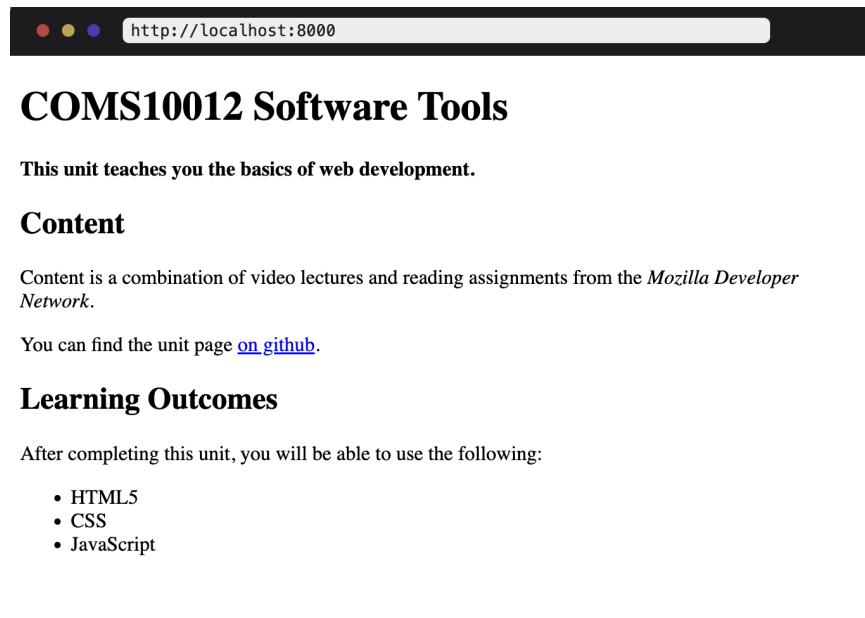


# Exercises:

---

## Basic HTML

- Create a web page called index.html that looks like this:



### ▼ Solution

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="utf-8" />
  <title>
    COMS10012 Software Tools
  </title>
</head>

<body>
```

```

<h1>
  COMS10012 Software Tools
</h1>

<p>
  <strong>
    This unit teaches you the basics of web development
  </strong>
</p>
<h2>
  Content
</h2>

<p>
  Content ins a combination of video lectueres and read
  from the
  <em>
    Mozilla Developer Network.
  </em>
</p>

<p>
  You can find the unit page
  <a href= "https://cs-uob.github.io/COMSM0085/exercises,
  on github.
  </a>
</p>

<h2>
  Learning Outcomes
</h2>

<ul>
  <li>
    HTML
  </li>

```

```

        <li>
            CSS
        </li>
        <li>
            JavaScript
        </li>
    </ul>

</body>

</html>

```

## Structuring planet data

- Create a table that looks like this in HTML:

### Planets data

Data about the planets of our solar system (Planetary facts taken from [Nasa's Planetary Fact Sheet - Metric](#)).

		Name	Mass (10 <sup>24</sup> kg)	Diameter (km)	Density (kg/m <sup>3</sup> )	Gravity (m/s <sup>2</sup> )	Length of day (hours)	Distance from Sun (10 <sup>6</sup> km)	Mean temperature (°C)	Number of moons	Notes
Terrestrial planets		Mercury	0.330	4,879	5427	3.7	4222.6	57.9	167	0	Closest to the Sun
		Venus	4.87	12,104	5243	8.9	2802.0	108.2	464	0	
		Earth	5.97	12,756	5514	9.8	24.0	149.6	15	1	Our world
		Mars	0.642	6,792	3933	3.7	24.7	227.9	-65	2	The red planet
Jovian planets	Gas giants	Jupiter	1898	142,984	1326	23.1	9.9	778.6	-110	67	The largest planet
		Saturn	568	120,536	687	9.0	10.7	1433.5	-140	62	
	Ice giants	Uranus	86.8	51,118	1271	8.7	17.2	2872.5	-195	27	
		Neptune	102	49,528	1638	11.0	16.1	4495.1	-200	14	
Dwarf planets		Pluto	0.0146	2,370	2095	0.7	153.3	5906.4	-225	5	Declassified as a planet in 2006, but this <a href="#">remains controversial</a> .

- ▼ Use the following CSS styles code:

```

html {
    font-family: sans-serif;
}

table {
    border-collapse: collapse;
}

```

```

border: 2px solid rgb(200,200,200);
letter-spacing: 1px;
font-size: 0.8rem;
}

td, th {
border: 1px solid rgb(190,190,190);
padding: 10px 20px;
}

th {
background-color: rgb(235,235,235);
}

td {
text-align: center;
}

tr:nth-child(even) td {
background-color: rgb(250,250,250);
}

tr:nth-child(odd) td {
background-color: rgb(245,245,245);
}

caption {
padding: 10px;
}

```

### ▼ Solution:

```

<!DOCTYPE html>
<html lang="en-US">

```

```

<!-- The document type declaration specifies this as an HTML5 document
The <html> element is set to use English (United States) as the default language
<head>
  <!-- The <head> section contains meta-information about the document
  <meta charset="utf-8">
  <!-- This meta tag specifies the character encoding for the document
  <meta name="viewport" content="width=device-width">
  <!-- This viewport tag sets the width of the layout viewport
  <title>Planetary Data</title>
  <!-- The <title> tag sets the page's title, shown in the browser's title bar
  <link href="minimal-table.css" rel="stylesheet" type="text/css">
  <!-- This link tag links an external CSS file for styling
</head>

<body>
  <!-- The <body> tag contains the content of the HTML document
  <h1>
    Planets Data
  </h1>
  <!-- An <h1> heading that provides a title for the data page

  <table>
    <!-- The <table> element creates a table. -->
    <caption>
      Data about the planets of our solar system (Planetary Data)
    </caption>
    <!-- The <caption> provides a title for the table, which is displayed above the table

    <colgroup>
      <col span="2">
      <col style="border: 2px solid black">
      <col span="9">
    </colgroup>
    <!-- The <colgroup> element groups columns for formatting

    <thead>

```

[illegible]

```

<tr>
  <th scope="row">Venus</th>
  <td>4.87</td>
  <td>12,104</td>
  <td>5243</td>
  <td>8.9</td>
  <td>2802.0</td>
  <td>108.2</td>
  <td>464</td>
  <td>0</td>
  <td>&nbsp;</td>
</tr>

<tr>
  <th scope="row">Earth</th>
  <td>5.97</td>
  <td>12,756</td>
  <td>5514</td>
  <td>9.8</td>
  <td>24.0</td>
  <td>149.6</td>
  <td>15</td>
  <td>1</td>
  <td>The Best Planet</td>
</tr>

<tr>
  <th scope="row">Mars</th>
  <td>0.62</td>
  <td>6792</td>
  <td>3933</td>
  <td>3.7</td>
  <td>24.7</td>
  <td>227.9</td>
  <td>-65</td>
  <td>2</td>

```

```

        <td>The Red Planet</td>
    </tr>

    <tr>
        <th rowspan="4" colspan="1" scope="rowgroup">Jovian |
        <th rowspan="2" colspan="1" scope="rowgroup">Gas giant
        <th scope="row">Jupitar</th>
        <td>1898</td>
        <td>6792</td>
        <td>3933</td>
        <td>3.7</td>
        <td>24.7</td>
        <td>227.9</td>
        <td>-65</td>
        <td>2</td>
        <td>The Largest Planet</td>
    </tr>

    <tr>
        <th scope="row">Saturn</th>
        <td>568</td>
        <td>6792</td>
        <td>3933</td>
        <td>3.7</td>
        <td>24.7</td>
        <td>227.9</td>
        <td>-65</td>
        <td>2</td>
        <td>&nbsp;</td>
    </tr>

    <tr>
        <th rowspan="2" colspan="1" scope="rowgroup">Ice giant
        <th scope="row">Uranus</th>
        <td>86.8</td>
        <td>6792</td>

```



```

        <td>3933</td>
        <td>3.7</td>
        <td>24.7</td>
        <td>227.9</td>
        <td>-65</td>
        <td>2</td>
        <td>&nbsp;</td>
    </tr>

    <tr>
        <th scope="row">Neptue</th>
        <td>102</td>
        <td>6792</td>
        <td>3933</td>
        <td>3.7</td>
        <td>24.7</td>
        <td>227.9</td>
        <td>-65</td>
        <td>2</td>
        <td>&nbsp;</td>
    </tr>

    <tr>
        <th colspan="2" scope="rowgroup">Dwarf Planets</th>
        <th scope="row">Pluto</th>
        <td>6792</td>
        <td>3933</td>
        <td>3.7</td>
        <td>24.7</td>
        <td>227.9</td>
        <td>-65</td>
        <td>-222</td>
        <td>5</td>
        <td>Declassified as a planet in 2006 but this <a href="
    </tr>

```

```
</tbody>

</table>

</body>
</html>
```

---

## Templating