

IT350 Web and Internet Programming

Set 19: Accessibility

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Goal

- To be able to describe sources of accessibility guidelines and standards, and the impact of these guidelines on designing computer-based applications.

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Web Accessibility

- What is Web Accessibility?
- Why should I implement it?

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Legal

Act	Purpose
Americans with Disabilities Act of 1990	The ADA prohibits discrimination on the basis of disability in employment, state and local government, public accommodations, commercial facilities, transportation and telecommunications.
Telecommunications Act of 1996	The Telecommunications Act of 1996 contains two amendments to Section 255 and Section 251(a)(2) of the Communications Act of 1934. These amendments require that communication devices, such as cell phones, telephones and pagers, be accessible to individuals with disabilities.
Individuals with Disabilities Education Act of 1997	Educational materials in schools must be made accessible to children with disabilities.
Rehabilitation Act of 1973	Section 504 of the Rehabilitation Act states that college-sponsored activities receiving federal funding cannot discriminate against individuals with disabilities. Section 508 was strengthened in 1998 to require the federal procurement of accessible electronic and information technology. The Electronic and Information Technology Accessibility Standards provide the federal technical standards for accessible Web design. Section 508 mandates that all government institutions receiving federal funding and all businesses that sell services to the government must design their Web sites in accordance with these stipulations.

Fig. 29.1 Acts designed to protect access to the Internet for people with disabilities.

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What to do? 2 Possible Benchmarks

- **Web Content Accessibility Guidelines (WCAG) -**
<http://www.w3.org/TR/WCAG20/>
 - Principles
 - Guidelines
 - Success criteria
 - Sufficient and Advisory Techniques
- “Section 508”
 - (a) A text equivalent for every non-text element shall be provided (e.g., via "alt", or in element content).
 - (j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.

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Guidelines: Images and Structure

- **Images**
 - alt attribute
- **Structure**
 - Use headers for _____, not _____
 - Use tables for _____, not _____
- **Titles**

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What's wrong with this table?

```

<p>Price of Fruit</p>

<table border = "1">
  <tr>
    <td>Fruit</td>
    <td>Current Price</td>
    <td>Max Price</td>
    <td>Min Price</td>
    <td>Avg Price</td>
  </tr>
  <tr>
    <td>Apple</td>
    <td>$0.25</td>
    <td>$0.55</td>
    <td>$0.15</td>
    <td>$0.35</td>
  </tr>
  <tr>
    <td>Pineapple</td>
    <td>$2.99</td>
    <td>$6.00</td>
    <td>$1.59</td>
    <td>$4.00</td>
  </tr>
</table>

```

Price of Fruit

Fruit	Current Price	Max Price	Min Price	Avg Price
Apple	\$0.25	\$0.55	\$0.15	\$0.35
Pineapple	\$2.99	\$6.00	\$1.59	\$4.00

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What's right with this table?

```

<table border = "1">
  <caption><strong>Price of Fruit</strong></caption>
  <thead>
    <tr>
      <th id = "fruit">Fruit</th>
      <th id = "cp">Current Price</th>
      <th id = "maxp">Max Price</th>
      <th id = "minp">Min Price</th>
      <th id = "avgp">Average Price</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td headers = "fruit">Apple</td>
      <td headers = "cp">$0.25</td>
      <td headers = "maxp">$0.55</td>
      <td headers = "minp">$0.15</td>
      <td headers = "avgp">$0.35</td>
    </tr><tr>
      <td headers = "fruit">Pineapple</td>
      <td headers = "cp">$2.99</td>
      <td headers = "maxp">$6.00</td>
      <td headers = "minp">$1.59</td>
      <td headers = "avgp">$4.00</td>
    </tr>
  </tbody>
</table>

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Price of Fruit

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Resources

- Web Accessibility Initiative
 - <http://www.w3.org/WAI/>
- <http://www.w3.org/TR/WCAG20/>
- <http://www.w3.org/TR/html5/>
- <http://www.w3.org/TR/2013/WD-aria-in-html-20130214/>
- <http://webaim.org/standards/508/checklist>
- http://www.icdri.org/section508/section_508_resource_page.htm
- <http://www.access-board.gov/guidelines-and-standards/communications-and-it/about-the-section-508-standards/section-508-standards>

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Exercise: Write the code to create an accessible version for the table below

Characteristics with positive and negative sides

Negative	Characteristic	Positive
Sad	Mood	Happy
Failing	Grade	Passing

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