Front End Technologies CSS - Day 10

- **Dynamic Pseudo class**
- **UI State Pseudo class**

Dynamic Pseudo class: There are four types of Dynamic pseudo classes they are:

- Link: Refers to any anchor that is a hyperlink (i.e., has an href attribute) and points to an address that has not been visited.
- Visited: Refers to any anchor that is a hyperlink to an already visited address
- Hover: Refers to any element over which the mouse pointer is placed—e.g., a hyperlink over which the mouse pointer is hovering.
- Active: Refers to any element that has been activated by user input—e.g., a hyperlink on which a user clicks during the time the mouse button is held down.

Let's understand Dynamic pseudo class with an example.

Example:

Index.html

```html
<!DOCTYPE html>
<html>

<head>
    <title>Example</title>
    <style type="text/css">
        a:link{
            background-color: orange;
        }

    </style>
</head>

<body>
    <h2>Good NGO's</h2>
    <a href="https://bhartifoundation.org">
        BhartiFoundation</a><br>
    <a href="https://cuddlesfoundation.org">
        CuddlesFoundation</a><br>
    <a href="https://goonjfoundation.org">
        GoonjFoundation</a><br>
</body>

</html>
```
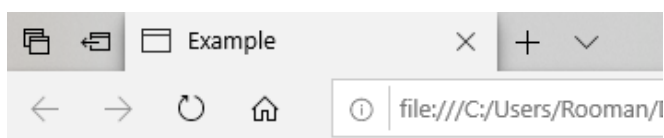
Output:

In this example, styling is applied to **link pseudo class** that has not been visited.

Example:

Index.html

```html
<!DOCTYPE html>
<html>

<head>
    <title>Example</title>
    <style type="text/css">
        a:link{
            background-color: orange;
        }
        a:visited{
            background-color: violet;
        }
    </style>
</head>

<body>
    <h2>Good NGO's</h2>
    <a href="https://bhartifoundation.org">
        BhartiFoundation</a><br>
    <a href="https://cuddlesfoundation.org">
        CuddlesFoundation</a><br>
    <a href="https://goonjfoundation.org">
        GoonjFoundation</a><br>
</body>

</html>
```
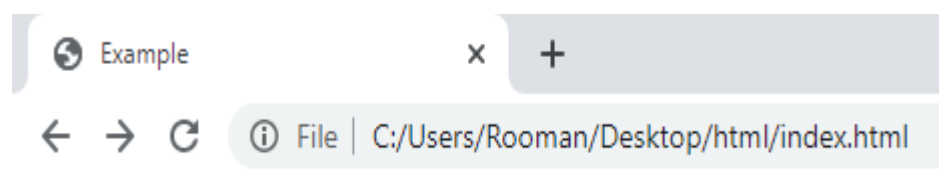
Output:

In this example, styling to visited pseudo-class applies once the link has been visited by the user.

Example:

Index.html

```html
<!DOCTYPE html>
<html>

<head>
    <title>Example</title>
    <style type="text/css">
        a:link{
            background-color: orange;
        }
        a:visited{
            background-color: violet;
        }
        a:hover{
            background-color: red;
        }
    </style>
</head>

<body>
    <h2>Good NGO's</h2>
    <a href="https://bhartifoundation.org">
        BhartiFoundation</a><br>
    <a href="https://cuddlesfoundation.org">
        CuddlesFoundation</a><br>
    <a href="https://goonj.org">
        GoonjFoundation</a><br>
</body>

</html>
```

Output:

Good NGO's

BhartiFoundation
CuddlesFoundation
GoonjFoundation

Here, if you observe the output styling is applied to BhartiFoundation because mouse cursor is hovered on that hyperlink.

Example:

Index.html

```html
<!DOCTYPE html>
<html>

<head>
    <title>Example</title>
    <style type="text/css">
        a:link{
            background-color: orange;
        }
        a:visited{
            background-color: violet;
        }
        a:hover{
            background-color: red;
        }
        a:active{
            background-color: pink;
        }
    </style>
</head>

<body>
    <h2>Good NGO's</h2>
    <a href="https://bhartifoundation.org">
        BhartiFoundation</a><br>
    <a href="https://cuddlesfoundation.org">
        CuddlesFoundation</a><br>
    <a href="https://goonj.org">
        GoonjFoundation</a><br>
</body>

</html>
```
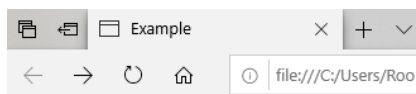
Output:

In this example, if you observe the output BhartiFoundation is active so styling is applied to that hyperlink only.

