2HTML List, Images, and Table

Table of Content

Lists in HTML

▼ Unordered List

An unordered list starts with the `<ul>` tag. Each list item starts with the `<li>` tag.

The list items will be marked with bullets (small black circles) by default:

▼ Ordered List

An ordered list starts with the `<ol>` tag. Each list item starts with the `<li>` tag.

The list items will be marked with numbers by default:

Table in HTML

▼ Basic Table elements

The `table`, `tr` and `td` elements

```
<table>
 <tr>
    <td>History</td>
    <td>18</td>
    <td>N</td>
  </tr>
</table>
```

Use CSS to add the border

```
table, th, td {
  border: 1px solid black;
  border-collapse: collapse;
}
```

`<thead>`: The `<thead>` HTML element defines a set of rows defining the head of the columns of the table.

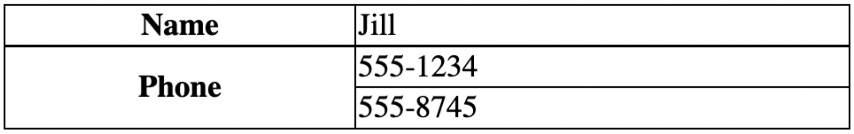
`<tbody>`: The `<tbody>` HTML element encapsulates a set of table rows, indicating that they comprise the body of the table.

`<tfoot>`: The `<tfoot>` HTML element defines a set of rows summarizing the columns of the table.

▼ rowspan and colspan

The `rowspan` attribute helps to span over multiple rows. Similarly, the `colspan` attribute helps to span over multiple columns.

Here the `rowspan` for **Phone** is 2



Name	Jill
Phone	555-1234
	555-8745

▼ rowgroup and colgroup

<caption>: The <caption> HTML element specifies the caption (or title) of a table.

<colgroup>: The <colgroup> HTML element defines a group of columns within a table.

<col>: The <col> HTML element defines a column within a table and is used for defining common semantics on all common cells. It is generally found within a <colgroup> element.

The same is true for `rowgoup` and row as well.

Images in HTML

▼ HTML `<img>` tag

The HTML `<img>` tag is used to embed an image in a web page. Images are not technically inserted into a web page; images are linked to web pages.
The `<img>` tag creates a holding space for the referenced image. The `<img>` tag is empty, it contains attributes only, and does not have a closing tag.

The `<img>` tag has two required attributes:

- src - Specifies the path to the image
- alt - Specifies an alternate text for the image

▼ Image width and height

The `width` and `height` attributes always define the width and height of the image in pixels.

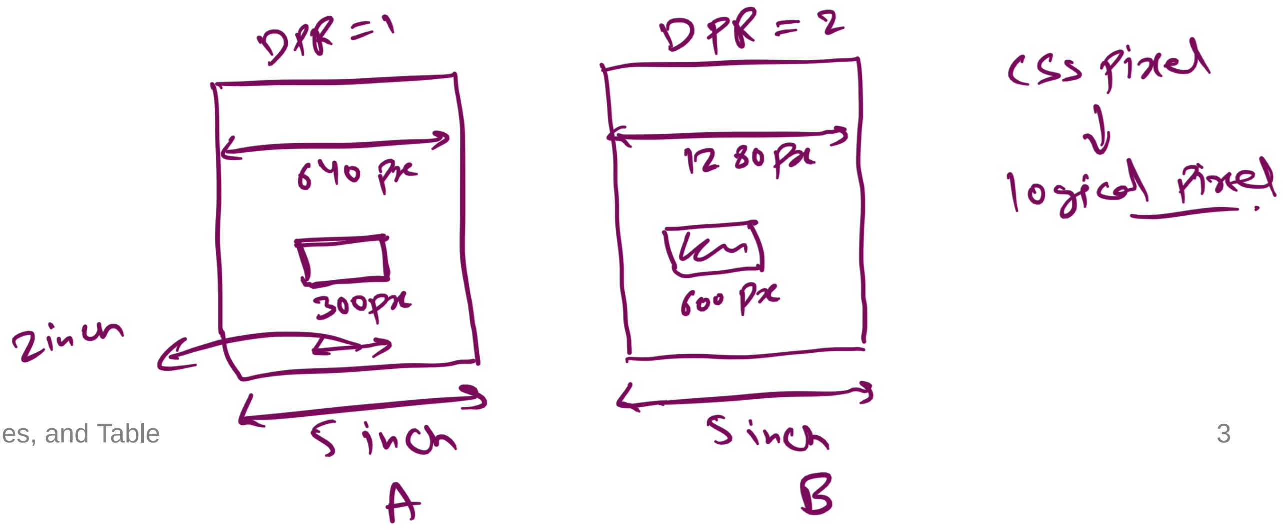
> **Note:**
> Always specify the width and height of an image. If width and height are not specified, the web page might flicker while the image loads.

