

HTML5 and CSS3 Complete

Second Edition

Unit I

Implementing Responsive Design

Objectives

- Assess responsive design
- Construct a multipart media query
- Test layouts with an emulator
- Add a column with a media query
- Create a widescreen layout
- Create responsive navigation

Objectives (continued)

- Implement adaptive content
- Use progressive enhancement

Assess Responsive Design

Unit I

- Web pages can be viewed at a range of screen sizes
- Responsive design: allows a web developer to specify different CSS rules for some/all elements depending on width of screen



Mobile



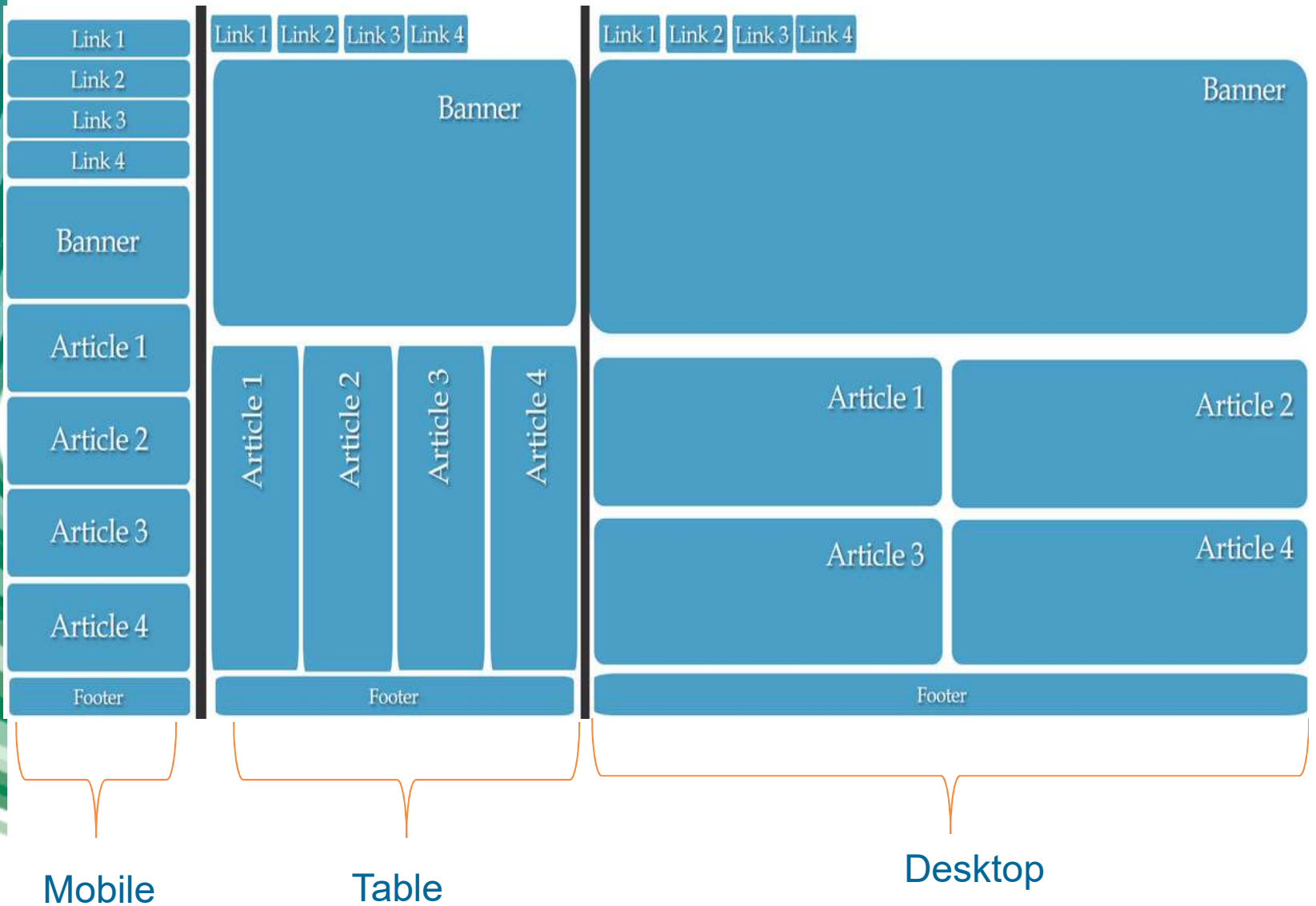
Tablet



Desktop

Example of Screen Sizes

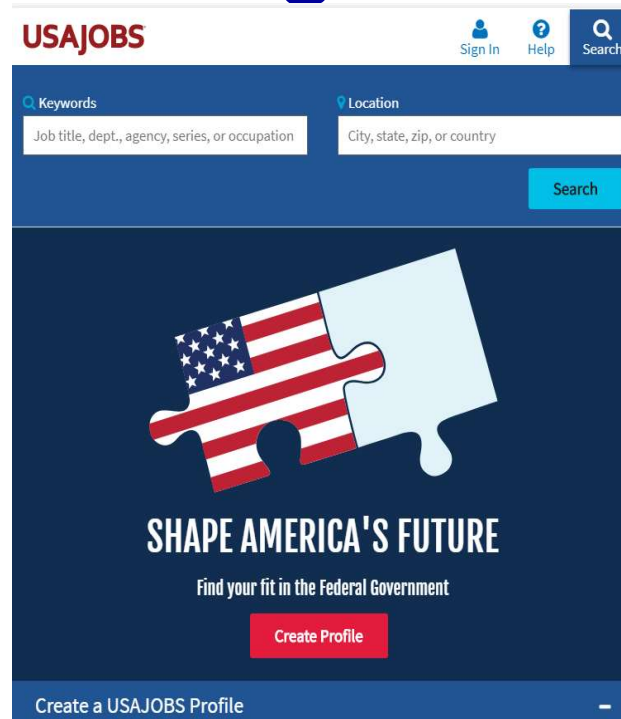
Unit I



Screen sizes using emulator