UI State Pseudo class: There are different types of UI state pseudo classes available, let's understand with an example.

Example:

```html
<!DOCTYPE html>
<html>

<head>
    <title>Exmp</title>
    <link rel="stylesheet" type="text/css"
    href="index.css">
</head>

<body>
    <h2>Sign up form</h2>
    <form action="response.html">
        <table>
            <tr>
                <td>
                    <label>Name:
                    </label>
                </td>
                <td>
                    <input type="text" name="name" size="15" required>
                    <p>Enter your name</p>
                </td>
            </tr>
            <tr>
            <tr>
                <td>
                    <label>College:</label>
                </td>
                <td>
                    <input type="text" name="College" size="15" disabled>
                </td>
            </tr>
            <td>
                <label>Primary-Email:</label>
            </td>
            <td>
                <input type="email" name="pmail" size="15" required>
                <p>Enter your mail</p>
                <img class="valid" src="check.png" height="20" width="20">
                <img class="invalid" src="warning.png" height="20" width="20">
            </td>
            </tr>
```

```html
            <tr>
                <td>
                    <label>Secondary-Email:</label>
                </td>
                <td>
                    <input type="email" name="smail" size="15">
                    <p>Enter your mail</p>
                    <img class="valid" src="check.png" height="20" width="20">
                    <img class="invalid" src="warning.png" height="20" width="20">
                </td>
            </tr>
            <tr>
                <td>
                    <label>Password:</label>
                </td>
                <td>
                    <input type="Password" name="pwd" size="15" required>
                    <p>Enter your password</p>
                </td>
            </tr>
            <tr>
                <td>
                    <label>Gender:</label>
                </td>
                <td>
                    <input type="radio" name="gender" value='M' checked="checked">
                    <label>Male</label>
                    <input type="radio" name="gender" value='F'>
                    <label>Female</label>
                    <input type="radio" name="gender" value='O'>
                    <label>Other</label>
                </td>
            </tr>
            <tr>
                <td>
                    <label>Age:</label>
                </td>
                <td>
                    <input type="number" name="age" size="15" min="18" max="100" value="18" required="">
                    <p>Enter your Age</p>
                    <img class="valid" src="check.png" height="20" width="20">
                    <img class="invalid" src="warning.png" height="20" width="20">
                </td>
            </tr>
            <tr>
                <td>
                    <label>MOD:</label>
                </td>
                <td>
                    <input type="text" name="mod" readonly value="online">
                    <p>Only online mode available due to covid</p>
                </td>
            </tr>
            <tr>
