

Technical specification for the feature: Tables creator

This is the technical specification for the Tables creator feature. The feature was created as part of an EU-funded project called We4Authors Cluster. All features, their technical specification and their video documentation are published on www.accessibilitycluster.com.

If you have any questions or comments, please do not hesitate to reach out to research@funka.com.

The technical specification contains several perspectives:

- the web interface of the feature, based on the experience of the end user or, when it comes to the testing-features, the web author;
- the code of the feature ensuring accessibility by default;
- a description highlighting the key elements of the code;
- reference to a video documentation;
- recommendations for implementation.

Specifications of the feature: Tables creator

Accessibility by default or built-in support for accessible content creation.

Tables are used online to show content in a structured way, just as in documents. Many authoring tools provide special functionality for creating tables to support the web author.

For visually impaired users with screen readers, the accessibility of tables is what makes them possible to understand, as it provides the structure of headings, columns etc. If a table is not created in a correct way, the assistive technology will read the content from left to right, without providing any clue as to how the content is supposed to be understood. For everyone else, the design of the table is important to make it easily readable and understandable.

An explicit connection between headings and cells will allow screen readers to read content in a logical order. The attribute scope on the **th-element** presents which data cells the headings belong to. Approved values are row, col, rowgroup and colgroup. The element colgroup will mark the column groups, as tbody will mark grouped rows. One option in expressing the relationship between cells is using the id-attribute on the th-element and the attribute headers on the **td-element**. Headers can consist of one or several identities on cell headings.

Web interface: the end user view

Contact us

You are welcome to contact us during our opening hours.

Opening hours

	Monday - Wednesday	Thursday - Friday	Saturday	Sunday
08:00 - 12:00	Open	Open	Closed	Closed
12:00 - 13:00	Closed	Closed	Closed	Closed
13:00 - 16:00	Open	Open	Open	Closed
16:00 - 18:00	Open	Closed	Closed	Closed

Figure 1: End user view of opening hours

Code of the end user view

```
<h1>Contact us</h1>
<p>You are welcome to contact us during our opening hours.</p>
<table>
  <caption>Opening hours</caption>
  <tbody>
    <tr>
      <td></td>
      <th scope="col">Monday - Wednesday</th>
      <th scope="col">Thursday - Friday</th>
      <th scope="col">Saturday</th>
      <th scope="col">Sunday</th>
    </tr>
    <tr>
      <th scope="row">08:00 - 12:00</th>
      <td>Open</td>
      <td>Open</td>
      <td>Closed</td>
      <td>Closed</td>
    </tr>
    <tr>
      <th scope="row">12:00 - 13:00</th>
      <td>Closed</td>
      <td>Closed</td>
      <td>Closed</td>
      <td>Closed</td>
    </tr>
```

```
</tr>
<tr>
  <th scope="row">13:00 - 16:00</th>
  <td>Open</td>
  <td>Open</td>
  <td>Open</td>
  <td>Closed</td>
</tr>
<tr>
  <th scope="row">16:00 - 18:00</th>
  <td>Open</td>
  <td>Closed</td>
  <td>Closed</td>
  <td>Closed</td>
</tr>
</tbody>
</table>
```

Figure 2: Code example

Explanation of the code example

```
<body>
  <h1>Contact us</h1>
  <p>You are welcome 1 to contact us during our opening hours.</p>
  <table>
    <caption>Opening hours</caption>
    <tbody>
      <tr>
        <th scope="col">2 Monday - Wednesday</th>
        <th scope="col">3 Thursday - Friday</th>
        <th scope="col">Saturday</th>
        <th scope="col">Sunday</th>
      </tr>
      <tr>
        <th scope="row">4 0:00 - 12:00</th>
        <td>Open</td>
        <td>Open</td>
        <td>Closed</td>
        <td>Closed</td>
      </tr>
    </tbody>
  </table>
```

Figure 3: Code example with highlighted elements

- 1. Caption element - Defines a table caption (created with the <caption> element)
- 2 & 4. Header cell elements - contains header information (created with the <th> element)

- 3 & 5. Scope - Specifies whether a header cell is a header for a column, row, or group of columns or rows
6. Data cell elements - contains data (created with the <td> element)

Video documentation

This technical specification has been developed in the We4Author Cluster project to reflect recommendations for accessibility features that can be implemented in any authoring tool. The specifications are complemented by a video documentation, covering a live description of:

- end user problems,
- web author challenges,
- feature solutions, and
- resulting accessibility for end users when the features are correctly used.

Recommendations for implementation

To make sure the implementation of the features is not causing accessibility problems for web authors with disabilities:

- avoid drag-and-drop for choosing template, and/or always have a keyboard alternative;
- always provide one pointer alternative without specific gestures;
- always support keyboard navigation;
- consider keyboard shortcuts;
- do not rely on sensory characteristics as the sole indicator for understanding and operating content;
- do not indicate important information using colour alone;
- make sure there is enough contrast between text objects and its background colour.