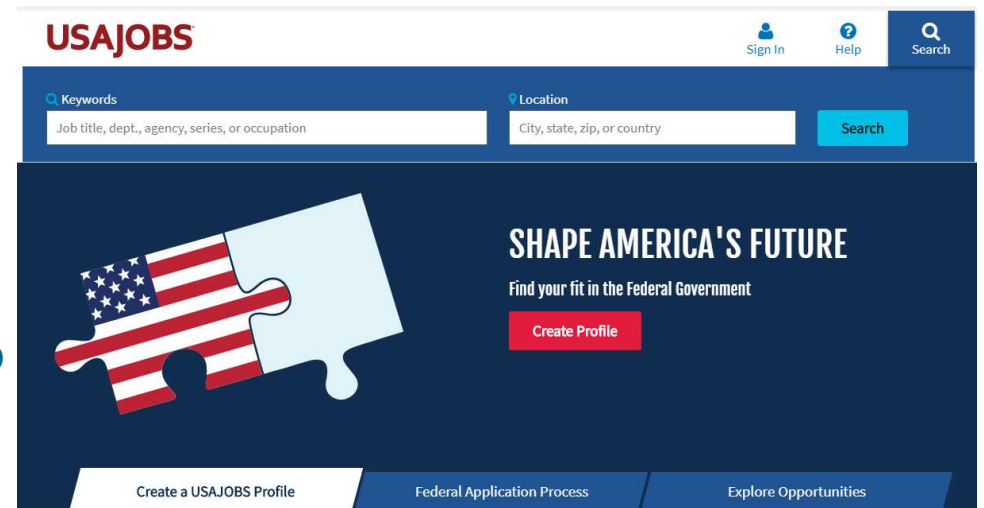


mobile



Tablet

Desktop



Create a USAJOBS Profile

Assess Responsive Design (continued)

Unit I

- Sizing with percentages
 - Elements sized with percentages maintain their sizing relative to each other while preserving their layout
 - Example: two images side by side, each with width of 45%, with remaining 10% for margin, padding, and border

Assess Responsive Design (continued)

Unit I

- Identifying breakpoints
 - Start with layout for smallest or largest screen size you want to support
 - View layout at different widths
 - Breakpoint: width at which the layout no longer looks good, or at which you decide to move elements, or add or remove content
- 320px iPhone, 768x iPad, 1024x laptop

