

# Lecture 2

## CSS Selectors

### 1. Basic Selectors

- **Universal Selector** (\*): Selects all elements.

```
* {  
  margin: 0;  
  padding: 0;  
}
```

- **Type Selector**: Selects all elements of a given type (tag name).

```
p {  
  color: blue;  
}
```

- **Class Selector** (.): Selects all elements with a specific class.

```
.my-class {  
  font-size: 16px;  
}
```

- **ID Selector (#):** Selects a single element with a specific ID.

```
#my-id {  
    background-color: yellow;  
}
```

## 2. Combinators

- **Descendant Selector (space):** Selects elements that are descendants of a specified element.

```
div p {  
    color: green; /* All <p> inside <div>  
    */  
}
```

- **Child Selector (>):** Selects elements that are direct children of a specified element.

```
ul > li {  
    list-style-type: square; /* Only  
    direct <li> children of <ul> */  
}
```

- **Adjacent Sibling Selector (+):** Selects an element that is immediately preceded by a specified element.

```
h1 + p {  
    margin-top: 0; /* First <p> after  
<h1> */  
}
```

- **General Sibling Selector (~):** Selects all elements that are siblings of a specified element.

```
h1 ~ p {  
    color: red; /* All <p> after <h1> */  
}
```

### 3. Attribute Selectors

- Selects elements based on their attributes.

```
a[target="_blank"] {  
    color: orange; /* Links that open in  
a new tab */  
}
```

```
input[type="text"] {  
    border: 1px solid #ccc; /* Text  
inputs */  
}
```

### 4. Pseudo-classes

- Selects elements based on their state.

```
a:hover {  
    color: green; /* Change color on  
hover */  
}
```

```
li:first-child {  
    font-weight: bold; /* First item in a  
list */  
}
```

```
input:focus {  
    outline: 2px solid blue; /* Focused  
input field */  
}
```

## 5. Pseudo-elements

- Selects a part of an element.

```
p::first-line {  
    font-weight: bold; /* Style the first  
line of a paragraph */  
}
```

```
p::before {
```

```
    content: "Note: "; /* Adds content
before paragraph */
    font-weight: bold;
}
```

## 6. Grouping Selectors

- Groups multiple selectors to apply the same styles.

```
h1, h2, h3 {
    margin-bottom: 10px; /* Applies to
all headings */
}
```

## 7. Combining Selectors

- You can combine selectors to create more specific selections.

```
div.my-class > p:first-child {
    color: blue; /* First <p> in <div>
with class 'my-class' */
}
```

## Example

Here's an example of using various selectors:

```
body {  
    font-family: Arial, sans-serif;  
}  
  
h1 {  
    color: navy;  
}  
  
.my-class {  
    margin: 20px;  
}  
  
#unique-id {  
    font-size: 24px;  
}  
  
ul > li {  
    list-style: none;  
}  
  
a:hover {  
    text-decoration: underline;  
}
```

Understanding selectors allows you to apply styles effectively and efficiently, making your web design more manageable and organized.