The School Website

Web Development

Time: 60 mins

Introduction

In this class, the student/s will revamp the school website to make it look attractive using HTML and CSS. Student/s will learn to add id selectors and class selectors to HTML elements. They will also learn about hexadecimal numbers and use them to represent colors in CSS. They will learn to use other CSS properties to align the elements of the Home section of the school website.

HTML Tags & CSS Properties Introduced

● <div id = "id-name">	HTML tag that gives a unique id to the <div> tag
● #id-name	CSS ID selector used to style an HTML element named id.
● font-size	CSS property that sets the size of the text element
● letter-spacing	CSS property that sets the spacing between the letters in the text element.
● float	CSS property that places an element on the left or right side of its container. The text and inline elements would be wrapped around it.
● background-color	CSS property that sets the background color of the HTML element
● <div class = "class-name">	HTML tag that gives a class name to the <div> tag
● .class name	CSS class selector used to style a class defined in an HTML file.

Vocabulary

- **Hexadecimal number system** uses 16 as its base. The numbers used in the system are 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, and F. e.g.: #32F18E, #FF00FF.
- **Hexadecimal color code** uses a 6-digit hexadecimal color code to represent a color. The first 2 digits represent red, the next 2 digits represent green and the last 2 digits represent blue. E.g.: FF0000 - red, 00FF00 - green, 0000FF - blue, FFFFFF - white, 000000- black.

Learning Objectives

Student/s should be able to:

- *Describe* the difference between id selectors and class selectors.
- *Explain* the hexadecimal number system and hexadecimal color code.
- *Demonstrate* how to use the dot operator and # symbol to represent elements in the CSS file.
- *Create* an attractive display for the Home section of the school website.

Activities

1. **Class Narrative:** *(2 mins)*
   - Brief the student/s that the school website needs a revamp to make it more appealing and attractive. The website is divided into different sections -. Home, About, Events and Footer. The Home section of the website will be designed in this class.

2. **Concept Introduction Activity:** *(5 mins)*
   - The image of the old school website is given in the slides. The old website looks plain due lack of styling and no images or styling. Let the student/s observe the explore-activity and observe the different parts of the revamped school website.
   - Using the slides, explain what they will learn:
     - to align the home section.
     - to style the home section using colors.
     - to style the additional information section.

3. **Activity 1: Align the Home Section:** *(10 mins)*

   Teacher Activity: *(5 mins)*
   - Explain to the student/s how to define the id selectors home-content and home-img and how to style the id selectors using "." in the CSS file.

Tag/id to be styled	CSS Property	Value
#home-content	width	20px (numeric value)
	display	inline, inline-block, block, contents, flex, grid, inline-flex, table, table-caption, list item
#home-img	width	40% (percentage)
	float	inherit left right none
	margin-top	80px (numeric value)
	margin-right	20px (numeric value)
	border-radius	20px (numeric value)

   Student Activity: *(5 mins)*
   - Guide students to style the id selector title and the image of the school on the webpage.

- Guide the student/s to define the id selectors home-content and home-img and style them using CSS.
  Note: Let the student/s explore more by changing the values of the CSS properties- display, width, align, etc.

Tag/id to be styled	CSS Property	Value
#title	background-color	color name eg: blue, red, light green
	text-align	left, right, center
	font-size	40px - any numeric value (unit pixels)
	letter-spacing	5px - any numeric value (unit pixels)
	font-family	cursive, serif, san-serif
	padding	20px - any numeric value (unit pixels)
	margin	0px - any numeric value (unit pixels)

4. **Activity 2: Style the Home Section using Colors:** *(10 mins)*

   Student Activity: *(10 mins)*
   - Explain to the student/s (using slide 27) that a color selector tool can be used to choose a specific shade of a color. Explain using the gif below how the color selector tool can be opened and that it shows an alphanumeric value at the bottom left side representing the color code.

```
2       margin: 0px;
3       font-family: calibri;
4 }
5
6 #title{
7       /* Set background, for id title */
8       background-color: blue;
9       color: white;
10      text-align: center;
11      letter-spacing: 5px;
12      font-size: 40px;
13      font-family: serif;
14      padding: 20px;
15      margin: 0px;
16
17 }
18
19 #home-content{
20      width: 55%;
21      display: inline-block;
22      margin-left: 30px;
```

   - Explain to the student/s about the hexadecimal color code.