Google Chrome Emulator

Responsive ▼ 768 × 862 100% ▼ Online ▼



Assess Responsive Design (continued)

Unit I

- Creating multipart media queries
 - Using first breakpoint, use `@media` keyword to create media query
 - Media features: conditions media must satisfy for rules in query to be applied
 - Media query includes the `screen` media type followed by one or more media features
 - `min-width` and `max-width` media features most common in responsive design

Assess Responsive Design (continued)

Unit I

- Creating multipart media queries
(continued)

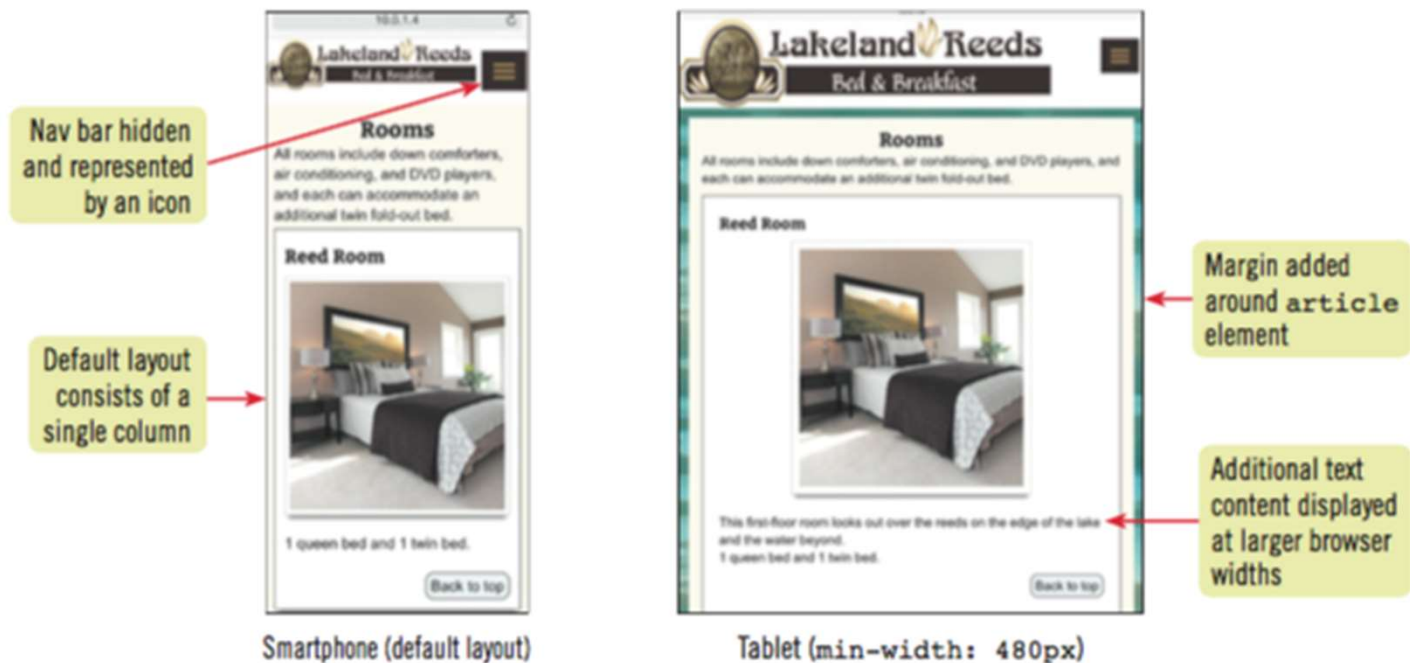
- Example:

```
@media screen and (min-width:  
800px) {  
    style rules  
}
```

Assess Responsive Design (continued)

