

Building a Web Page with HTML

Lists and Tables

HTML Review

- HTML specifies webpage *content*
 - HTML metadata tags
 - `<head>` `<title>`
 - HTML content sectioning
 - `<body>` `<h1>` `<h2>`
 - HTML text content
 - More than the `<p>` paragraph we've seen
 - Lists and tables
- } seen these previously
- } will explore now



Simple Lists

- Some lists use circles or bullets
 - These are unordered lists, tag: ` `
 - Content viewed in order, list labels all the same

Duke: Learn to Pr

We are pleased to introduce you to the first course in learning to pr
In the first course you'll learn about:

- How computing and programming are changing the world.
- Internet and the Web
- HTML and CSS to create web pages
- Javascript to create images and to process data

Before you begin programming with Java.

Simple Lists

- Some lists use circles or bullets
 - These are unordered lists, tag: ` `
 - Content viewed in order, list labels all the same
 - For later: labels can be changed with CSS



Structure of Lists as Text Content

We are pleased to introduce you to the first ...
In the first course you'll learn

```
<ul>
```

```
  <li>How computing and programming are  
    changing the world.
```

```
  </li>
```

```
  <li>Internet and the Web
```

```
  </li>
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```
  <li>HTML and CSS to create web pages
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  </li>
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```

```
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```

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- Internet and the Web
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Constructing an HTML List

- Inside `` `` must have sequence of ```` elements

```
<ul>  
  <li>How computing and programming are  
    changing the world.  
  </li>  
  <li>Internet and the Web  
  </li>  
  <li>HTML and CSS to create web pages  
  </li>  
  <li>Javascript to create images and to  
  </li>  
</ul>
```

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  </li>
  <li>HTML and CSS to create web pages
  </li>
  <li>Javascript to create images and to
  </li>
</ul>
```


Constructing an HTML List

- Inside `` `` must have sequence of ```` elements
 - Anything between ```` elements, not just text: ``, `<a href>`, ``, ...

```
<ul>  
  <li>How computing and programming are  
    changing the world.  
  </li>  
  <li>Internet and the Web  
  </li>  
  <li>HTML and CSS to create web pages  
  </li>  
  <li>Javascript to create images and to  
  </li>  
</ul>
```

Creating Order in HTML Lists

- May want ordered list
 - Numbers can be important
 - Also possible: letters
- `` is ordered list
 - `` required
 - Automatic numbering
 - Add, remove ``
 - Numbers change

1. Apple
2. Watermelon
3. Guava
4. Raspberry
5. Fig

```
HTML
1 <ol>
2   <li>Apple</li>
3   <li>Watermelon</li>
4   <li>Guava</li>
5   <li>Raspberry</li>
6   <li>Fig</li>
7 </ol>
```

List Elements of ...

- We can compose HTML elements
 - Composition important concept in Computer Science and other disciplines
 - Construct web pages with elements that can contain other elements
- lists of images
- list of lists



Nested Lists

- `` in ``
 - bullets “change”
 - Indentation helps

- Capital Cities
 - Beijing
 - Moscow
 - Madrid
 - Bogota
- Large Cities
 - Sao Paulo
 - Neighborhoods
 - Centro
 - Higienópolis
 - Jardins
 - Karachi
 - Mumbai

Nested Lists

- `` in ``
 - bullets “change”
 - Indentation helps
 - Reading HTML

```
1 <ul>
2   <li>Capital Cities
3     <ul>
4       <li>Beijing</li>
5       <li>Moscow</li>
6       <li>Madrid</li>
7       <li>Bogota</li>
8     </ul>
9   </li>
10  <li>Large Cities
11    <ul>
12      <li>Sao Paulo
13        <br> Neighborhoods
14        <ul>
15          <li> Centro </li>
16          <li> Higien&ocirc;polis </li>
17          <li> Jardins </li>
18        </ul>
19      </li>
20      <li>Karachi</li>
21      <li>Mumbai</li>
22    </ul>
23  </li>
```

Nested Lists

- `` in ``
 - bullets “change”
 - Indentation helps
 - Reading HTML
- Composing ``
 - Between ``

```
1 <ul>
2   <li>Capital Cities
3     <ul>
4       <li>Beijing</li>
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6       <li>Madrid</li>
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```


Nested Lists

- `` in ``
 - bullets “change”
 - Indentation helps
 - Reading HTML
- Composing ``
 - Between ``

<http://codepen.io/duketeam/full/JdadJg>

```
1 <ul>
2   <li>Capital Cities
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21      <li>Mumbai</li>
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```

HTML Tables

- Tables information in rows and columns
 - General organization? CSS preferred
- Tables constructed from HTML elements that correspond to visible table

| Sweet | Sour | Salty |
|--------------|-------------|--------------|
| Milk | Yogurt | Sardines |
| Pineapple | Kimchi | Salami |
| Grape | Vinegar | Pickles |

HTML Tables

- HTML table elements

| Sweet | Sour | Salty |
|-----------|---------|----------|
| Milk | Yogurt | Sardines |
| Pineapple | Kimchi | Salami |
| Grape | Vinegar | Pickles |

```
<table>
  <tr>
    <th>Sweet</th>
    <th>Sour</th>
    <th>Salty</th>
  </tr>
  <tr>
    <td> Milk </td>
    <td> Yogurt </td>
    <td> Sardines </td>
  </tr>
  <tr>
    <td> Pineapple </td>
    <td> Kimchi </td>
    <td> Salami </td>
  </tr>
  <tr>
    <td> Grape </td>
    <td> Vinegar </td>
    <td> Pickles </td>
  </tr>
</table>
```


HTML Tables

- HTML table elements
 - `<table></table>`

| Sweet | Sour | Salty |
|-----------|---------|----------|
| Milk | Yogurt | Sardines |
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```
<table>
  <tr>
    <th>Sweet</th>
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    <td> Vinegar </td>
    <td> Pickles </td>
  </tr>
</table>
```

HTML Tables

- HTML table elements
 - `<table></table>`
 - contains rows `<tr></tr>`

| Sweet | Sour | Salty |
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| Milk | Yogurt | Sardines |
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```
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HTML Tables

- HTML table elements
 - `<table></table>`
 - contains rows `<tr></tr>`
- Rows contain
 - header elements `<th></th>`

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</table>
```

HTML Tables

- HTML table elements
 - `<table></table>`
 - contains rows `<tr></tr>`
- Rows contain
 - header elements `<th></th>`
 - table cells `<td></td>`

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  </tr>
</table>
```

Tables and Lists

- HTML tables and lists help organize information
 - From simple



Tables and Lists

- HTML tables and lists help organize information
 - From simple to complex

| Group → | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|------------|-----------|------------|------------|
| ↓ Period | | | | | | | | | | | | | | | | | | |
| 1 | 1 H | | | | | | | | | | | | | | | | | 2 He |
| 2 | 3 Li | 4 Be | | | | | | | | | | | 5 B | 6 C | 7 N | 8 O | 9 F | 10 Ne |
| 3 | 11 Na | 12 Mg | | | | | | | | | | | 13 Al | 14 Si | 15 P | 16 S | 17 Cl | 18 Ar |
| 4 | 19 K | 20 Ca | 21 Sc | 22 Ti | 23 V | 24 Cr | 25 Mn | 26 Fe | 27 Co | 28 Ni | 29 Cu | 30 Zn | 31 Ga | 32 Ge | 33 As | 34 Se | 35 Br | 36 Kr |
| 5 | 37 Rb | 38 Sr | 39 Y | 40 Zr | 41 Nb | 42 Mo | 43 Tc | 44 Ru | 45 Rh | 46 Pd | 47 Ag | 48 Cd | 49 In | 50 Sn | 51 Sb | 52 Te | 53 I | 54 Xe |
| 6 | 55 Cs | 56 Ba | * | 72 Hf | 73 Ta | 74 W | 75 Re | 76 Os | 77 Ir | 78 Pt | 79 Au | 80 Hg | 81 Tl | 82 Pb | 83 Bi | 84 Po | 85 At | 86 Rn |
| 7 | 87 Fr | 88 Ra | ** | 104 Rf | 105 Db | 106 Sg | 107 Bh | 108 Hs | 109 Mt | 110 Ds | 111 Rg | 112 Cn | 113 Uut | 114 Fl | 115 Uup | 116 Lv | 117 Uus | 118 Uuo |
| | | * | 57 La | 58 Ce | 59 Pr | 60 Nd | 61 Pm | 62 Sm | 63 Eu | 64 Gd | 65 Tb | 66 Dy | 67 Ho | 68 Er | 69 Tm | 70 Yb | 71 Lu | |
| | | ** | 89 Ac | 90 Th | 91 Pa | 92 U | 93 Np | 94 Pu | 95 Am | 96 Cm | 97 Bk | 98 Cf | 99 Es | 100 Fm | 101 Md | 102 No | 103 Lr | |

Tables and Lists

- HTML tables and lists help organize information

- From simple to complex
- `` elements can contain tables
- `<td>` elements can contain lists

```
<table>  
<td>  
<ol>  
<li></li>  
</ol>  
</td>  
</table>
```

Tables and Lists

- HTML tables and lists help organize information
 - From simple to complex
 - `` elements can contain tables
 - `<td>` elements can contain lists
- Composition key principle of Computer Science from HTML to Programming
 - Create, Design, Build