

# Web Development and Databases

## Practical 5 – CSS3 – Layout and Formatting

### Practical Aim

- To practice different layout design
- To learn CSS3 features and apply them e.g., animations which can be used without needing external plug-ins e.g., flash

### Pre-requisite:

- You have completed basic CSS practical exercises.
- You have reviewed all lecture examples.
- You have a web browser to load/render your web pages.
- You have VS Code to write CSS and HTML script.
- You have already created a workspace directory on your computer where you can save all your scripts.
- You have gone through lecture slides / recording.

If you need help - **ask**. If you are curious - **ask**. If you want to know - **ask**. You may work in groups but this is not compulsory.

### A quick guide:

A good guide to follow is accessible from <https://www.w3schools.com/css/default.asp>.

### Exercise 1:

**Task 1:** You may reuse an existing web page or create a new simple webpage with CSS style rules. This web page should have commonly used HTML elements (e.g., <body>, <p>, <H1>, <H2>, <ul>, <li>, <img>, <a>, <section>, <header>, <article>, <footer>, <nav> and few <input> elements for <form>) and you should apply one or two meaningful (or appropriate) CSS style rules on the HTML elements.

**Hint:** you may reuse **HTML5\_tags.html** from previous practical sheet and extend it with more contents e.g., add an image **OR** you may create a web page that you planned for your Website project.

Task 2: Try to structure your webpage presentation by putting the visual layout into four parts as shown below:

Header (100% width)	
Left navigation menu (25% width)	Web Contents (75% width)
Footer (100% width)	

**Hint 1:** Remember [CSS box model](https://www.w3schools.com/css/css_boxmodel.asp) and how padding, margin and border can affect width of an element. [https://www.w3schools.com/css/css\\_boxmodel.asp](https://www.w3schools.com/css/css_boxmodel.asp)

**Hint 2:** Check layouts [https://www.w3schools.com/css/css\\_website\\_layout.asp](https://www.w3schools.com/css/css_website_layout.asp). You may need to use **Div** tags, IDs/Classes. You should be able to create above layout by using **float** property. With float property the sequence of HTML elements in .html file is important. If you use **float** then check box-sizing property. [https://www.w3schools.com/css/css\\_float.asp](https://www.w3schools.com/css/css_float.asp)

**Hint 3:** for left navigation you may need **display** property. Think creatively. [https://www.w3schools.com/cssref/pr\\_class\\_display.asp](https://www.w3schools.com/cssref/pr_class_display.asp)

**Hint 4:** For advance use you can try **flexbox** - [https://www.w3schools.com/css/css3\\_flexbox.asp](https://www.w3schools.com/css/css3_flexbox.asp)

Exercise 2: Discuss with your tutor(s) how is CSS relevant to your Website Project? What would be your approach to apply CSS on your Website and Why? **Hint:** Don't forget the 'Separation of Concern' design principle.

Exercise 3: Try to convert the structure of your webpage presentation (Exercise 1: Task 2) by putting the visual layout into five parts:

Header with a logo/image (100% width)		
Left navigation menu (20% width)	Web Contents (60% width)	Right aside - highlights/notifications (20% width)
Footer (100% width)		

**Hint 1:** if you used flow property then keep <aside> after <section>.

**Exercise 4:** Use an existing webpage and extend it with new code to perform a continuous animation of an object (e.g., image or div box) by using CSS3 features.

**Hint:** Check CSS3 [Animation](https://www.w3schools.com/css/css3_animations.asp). [https://www.w3schools.com/css/css3\\_animations.asp](https://www.w3schools.com/css/css3_animations.asp)