Unit I

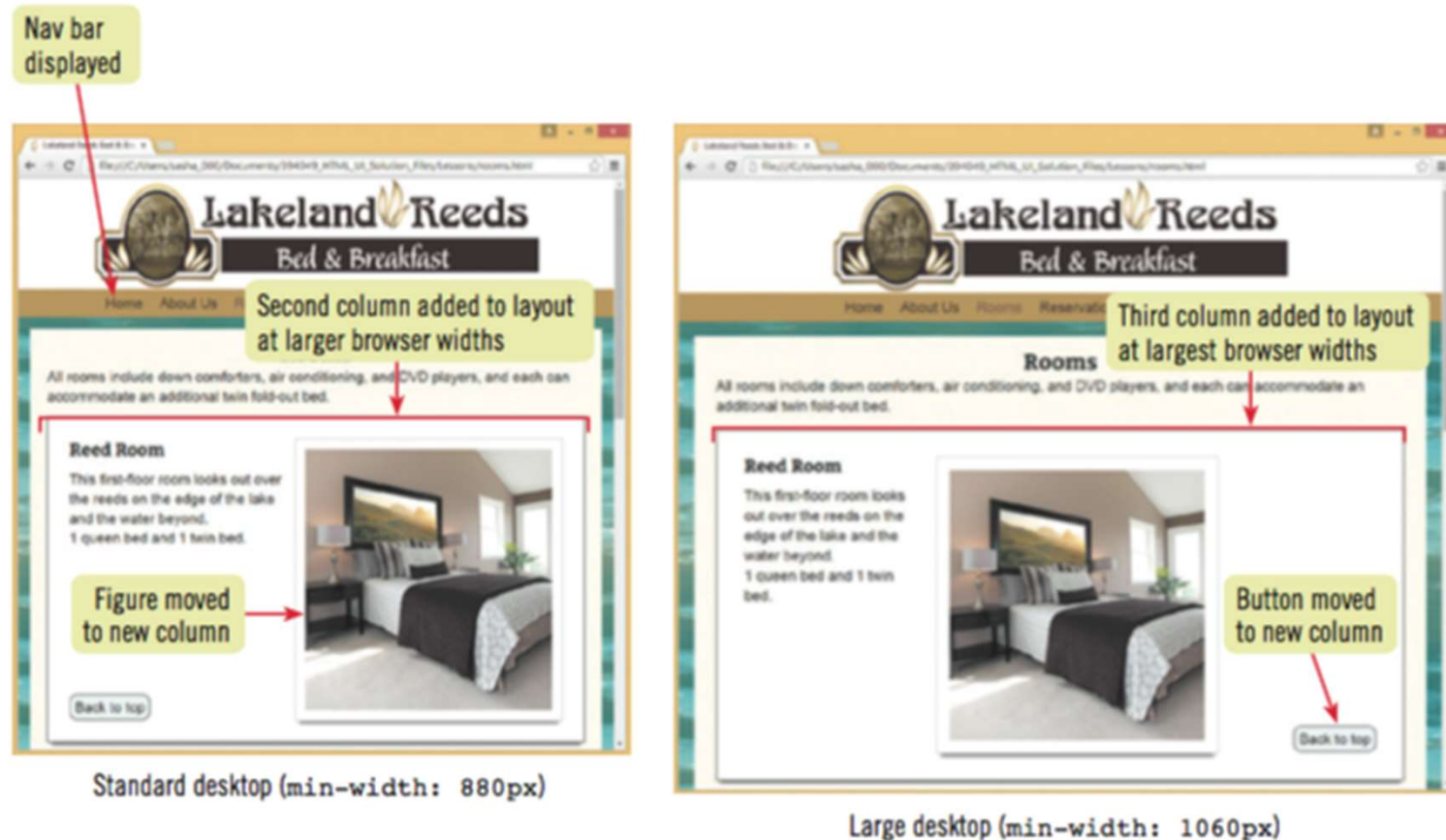
Figure I-1: Web page displayed on different devices using different media queries



Assess Responsive Design (continued)

Unit I

Figure I-1: Web page displayed on different devices using different media queries (cont'd)





Construct a Multipart Media Query

Unit I

- Implementing responsive design:
 - 1. Create a default layout for smallest or largest browser width to support
 - 2. Create a multipart media query
 - `screen` media type
 - media feature (usually `min-width` or `max-width`)

Demo – use labs.htm, labs.css and add the code below.

smart phone - Google Search Ordered/Unordered List X + -

file:///D:/OneDrive/Schools/ITUs/ITU_HTML_Fall2017/week8/demos_h/labs.htm

To see favorites here, select ☆ then ☆, and drag to the Favorites Bar folder. Or import from another browser. [Import favorites](#)

Ordered/Unordered List, Tables, Debugging, Responsive Design

Unordered List	Ordered List	Description List	Navigation	Nested List	Tables
Table Format (rowspan, colgroup)		Table Format CSS			

[Yahoo!](#)

UNORDERED LIST

Places to travel...