                <td>
                    <input type="submit" name="submit">
                </td>
            </tr>
        </table>
    </form>

</body>

</html>
```
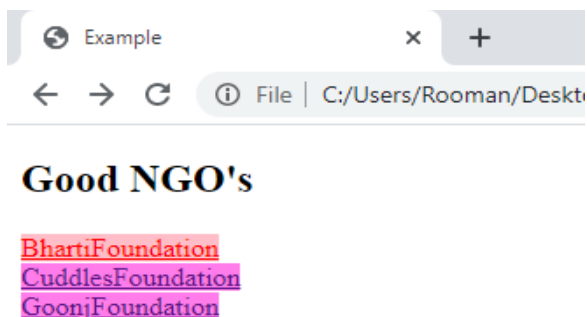
Index.css

```css
body{
    background-color: yellow;
    font-family: cursive;
}

form{
    border:3px solid black;
}

input:required{
    border:2px groove violet;
}

input:optional{
    border: 2px dashed violet;
}

input:disabled{
    border:2px dotted violet;
}

input:read-only{
    background-color: grey;
}

p{
    display: none;
}

input:hover + p{
    display:inline;
    font-family: monospace;
    background-color: red;
}

input:focus{
    background-color: silver;
    font-weight: bold;
}
```

```css
img{
    display: none;
}

input[type="email"]:focus:valid ~ img.valid{
    display: inline;
    width: 20px;
    height: 20px;

}

input[type="email"]:focus:invalid ~
img.invalid{
    display: inline;
    width: 20px;
    height: 20px;

}

input[type="radio"]:checked{
    width: 20px;
    height: 20px;
}

input[type="radio"]:checked + label{
    color: red;
}

input[type="submit"]{
    border:2px solid violet;

}
```
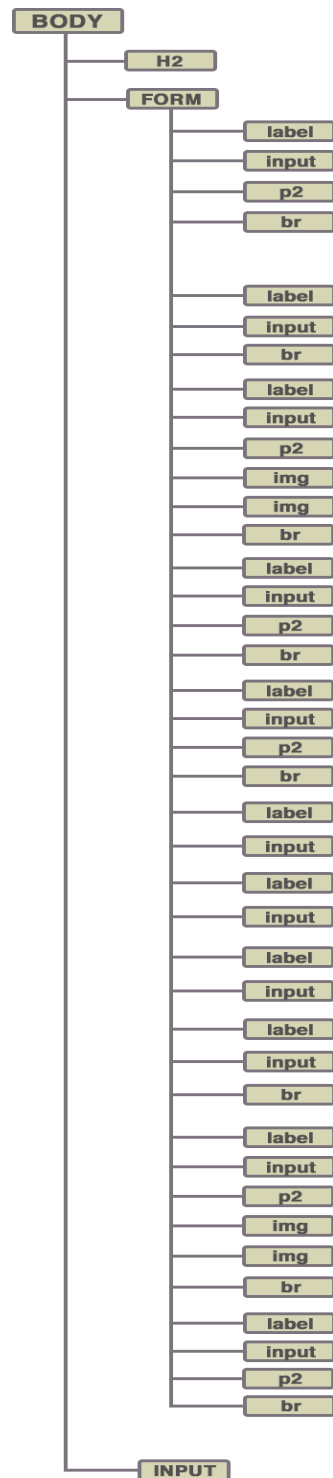
Tree Representation:

```
BODY
  ├── H2
  ├── FORM
  │     ├── label
  │     ├── input
  │     ├── p2
  │     ├── br
  │     │
  │     ├── label
  │     ├── input
  │     ├── br
  │     ├── label
  │     ├── input
  │     ├── p2
  │     ├── img
  │     ├── img
  │     ├── br
  │     ├── label
  │     ├── input
  │     ├── p2
  │     ├── br
  │     ├── label
  │     ├── input
  │     ├── p2
  │     ├── br
  │     ├── label
  │     ├── input
  │     ├── label
  │     ├── input
  │     ├── label
  │     ├── input
  │     ├── label
  │     ├── input
  │     ├── br
  │     ├── label
  │     ├── input
  │     ├── p2
  │     ├── img
  │     ├── img
  │     ├── br
  │     ├── label
  │     ├── input
  │     ├── p2
  │     └── br
  └── INPUT
```

Output:

Let's explore all UI state pseudo class one by one

:required – styling is applied to a user input that must have a value set.

:optional – Styling is applied to a user input that does not need to have a value set

:read-only - Refers to a user input that is not editable by the user

:read-write - Refers to a user input that is editable by the user

:disabled - Refers to user-interface elements (such as form elements) that are disabled; that is, not available for input

:enabled - Refers to user-interface elements (such as form elements) that are enabled; that is, available for input.

:checked - Refers to radio buttons or checkboxes that have been selected, either by the user or by defaults within the document itself.

:default - Refers to the radio button, checkbox, or option that was selected by default.

:valid - Refers to a user input that meets all of its data validity semantics

:invalid - Refers to a user input that does not meet all of its data validity semantics

:in-range - Refers to a user input whose value is between the minimum and maximum values

:out-of-range - Refers to a user input whose value is below the minimum or above the maximum values allowed by the control

display:none - Hiding an element can be done by setting the display property to none. The element will be hidden, and the page will be displayed as if the element is not there.