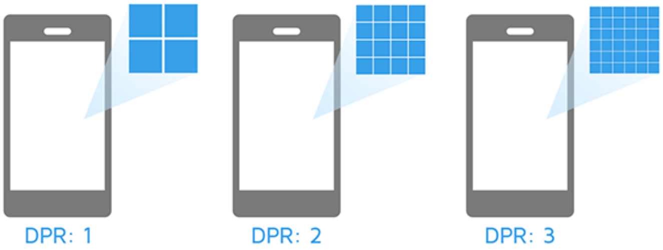
▼ Responsive Images

Let us first talk about **DPR**

The device pixel ratio (DPR) is the ratio between physical pixels and logical pixels.

For instance, the iPhone 4 and iPhone 4S report a device pixel ratio of 2, because the physical linear resolution is double the logical linear resolution.





We should load low-resolution images on low dpr devices and high-resolution images on higher dpr devices. This helps improve website performance in terms of network usage. To achieve this we use the `srcset` and the `sizes` attribute with `img`

- The `srcset` attribute

  The `srcset` is a string that identifies one or more **image candidate strings** separated using commas (`,`) each specifying image resources to use under given circumstances.

  Each image candidate string contains an image URL and an optional width or pixel density descriptor that indicates the conditions under which that candidate should be used instead of the image specified by the `src` property.

  You may mix and match the two types of descriptors. You must not, however, provide multiple image candidate strings that specify the same descriptor. All of the following are valid image candidate strings:

  ```
  srcset="images/team-photo.jpg 1x, images/team-photo-retina.jpg 2x,
          images/team-photo-full.jpg 2048w"
  ```

- The `sizes` attribute

  `sizes` allows you to specify the layout width of the image for each of a list of media conditions. This provides the ability to automatically select among different images—even images of different orientations or aspect ratios—as the document state changes to match different media conditions.

Each condition is specified using the same conditional format used by media queries.

```
sizes="(max-width: 400px) 400px, sovw
       (max-width: 600px) 600px,
       1000px"
```

400px From the first media condition i.e. `max-width: 400px) 400px`	400px at 1x 800px at 2x 1200px at 3x
600px From the first media condition i.e. `max-width: 600px) 600px`	600px at 1x 1200px at 2x 1800px at 3x
The third query does not have a condition to allow fallback	1000px at 1x 2000px at 2x 3000px at 3x

However, you don’t have to provide images at all required sizes in `srcset` You can select a few candidates, and the browser will pick the closest one.

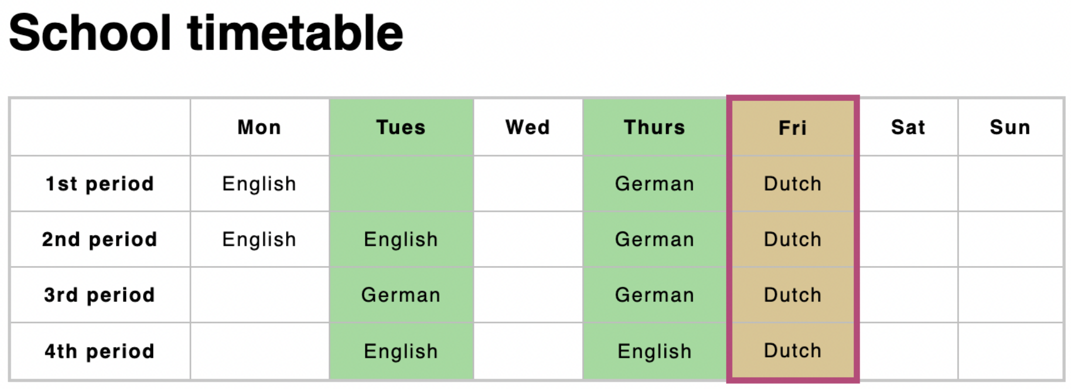
So you can pick three or four candidates and write `srcset` like this:

```
srcset="https://ik.imgkit.net/ikmedia/women-dress-1.jpg?tr=w-400 400w,
        https://ik.imgkit.net/ikmedia/women-dress-1.jpg?tr=w-600 600w,
        https://ik.imgkit.net/ikmedia/women-dress-1.jpg?tr=w-1000 1000w,
        https://ik.imgkit.net/ikmedia/women-dress-1.jpg?tr=w-1200 1200w"
```