- France
- Britain
- Russian
- India
- Honkong

```
<ul>
  <li>France</li>
  <li>Britain</li>
  <li>Russian</li>
  <li>India</li>
  <li>Honkong</li>
</ul>
```

"list-style-type" property defines the style of the list item marker.

disc - lists item marker to a bullet (default)



```
@media only screen and (max-width: 600px) {
  body {
    background-color: red;
  }
}
```

file:///D:/OneDrive/Schools/ITUs/ITU_H

To see favorites here, select ☆ then ☆, and drag to the Favorites Bar folder. Or import from another browser

Ordered/Unordered List, Tables, Debugging, Responsive Design

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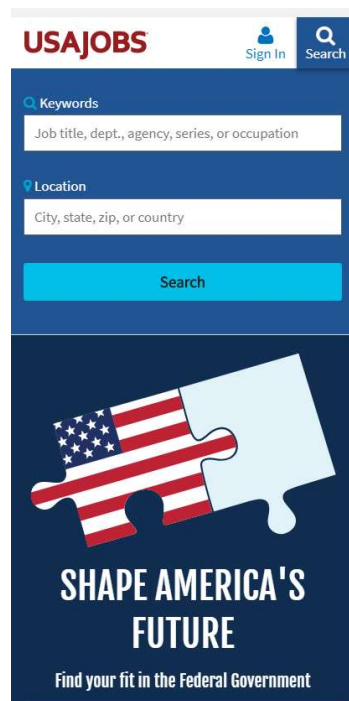
Places to travel...

- France
- Britain
- Russian
- India
- Honkong

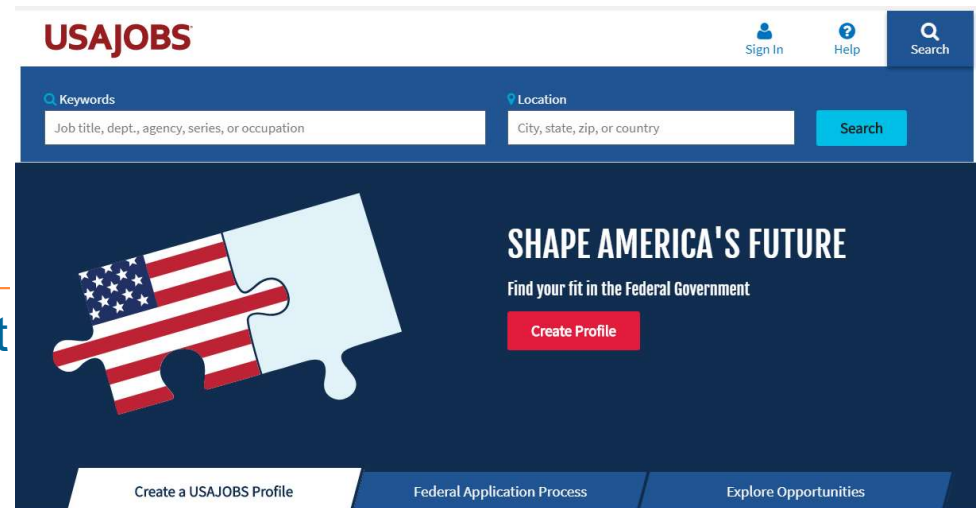
```
<ul>
  <li>France</li>
  <li>Britain</li>
  <li>Russian</li>
  <li>India</li>
  <li>Honkong</li>
</ul>
```

Construct a Multipart Media Query

- Implementing responsive design:
 - 3. Identify the first breakpoint



Breakpoint



Create a USAJOBS Profile

```
@media only screen and (max-width: 768px) {  
  /* For mobile phones: */  
  /* define your layout here */  
}
```