- Guide the student/s to change the background-color of the id selector "title" and h1 tags along with adding a background image.
  Note: Let the student/s play with different alphanumeric values to try out different colors.
  Probing question: How can we set a background image for a HTML element using CSS?
  Expected answer: By specifying the path of the image file in url(file_name) for the CSS property background-image.

Tag/id to be styled	CSS Property	Value
#home	background-image: url(file_name)	Complete path of the image
	background-size	percentage value of width and height
#title	background-color	#340969 (hexadecimal value)
h1	color	#4c2755 (hexadecimal value)
	font-size	60px - any numeric value (unit pixels)
#school-description	font-size	20px - any numeric value (unit pixels)

5. **Activity 3: Style the Additional Information :** *(10 mins)*

    Teacher Activity: *(5 mins)*
- Explain to the student/s the use of class selectors and how to use them to style the "school-highlights" section of the webpage.

    Student Activity: *(5 mins)*
- Guide the student/s to use the class selectors to style the class "school-highlights" section of the webpage.
- Guide the student/s to use hexadecimal color code to set the color of the class selector named "school-highlights-heading".

Tag/id to be styled	CSS Property	Value
.school-highlights	display	inline-block
	padding	30px - any numeric value (unit pixels)
	text-align	center

school-highlights-heading	color	##340969 (hexadecimal value)

6. **Introduce the Post class project:** *(2 min)*
   ● In the Jungle Book webpage, style the images and text using id selectors and class selectors.

7. **Test and Summarize the class learnings:** *(5 mins)*
   ● Check for understanding through quizzes and summarize learning after respective missions.
   ● Summarize the overall class was learning towards the end of the class.

8. **Additional activities:**
   ● Encourage the student/s to add the details of the number of teachers in the school.
   ● Encourage the student/s to style school-highlights details vertically instead of horizontally.

9. **State the Next Class Objective:** *(1 min)*
   ● We will learn to add a navigation bar to the website.

U.S. Standards:

CSTA: 2-AP-13, 2-AP-19

Links Table		
Activity	**Activity Name**	**Link**
Class Presentation	The School Website	https://s3-whjr-curriculum-uploads.whjr.online/505d3734-d613-41fa-ba4f-efdc2096f5a8.html
Explore Activity	The School Website : Explore Activity	https://tynker.com/code/view/6389ccc7887ab367f2234722/
Teacher Activity 1	Style the Home Section	https://tynker.com/code/project/634947b57e452a34c20bf1f2
Teacher Activity 1 Solution	Style the Home Section - Solution	https://tynker.com/code/project/6343ad377f8bad61d6021097
Student Activity 1	Style the Home Section	https://tynker.com/code/project/63441b10b29d0f70880924d2
Teacher Reference: Student Activity 1 Solution	Style the Home Section - Solution	https://tynker.com/code/project/633fd6733570027b2110cd92
Student Activity 2	Add Colors to the Home Section	https://tynker.com/code/project/63442804633da6681a7d10d2
Teacher Reference: Student Activity 2 Solution	Add Colors to the Home Section - Solution	https://tynker.com/code/project/633fdaaef80d6f68116f02f2

Teacher Activity 3	Add Additional Information	https://tynker.com/code/project/6343faf936e27021a535d872
Teacher Reference:Teacher Activity 3 Solution	Add Additional Information - Solution	https://tynker.com/code/project/633fd572d392b50cf90b9db7
Student Activity 3	Add Additional Information	https://tynker.com/code/project/636b747182fa2256562435c7
Teacher Reference: Student Activity 3 Solution	Add Additional Information - Solution	https://tynker.com/code/project/636b738e3572e8387f0be212
Student's Additional Activity 1	How many teachers?	https://tynker.com/code/project/636b5763cfa78f7af304c282
Teacher Reference: Student's Additional Activity 1 Solution	How many teachers? - Solution	https://tynker.com/code/project/636b55f3ce671f61bf77bfa2
Student's Additional Activity 2	Style the Additional Information	https://tynker.com/code/project/636b58103d5cb772d456f382
Teacher Reference: Student's Additional Activity 2 Solution	Style the Additional Information-Solution	https://tynker.com/code/project/636b4e6b1df753305b2e6d42
Post Class Project	The Jungle Book	https://tynker.com/code/project/635b91e2c25db056c534b3b2
Teacher Reference: Post Class Project Solution	The Jungle Book - Solution	https://tynker.com/code/project/635b8ee5139a004f61387602