Box Model:

The box model refers to the physical properties of an element’s rectangular box. These are margins, borders, padding, and content width and height.

Border attributes: border-width, border-style,
border-color

TOTAL ELEMENT WIDTH
= (left border + left padding + content width + right padding + right border)

Box sizing:

```
.box {
	width: 300px;  *This is not the final width*
	padding: 10px;
	border: 1px solid black;
	box-sizing: content-box;
}
/*If we specify box-sizing to border-box, then the mentioned width is the final width.
```

Box Model considerations:

- If a property is not declared, you cannot assume the value is “0”.
- Elements often have default margins you need to account for.
- At 100% width property, when combined with padding and borders, can create elements that are larger than their parents.

CSS Element Positioning:

- Normal flow
- Element floating
- Absolute positioning

Floating technique to create Horizontal menu out of Unordered list:

```
.box1,
.box2,
.box3 {
	float: left;
}
```

Flexbox:

First you define a parent element (flex container) and then you add Children (flex items) to the parent. Based on flexbox properties, childs can be layed out in any direction, any alignment, any order, any size.

CSS Grid layout system:

“This CSS module defines a two-dimenstional grid based layout system, optimized for user interface design. In the grid layout model, the children of a grid container can be positioned into arbitrary slots in a predefined flexible or fixed sixed layout grid.”

-*W3C candidate recommendation*

```
.container {
    display: grid;
}
```

Tips for organising CSS:

- Use comments liberally
- Use consistent naming conventions.
- Use consistent formatting
- Group like styles
- Split up files

Media Queries:

```
@media not | only mediatype and (media feature) {

    //styles

}
```

Example:

```
@media only screen and (min-width: 800px) {

    .site-title {
        text-align: left;
    }
}
```

Mobile first Web design:

- Has default styles for the smallest viewport.
- Overrides default styles for larger viewports.
- Only sends data needed for that device size.
- Use the min-width media queries.

```
//settings for smaller screens
h1 {
    font-size: 30px;
}
```

```
//settings for larger screens
@media (min-width: 640px) {
	h1 {
		font-size: 60px;
	}
}
```

CSS Preprocessors:

- Sass
- LESS
- Stylus