LAB-03

DOCUMENT OBECT MODEL(DOM)

OBJECTIVE:

To learn what is DOM and the APIs is available for manipulating them .

Lab Task :

Code:

```html
Lab02 task#01.html  ×

D: > 6th Semster > Web Engineering > LABS > <> Lab02 task#01.html > html
 1    <!DOCTYPE html>
 2    <html lang="en">
 3
 4    <head>
 5        <meta charset="UTF-8">
 6        <meta http-equiv="X-UA-Compatible" content="IE=edge">
 7        <meta name="viewport" content="width=device-width, initial-scale=1.0">
 8        <title>2019-SE-010 Lab02 Task#01</title>
 9        <style>
10            div {
11                border: 1px solid black;
12                margin-left: 100px;
13                margin-left: inherit;
14                margin: 25px 75px 100px 100px;
15            }
16
17            tr {
18                margin: 25px 75px 100px 100px;
19            }
20
21            .highlight {
22                background-color: #00FFFF;
23            }
24
25            table {
26                border-collapse: collapse;
27                width: 100%;
28            }
29
30            th,
31            td {
32                padding: 8px;
33                text-align: left;
34                border-bottom: 1px solid #ddd;
35            }
36
37            .button1 {
38                background-color: white;
39                color: black;
40                border: 3px solid #4CAF50;
41                /* Green */
42                float: center;
43            }
44
45            a:link {
46                color: red;
47            }
48            /* visited link */
49
50            a:visited {
51                color: green;
52            }
53            /* mouse over link */
54
55            a:hover {
56                color: hotpink;
57            }
58            /* selected link */
59
60            a:active {
61                color: blue;
62            }
```

```
Lab02 task#01.html  ✕

D: > 6th Semster > Web Engineering > LABS > <> Lab02 task#01.html > ⊘ html
114                <input type="button" value="Update Course" onclick="updateCourse();" class="button1" />
115            </center>
116        </div>
117
118        <script type="text/javascript">
119            // JavaScript Code to Highlight any
120            // row in the given table.
121            document.getElementById('table_to_highlight')
122                .addEventListener('click', function(item) {
123
124                    // To get tr tag
125                    // In the row where we click
126                    var row = item.path[1];
127
128                    var row_value = "";
129
130                    for (var j = 0; j < row.cells.length; j++) {
131
132                        row_value += row.cells[j].innerHTML;
133                        row_value += " | ";
134                    }
135
136                    alert(row_value);
137
138                    // Toggle the highlight
139                    if (row.classList.contains('highlight'))
140                        row.classList.remove('highlight');
141                    else
142                        row.classList.add('highlight');
143                });
144
145        //This declarative function will be called on 'Add New Row' button click and add new row
146        function addNewCourse() {
147
148            //1 - Find the 'body' element
149            const body = document.querySelector('tbody');
150
151            //2 - Create elements using document.createElement API (method)
152            const row = document.createElement('tr'); //Create 'tr' element
153            const tdCourseID = document.createElement('td'); //Create 'td' element
154            const tdCourseName = document.createElement('td'); //Create 'td' element
155            const tdCreditHours = document.createElement('td'); //Create 'td' element
156            const tdYearTaken = document.createElement('td'); //Create 'td' element
157
158            const courseId = ((Math.round(Math.random() * 100)) + 4);
159            const courseName = ((Math.round(Math.random() * 500)) + 50);
160            const creditHours = ((Math.round(Math.random() * 1)) + 2);
161            const yearTaken = (Math.round(Math.random() * 2020)) + 2020;
162            row.id = 'row' + courseId;
163
164            //3 - Update td's 'innerHTML' (basically element content - anything within the angle brackets)
165            tdCourseID.innerHTML = 'Course ' + courseId;
166            tdCourseName.innerHTML = 'Course - DOM - ' + courseName;
167            tdCreditHours.innerHTML = creditHours;
168            tdYearTaken.innerHTML = yearTaken;
```

```
<> Lab02 task#01.html  ✕

D: > 6th Semster > Web Engineering > LABS > <> Lab02 task#01.html > ⬡ html > ⬡ body

167              tdCreditHours.innerHTML = creditHours;
168              tdYearTaken.innerHTML = yearTaken;
169
170              //4 - Insert newly created 'td's into newly created 'tr' using element's appendChild API
171              row.appendChild(tdCourseID);
172              row.appendChild(tdCourseName);
173              row.appendChild(tdCreditHours);
174              row.appendChild(tdYearTaken);
175
176              //5 - Finally insert newly created 'row' into 'body' element
177              body.appendChild(row);
178          }
179
180          function deleteCourse() {
181              //Ask for course# using prompt
182              const courseId = prompt('Please enter course ID');
183
184              //If user has entered course#
185              if (courseId) {
186                  //Find the row containing the 'course #' entered by the user
187                  const row = document.getElementById('row' + courseId);
188                  if (row) {
189                      //Find the parent of the 'row' just found so that it can be removed from its child list
190                      const body = document.querySelector('tbody');
191
192                      //Finally remove it from 'tbody' element
193                      body.removeChild(row);
194                  }
195              }
196          }
197
198          function updateCourse() {
199              //Ask the course# and year taken
200              const newCourseYear = prompt('Please enter course# and new year delimited by comma');
201
202              //If the user has entered course# and year taken
203              if (newCourseYear) {
204                  //Split the comma separated input entered by the user. Example input; 3,2021
205                  const courseId = newCourseYear.split(',')[0];
206                  const courseYear = newCourseYear.split(',')[1];
207
208                  //Find the row containing the 'course #' entered by the user
209                  const row = document.getElementById('row' + courseId);
210                  if (row) {
211                      //Find the 'year taken' td element within the 'row' entered by the user
212                      const tdYearTaken = row.querySelector('#row' + courseId + ' > td:nth-child(3)');
213
214                      //Finally update the new 'year taken' entered by the user using 'innerHTML' property of element
215                      tdYearTaken.innerHTML = courseYear;
216                  }
217              }
218          }
219      </script>
220  </body>
221
```

Output:

Sir Syed University
of Engineering & Technology

Syed University of Engineering and Technology is a private research university located in the urban area of Karachi, Sindh, Pakistan.
The university is honored in the name of notable 19th-century Indian Muslim reformer and philosopher, Sir Syed Ahmad Khan

SSUET University Home Page

SSUET University Scholarship Notice Page

SSUET University News and Events Page Calandar

Course ID	Course Name	Credit Hours	Year Taken
SWE314L. - 203	ARTIFICIAL INTELLIGENCE	3+1	2021
SWE312T - 2190	SOFTWARE CONSTRUCTION & DEVELOPMENT	3+1	2021
SWE209L - 1483	INTRODUCTION TO DATABASE SYSTEMS	3+0	2020
SWE204L - 1837	OPERATING SYSTEMS	3+0	2020

Add New Course | Delete Course | Update Course

Add New Course:

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SWE209L - 1483	INTRODUCTION TO DATABASE SYSTEMS	3+0	2020
SWE204L - 1837	OPERATING SYSTEMS	3+0	2020
Course 35	Course - DOM - 89	3	2025
Course 95	Course - DOM - 206	3	2655

Add New Course | Delete Course | Update Course

Delete Course:

Update Course:

Home Task

Code:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>lab3 home task</title>
</head>
<body>
    <div><center>
        <h1>Student Registration Form</h1></center>
        <form name="yes" onsubmit="check()">
            <label>student name:</label>
            <input type="text" name="Name" placeholder="Student Name"/>
            <label>email:</label>
            <input type="text" name="Email" placeholder="Student Name"/>
            <label>password:</label>
            <input type="text" name="Password" placeholder="Student Name"/>
            <label>phone no:</label>
            <input type="text" name="Phone" placeholder="Student Name"/>
            <button>click me</button>
        </form>

        <script>
            function check() {
                var name = document.forms.yes.Name.value;
                var email =document.forms.yes.Email.value;
                var password =document.forms.yes.Password.value;
                var phone =document.forms.yes.Phone.value;

                if (name == "") {
                    window.alert("Please enter your name properly.");
                    name.focus();
                    return false;
                }

                if (email == "") {
                    window.alert("Please enter a valid e-mail address.");
                    email.focus();
                    return false;
```

```
            if (password == "") {
                alert("Please enter your password");
                password.focus();
                return false;
            }

            if(password.length <6){
                alert("Password should be atleast 6 character long");
                password.focus();
                return false;

            }
            if (phone == "") {
                alert("Please enter valid phone number.");
                phone.focus();
                return false;
            }

                return true;
            }
        </script>

    </div>
</body>
</html>
```

Output:

Student Registration Form

student name: [Student Name]   email: [Student Name]   password: [Student Name]   phone no: [Student Name]   [click me]

student name: [edfsef]   email: [Student Name]   password: [Student Name]

This page says

Please enter a valid e-mail address.

[OK]