> Learn more about Responsive images here:
> https://imagekit.io/responsive-images/

Assignments

1. Build a School timetable



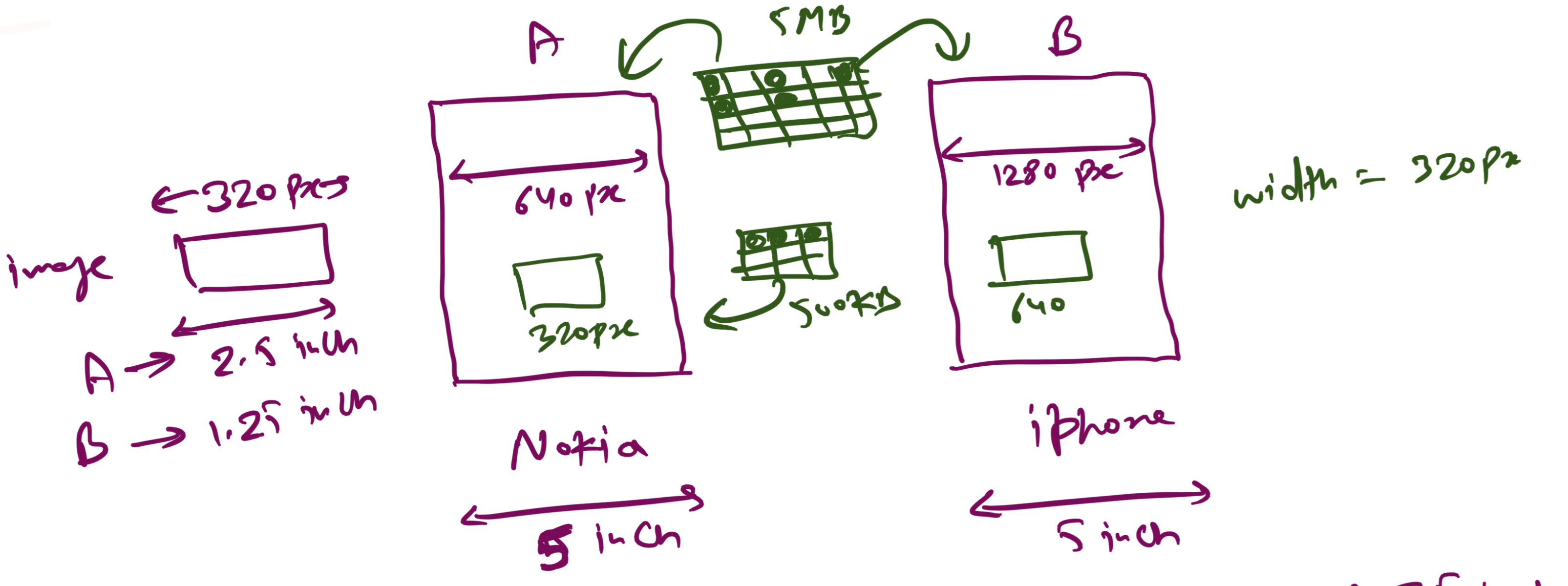
School timetable

	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
1st period	English			German	Dutch		
2nd period	English	English		German	Dutch		
3rd period		German		German	Dutch		
4th period		English		English	Dutch		

2. Build a Responsive Photo Gallery webpage. It should have:
    a. 2 rows and 3 columns in desktop mode (width > 1024px)

b. 2 columns in tablet mode (width > 768px)

c. 1 column in Phone mode (width > 480px)



$$\frac{5}{640} * 320 = 2.5 \text{ inch} \qquad \frac{5}{1280} * 320 = 1.25 \text{ inch}$$

CSS Pixel

width = 320px. → Physical conversion by $\boxed{DPR}$

DPR = 1

$$PP = CP * DPR$$

Ⓐ → $PP = 320 * 1 = \underline{320px} = \underline{2.5 \text{ inch}}$

Ⓑ → $PP = 320 * 2 = \underline{640px} = 2.5 \text{ inch}$