

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

WEB TECHNOLOGY LAB

BCSL504

EXPERIMENT – 02
CLASS TIME TABLE USING HTML

5th Semester

HTML Table • Table Header • Table Footer
Rowspan • Colspan • Cell Colours
Lab Highlighting • Elective Highlighting

Prepared by Search Creators

Learn • Practice • Execute

1. Experiment 02

Aim

Develop an HTML page named `Table.html` to display a class time table.
Use table header and footer, row spanning and column spanning, and different background colours to improve the presentation of the timetable.

2. Requirements

- Search Creators Compiler / Code Studio (Recommended)

<https://searchcreators.org/compiler/>

- Modern web browser such as Chrome, Edge or Firefox
- Internet connection for accessing Search Creators Compiler
- Alternatively, VS Code, Notepad or another suitable HTML editor
- Basic knowledge of HTML tables

3. Search Creators Compiler

Run This Program on Search Creators

You can practice and execute the Web Technology Lab program using the **Search Creators Compiler / Code Studio**.

Open Search Creators Compiler

<https://searchcreators.org/compiler/>

Use the online coding environment to write the HTML program, execute it and verify the timetable output.

4. Problem Statement

Develop the HTML page:

`Table.html`

The webpage should demonstrate:

1. Class timetable using an HTML table.
2. Table heading.
3. Table footer.
4. Row spanning using `rowspan`.
5. Column spanning using `colspan`.
6. Different background colours for cells.
7. Highlighting of laboratory periods.
8. Highlighting of elective periods.
9. Different colours for selected rows or cells.

5. Introduction to HTML Tables

HTML tables are used to represent information in the form of rows and columns.

A timetable is a good example of tabular data because it contains:

- Days
- Time slots
- Subjects
- Laboratory sessions
- Break periods
- Elective periods

The main element used to create an HTML table is:

<code><table></code>

6. Important HTML Table Tags

Tag / Attribute	Purpose
<table>	Creates an HTML table.
<caption>	Defines a caption for the table.
<thead>	Groups the table header content.
<tbody>	Groups the main table content.
<tfoot>	Groups the table footer content.
<tr>	Creates a table row.
<th>	Creates a table heading cell.
<td>	Creates a table data cell.
rowspan	Makes a cell span multiple rows.
colspan	Makes a cell span multiple columns.

7. Basic Table Structure

A simple HTML table has the following structure:

```
1 <table>
2
3     <tr>
4         <th>Day</th>
5         <th>Subject</th>
6     </tr>
7
8     <tr>
9         <td>Monday</td>
10        <td>Computer Networks</td>
11    </tr>
12
13 </table>
```

8. HTML Program

Important

Create the following file:

Table.html

Practice and execute the program using:

Search Creators Compiler / Code Studio

<https://searchcreators.org/compiler/>

```
1 <!DOCTYPE html>
2 <html lang="en">
3
4 <head>
5     <meta charset="UTF-8">
6     <title>Class Time Table</title>
7 </head>
8
9 <body>
10
11 <h2 align="center">Class Time Table</h2>
12
13 <table border="1"
14     cellpadding="0"
15     cellspacing="10"
16     align="center">
17
18     <caption>
19         <b>5th Semester Class Time Table</b>
20     </caption>
21
22     <!-- Table Header -->
23     <thead bgcolor="lightgreen">
24
25         <tr>
26             <th>Day / Time</th>
27             <th>9:00 - 10:00</th>
28             <th>10:00 - 11:00</th>
29             <th>11:00 - 11:15</th>
30             <th>11:15 - 12:15</th>
31             <th>12:15 - 1:15</th>
32             <th>1:15 - 2:00</th>
33             <th>2:00 - 3:00</th>
34             <th>3:00 - 4:00</th>
35         </tr>
36
37     </thead>
38
```

```
39  <!-- Table Body -->
40  <tbody>
41
42      <!-- Monday -->
43      <tr bgcolor="#FFF8DC">
44
45          <th bgcolor="lightblue">
46              Monday
47          </th>
48
49          <td>TOC</td>
50          <td>CN</td>
51
52          <td rowspan="5"
53              bgcolor="lightyellow"
54              align="center">
55              <b>BREAK</b>
56          </td>
57
58          <td>DBMS</td>
59          <td>SE</td>
60
61          <td rowspan="5"
62              bgcolor="lightpink"
63              align="center">
64              <b>LUNCH</b>
65          </td>
66
67          <td colspan="2"
68              bgcolor="lightcyan"
69              align="center">
70              <b>WEB LAB</b>
71          </td>
72
73      </tr>
74
75      <!-- Tuesday -->
76      <tr bgcolor="#F0FFF0">
77
78          <th bgcolor="lightblue">
79              Tuesday
80          </th>
81
82          <td>CN</td>
83          <td>TOC</td>
84          <td>SE</td>
85          <td>DBMS</td>
86
```

```
87         <td colspan="2"
88             bgcolor="lightcyan"
89             align="center">
90             <b>CN LAB</b>
91         </td>
92
93     </tr>
94
95     <!-- Wednesday -->
96     <tr bgcolor="#FFF8DC">
97
98         <th bgcolor="lightblue">
99             Wednesday
100        </th>
101
102        <td>DBMS</td>
103        <td>SE</td>
104        <td>TOC</td>
105        <td>CN</td>
106
107        <td bgcolor="lavender"
108            align="center">
109            <b>ELECTIVE</b>
110        </td>
111
112        <td>Library</td>
113
114    </tr>
115
116    <!-- Thursday -->
117    <tr bgcolor="#F0FFF0">
118
119        <th bgcolor="lightblue">
120            Thursday
121        </th>
122
123        <td>SE</td>
124        <td>DBMS</td>
125        <td>CN</td>
126        <td>TOC</td>
127
128        <td colspan="2"
129            bgcolor="lightgray"
130            align="center">
131            <b>PROJECT</b>
132        </td>
133
134    </tr>
```

```
135
136     <!-- Friday -->
137     <tr bgcolor="#FFF8DC">
138
139         <th bgcolor="lightblue">
140             Friday
141         </th>
142
143         <td>TOC</td>
144         <td>CN</td>
145
146         <td bgcolor="lavender"
147             align="center">
148             <b>ELECTIVE</b>
149         </td>
150
151         <td>SE</td>
152
153         <td colspan="2"
154             bgcolor="lightcyan"
155             align="center">
156             <b>WEB LAB</b>
157         </td>
158
159     </tr>
160
161 </tbody>
162
163 <!-- Table Footer -->
164 <tfoot bgcolor="lightgreen">
165
166     <tr>
167         <td colspan="9"
168             align="center">
169
170             <b>
171                 BCSL504 - Web Technology Lab
172             </b>
173
174         </td>
175     </tr>
176
177 </tfoot>
178
179 </table>
180
181 </body>
182 </html>
```

9. Program Explanation

9.1 Table Element

The complete timetable is placed inside:

```
1 <table>
2   ...
3 </table>
```

The `table` element creates an HTML table.

9.2 Table Caption

```
1 <caption>
2   <b>5th Semester Class Time Table</b>
3 </caption>
```

The `caption` element provides a title or description for the table.

9.3 Table Header

The table header is created using:

```
1 <thead>
2   ...
3 </thead>
```

The heading cells are created using:

```
1 <th>Day / Time</th>
```

The timetable header displays the different time slots.

9.4 Table Body

The main timetable data is placed inside:

```
1 <tbody>
2   ...
3 </tbody>
```

Each table row is created using:

```
1 <tr>
2   ...
3 </tr>
```

Each normal data cell is created using:

```
1 <td>TOC</td>
```

9.5 Table Footer

The footer is created using:

```
1 <tfoot>
2
3     <tr>
4         <td colspan="9">
5             BCSL504 - Web Technology Lab
6         </td>
7     </tr>
8
9 </tfoot>
```

The `tfoot` element groups the footer content of the table.

10. Row Spanning

The `rowspan` attribute allows one table cell to occupy multiple rows vertically.

Example:

```
1 <td rowspan="5"
2     bgcolor="lightyellow">
3     BREAK
4 </td>
```

Here:

rowspan="5"

means that the BREAK cell occupies five rows.

Similarly, the lunch period is displayed using:

```
1 <td rowspan="5"
2     bgcolor="lightpink">
3     LUNCH
4 </td>
```

11. Column Spanning

The `colspan` attribute allows one cell to occupy multiple columns horizontally.

Example:

```
1 <td colspan="2"
2     bgcolor="lightcyan">
3     WEB LAB
4 </td>
```

Here:

colspan="2"

means that the WEB LAB occupies two time-slot columns.

12. Rowspan vs Colspan

Feature	Rowspan	Colspan
Direction	Vertical	Horizontal
Purpose	Combines multiple rows	Combines multiple columns
Example	rowspan="5"	colspan="2"
Used Here For	Break and Lunch	Laboratory periods

13. Cell and Row Colours

Different colours are used to make the timetable easier to understand.

For example:

```
1 <tr bgcolor="#FFF8DC">
```

provides a background colour for a complete row.

The laboratory period is highlighted using:

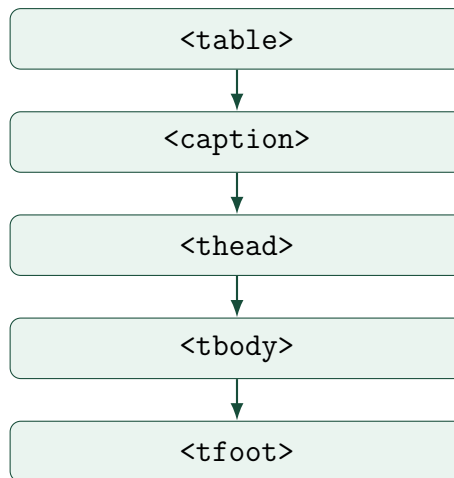
```
1 <td bgcolor="lightcyan">
2     WEB LAB
3 </td>
```

The elective period is highlighted using:

```
1 <td bgcolor="lavender">
2     ELECTIVE
3 </td>
```

The break and lunch periods are also given different background colours.

14. Table Structure



15. How to Execute the Program

Run This Program on Search Creators

Recommended Method – Search Creators Compiler

Open:

Search Creators Compiler / Code Studio

<https://searchcreators.org/compiler/>

Enter the HTML program in the online coding environment, run it and verify the class timetable in the output preview.

16. Procedure

1. Open the **Search Creators Compiler / Code Studio**:

<https://searchcreators.org/compiler/>

2. Create a new HTML file or web project.
3. Name the file:

Table.html

4. Enter the given HTML program in the editor.
5. Create the timetable using the `<table>` element.

6. Add the table heading using `<thead>`.
7. Add the main timetable content inside `<tbody>`.
8. Apply `rowspan` to the BREAK and LUNCH cells.
9. Apply `colspan` to laboratory periods.
10. Apply different background colours to rows and selected cells.
11. Highlight the laboratory and elective periods.
12. Add the table footer using `<tfoot>`.
13. Save the program.
14. Run or preview the HTML program using the Search Creators coding environment.
15. Verify the complete class timetable output.
16. If required, the same program can alternatively be executed using VS Code, Notepad or another HTML editor and a web browser.

17. Expected Output

The output displays a class timetable containing:

- Days of the week
- Different time slots
- Subject periods
- Common break
- Common lunch period
- Laboratory sessions
- Elective periods
- Row spanning
- Column spanning
- Different background colours
- Table header and footer

A simplified representation is shown below.

Day	9–10	10–11	Break	11:15–12:15	12:15–1:15
Monday	TOC	CN	BREAK	DBMS	SE
Tuesday	CN	TOC		SE	DBMS
Wednesday	DBMS	SE		TOC	CN
Thursday	SE	DBMS		CN	TOC
Friday	TOC	CN		ELECTIVE	SE

18. Important Viva Questions

Viva Questions

1. **What is an HTML table?**

An HTML table is used to organize and display data in rows and columns.

2. **Which tag is used to create an HTML table?**

`<table>`

3. **Which tag creates a table row?**

`<tr>`

4. **Which tag creates a heading cell?**

`<th>`

5. **Which tag creates a normal data cell?**

`<td>`

6. **What is the purpose of `<caption>`?**

It provides a caption or title for a table.

7. **What is the use of `<thead>`?**

It groups the header content of a table.

8. **What is the use of `<tbody>`?**

It groups the main body content of a table.

9. **What is the use of `<tfoot>`?**

It groups the footer content of a table.

10. **What is rowspan?**

Rowspan allows one cell to span multiple rows vertically.

11. **What is colspan?**

Colspan allows one cell to span multiple columns horizontally.

12. What does `rowspan="5"` mean?

It means that the cell occupies five rows.

13. What does `colspan="2"` mean?

It means that the cell occupies two columns.

14. Why are different colours used in the timetable?

Different colours make laboratory, elective, break and other timetable sections easier to identify.

15. Which online coding platform can be used to practice this experiment?

Search Creators Compiler / Code Studio can be used:

<https://searchcreators.org/compiler/>

19. Quick Revision

Concept	Remember
Required Filename	Table.html
HTML Table	<table>
Caption	<caption>
Header	<thead>
Body	<tbody>
Footer	<tfoot>
Table Row	<tr>
Heading Cell	<th>
Data Cell	<td>
Vertical Spanning	rowspan
Horizontal Spanning	colspan
Lab Highlight	Different background colour
Elective Highlight	Different background colour
Practice Platform	Search Creators Compiler
Website	searchcreators.org/compiler/

20. Result

Result

The HTML page `Table.html` was developed successfully to display a class timetable. Table header, table footer, row spanning, column spanning, different row and cell colours, and highlighting of laboratory and elective periods were demonstrated successfully.

The program can be practised and executed using the **Search Creators Compiler / Code Studio**.

<https://searchcreators.org/compiler/>

END OF EXPERIMENT – 02

BCSL504 – Web Technology Lab

Prepared by Search Creators

Practice Online: searchcreators.org/compiler/
