files over time. The primary purpose of a VCS is to maintain a history of changes and provide mechanisms to revert to previous versions, compare differences between versions, and merge changes made by different users.

* What is Centralized VCS?

Centralized Version Control System (CVCS): In a CVCS, there is a central repository that stores all versions of the files. Developers check out a copy of the files from the central repository, make changes locally, and then commit their changes back to the repository. Examples of CVCS include Subversion (SVN) and Perforce.

* What is Distributed VCS?

Distributed Version Control System (DVCS): In a DVCS, each developer maintains a complete copy of the repository, including its entire history. Developers can work offline and commit changes to their local repository. They can also push their changes to other repositories or pull changes made by others. Git and Mercurial are examples of DVCS.

* What is Git?

Git is a distributed version control system (VCS) that is widely used for managing source code and tracking changes in software development projects. It was created by Linus Torvalds, the creator of the Linux operating system, in 2005.

Git is designed to handle everything from small to large-scale projects with speed and efficiency. It provides a reliable and flexible way to track changes made to files over time, enabling collaboration among developers and facilitating the management of codebase versions.

Git has become the de facto standard for version control in software development due to its robustness, flexibility, and widespread adoption. It provides developers with powerful tools to manage and track changes, collaborate efficiently, and maintain the integrity and history of their codebase.

* Why is the VCS important?

Overall, a Version Control System plays a crucial role in managing software development projects by providing a structured and organized approach to track changes, facilitate collaboration, ensure code integrity, and enable efficient versioning and recovery mechanisms. It is an essential tool for developers to work effectively and deliver high-quality software products.

**HTML5**

* What is HTML?

HTML stands for Hypertext Markup Language. It is the standard markup language used for creating and structuring web pages and applications. HTML provides a set of elements and tags that define the structure, content, and presentation of web documents.

* How many versions of HTML do you know?

|  |  |
| --- | --- |
| HTML (HTML 2.0) | 1995 |
| HTML 3.2 | 1997 |
| HTML 4.01 | 1999 |
| XHTML | 2000 |
| HTML5 | 2008 |

* How does the basic anatomy of a web page look like?

1. *DOCTYPE Declaration*: The DOCTYPE declaration is placed at the very beginning of an HTML document to specify the version of HTML being used. For HTML5, the DOCTYPE declaration is as follows: **<!DOCTYPE html>**
2. *HTML Element*: The HTML element is the root element of an HTML document. It wraps around all other elements and signifies that the document is written in HTML. It is defined as follows**: <html>content</html>**
3. *Head Element*: The head element contains metadata and other non-visible information about the web page. It includes elements such as the title, character encoding, linked stylesheets, JavaScript files, and more. It is defined within the HTML element, as follows: **<html><head>metadata</head>**<body>content</body></html>
4. *Title Element*: The title element is placed within the head element and defines the title of a web page. It appears in the browser’s title bar or tab, and is also used by search engines to display the page title in search results. Here’s an example: **<head><title>Page Title</title></head>**
5. *Body Element*: The body element wraps around the visible content of the web page. It contains elements such as headings, paragraphs, images, links, forms, and more. The content placed within the body element is what appears on the actual web page. Here’s an example: **<body><h1>Heading</h1><p>This is a paragraph. </p>more content</body>**

* Could you describe the constituting parts of the Web page? Open your favorite website in your browser and try to find these parts in it.
* What are HTML elements? What is the difference between opening and closing tags?
* Could you describe the Page Structure of an HTML document explaining each element?
* What is an HTML block element?
* What is an HTML inline element?
* What is the div tag and why is it important? What is the difference between div and span elements?
* What is the purpose of semantic elements in HTML5?