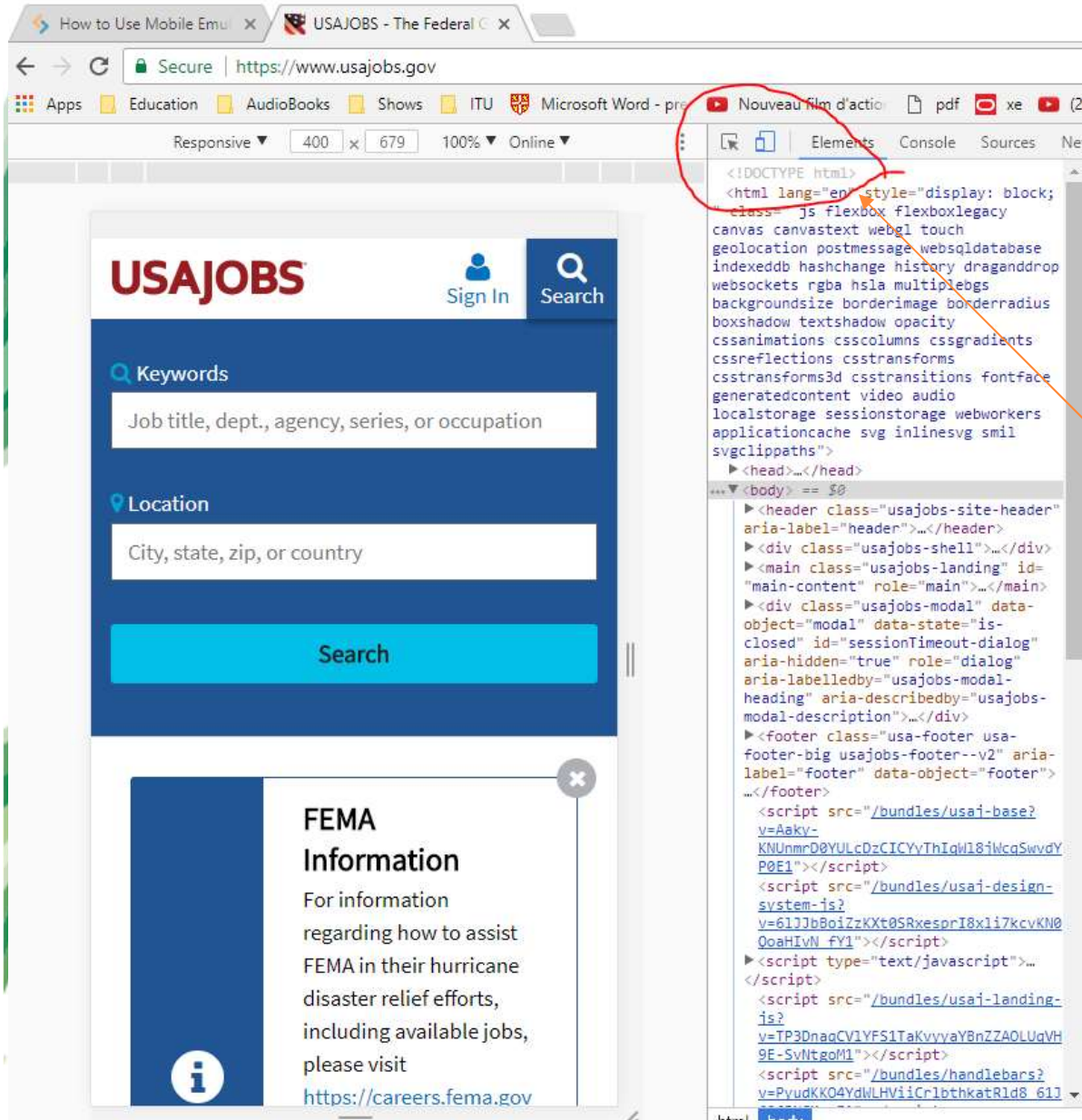
Test Layouts with an Emulator



- Important to test website on devices that your audience will be using
- While developing, you don't need to use actual devices
- Emulator: an application that runs on a computer and approximates the dimensions and behavior of a wide range of devices
- Built into Chrome browser

Chrome F12

Unit I



Start Chrome, navigate to the web page you want to test and open the **Developer Tools** (Menu > Tools > Developer Tools, Cmd+Opt+I on Mac or F12 / Ctrl+Shift+I on Windows and Linux).

You can now enable the browser emulator by clicking the **Toggle device toolbar** icon in the top-left: