Explorin Academy

Master Dev

Day 4 Notes

How can we change the colour of text using only HTML?

In pure HTML, without using CSS (style attribute or an external stylesheet), you can use the <font> tag, though it's outdated and deprecated in HTML5 and not recommended in modern web development.

Example : `<font color="red">This text is red</font>`

How can we change the background colour using HTML?

Several tags have the bgcolor attribute which can be used to change the background colour of an element, but it is deprecated in HTML5. Here are some of the tags that used to support bgcolor :

- <body> : example -

  ```
  <body bgcolor="lightblue">
        This page has a light blue background.
  </body>
  ```

- <table> : example -

  ```
  <table bgcolor="yellow" border="1">
      <tr>
          <td>Cell 1</td>
          <td>Cell 2</td>
      </tr>
  </table>
  ```

- <tr> : example -

  ```
  <tr bgcolor="lightgray">
      <td>Row 1, Cell 1</td>
      <td>Row 1, Cell 2</td>
  </tr>
  ```

- <td> / <th> : example -

  ```
  <td bgcolor="pink">Cell with pink background</td>
  ```

Image tag

The <img> tag is used to display images in an HTML document. It is a self-closing (void) tag and does not require a closing tag.

Attributes of img tag

- **src (Source) – Required:** Specifies the image URL or file path.

  Example: `<img src="logo.png">`
- **alt (Alternative Text) – Recommended:** Provides text if the image fails to load (useful for accessibility and SEO).

  Example: `<img alt="Explorin Logo">`
- **width & height :** Defines the image dimensions in pixels or percentages.

  Example: `<img width="300" height="200">`

Horizontal Rule tag

The <hr> tag is used to insert a horizontal line in a webpage. It is a self-closing tag and is commonly used to separate sections of content. Example: `<hr>`

- **width :** Specifies the width of the horizontal line. Example: `<hr width="500">`
- **size :** Defines the thickness (height) of the line in pixels. Example: `<hr size="5">`
- **color :** Sets the color of the horizontal rule. Example: `<hr color="blue">`
- **align :** Aligns the <hr> to the left, right, or center. Example: `<hr align="left">`

Attributes of table tag

- **border :** Sets the border width of the table.

  Example: <table border="1">
- **cellpadding :** Adds space inside each table cell.

  Example: <table cellpadding="10">
- **cellspacing :** Defines space between table cells.

  Example: <table cellspacing="5">
- **width & height :** Defines the image dimensions in pixels or percentages.

  Example: <table width="80%" height="300px">
- **align :** Aligns the table horizontally (left, center, right).

  Example: <table align="center">
- **bgcolor :** Sets the background color of the table.

  Example: <table bgcolor="lightblue">

Cloud

Cloud refers to a network of remote servers that store, manage, and process data over the internet instead of a local computer. It allows users to access computing resources (like storage, databases, servers, and software) on demand, without needing physical hardware.

Version Control

Version control - also known as source control or revision control - is an important software development practice for tracking and managing changes made to code and other files.

Version Control System

Version control systems are software tools that help to record the changes made to code and other files overtime.

Benefits of a VCS (Version Control System)

- It keeps track of all the changes made in the project and informs us about Who, What, and When have changed the files.
- It helps in comparing the differences between the different versions of our code.
- It allows us to rollback (refers to the process of undoing changes, resetting commits, or restoring files to an earlier version.) to the previous version.
- It enables different people to work on a single project .
- It enhances the project development speed by providing efficient collaboration.
- Multiple people in the project can contribute from anywhere irrespective of the different geographical locations through this VCS.

Types of VCS

1. **Local Version Control Systems :** A Local VCS stores all file versions on a single computer and allows users to track changes. Example: RCS (Revision Control System).
2. **Centralized Version Control Systems:** A CVCS uses a single central server to store all versions of files, enabling multiple users to collaborate, but it requires an internet connection. Examples: SVN (Subversion), Perforce, and CVS.
3. **Distributed Version Control Systems:** A DVCS allows every user to have a complete copy of the repository, enabling offline work, better backup, and faster operations. Examples: Git, Mercurial, and Bitbucket.

Difference between Git and Github

The key difference between Git and GitHub is that Git is an open source version control tool that developers install locally on their personal computers, while GitHub is an online service built to run Git in the cloud.

Git	GitHub
Git is a software.	GitHub is a service.
Git is a command-line tool	GitHub is a graphical user interface
3. Git is installed locally on the system	GitHub is hosted on the web
Git is focused on version control and code sharing.	GitHub is focused on centralized source code hosting.
Git is a version control system to manage source code history.	GitHub is a hosting service for Git repositories.

Setting up Git on your device

- **Download and install the latest version of Git** : Download Link
- **Verify Installation (on cmd) :** git --version
- **Configure Git Locally(on cmd) :**

```
git config --global user.name "explorin academy"
git config --global user.email "admin@explorin.com"
```

- **Generate a Personal Access Token (PAT) on GitHub :**

  1. Go to GitHub Token Settings

  - Log in to GitHub → Click on your profile → Settings
  - Go to Developer Settings → Personal Access Tokens → Tokens (classic)
  - Click "Generate new token (classic)"

  2. Set Up the Token

  - **Expiration:** Choose an expiration date (or set to No expiration).
  - **Scopes (Permissions):** Check the following boxes:
    - repo (Full control of repositories)
    - workflow (Access GitHub Actions)
    - admin:public_key (Manage SSH keys)
    - gist (Access GitHub Gists)

    - **Click Generate Token**
    - **Copy and save the token**
- **Enable Git Credential Helper Store :** Git will save the credentials permanently, so you won't have to enter them again.
  Syntax : `git config --global credential.helper store`
- **Authenticate github using the Token Instead of a Password :** When pushing a repository, GitHub will ask for your username and password:

  ```
  git credential approve https://github.com
  ```

  It will prompt you for:

  Username: Your GitHub username

  Password: Paste the token (instead of your actual password)
- **Verify Authentication :** `git credential fill < ~/.git-credentials`