



Technical University of Sofia  
Faculty of Computer Systems and Control

# Web Programming

Lecture 4

HTML5 & CSS3 – new things...

# Agenda

- HTML vs HTML5: New features
- CSS vs CSS3: New features
- Responsive Design core concepts
- Modernizr

**HTML**



HTML5 & CSS3

# HTML VS HTML5: NEW FEATURES

HTML





# DOCTYPE

- HTML5

- `<!DOCTYPE html>`

- HTML

- `<!DOCTYPE html PUBLIC "-`

- `//W3C//DTD XHTML 1.0 Transitional//EN" "http://`

- `www.w3.org/TR/xhtml1/DTD/xhtml1-`

- `transitional.dtd">`

**HTML**



# <Figure>

- HTML5

- <figure>

- 

- <figcaption>

- <p>This is an image of something interesting. </p>

- </figcaption>

- </figure>

- HTML

- N/A

**HTML**



# “Type” – Links & Js

- HTML5

- Not necessary

- `<script src="path/to/script.js"></script>`

- HTML

- Necessary

- `<script src="path/to/script.js"  
type="text/javascript"></script>`

**HTML**





# "" – ID's & Classes

- HTML5

- Not necessary

- `<p class=myClass id=someld>`

- HTML

- Necessary

- `<p class="myClass" id="someld">`

**HTML**



# UL Editable

- HTML5
  - `<ul contenteditable=true>`
- HTML
  - N/A

**HTML**





# Type="Email"

- HTML5
  - `<input id="email" name="email" type="email" />`
- HTML
  - N/A

**HTML**



# Placeholders

- HTML5

- `<input name="email" type="email" placeholder="mail@domain.com" />`

- HTML

- N/A

**HTML**



# Semantic Tags

- HTML5

- <Nav>
- <Header>
- <Article>
  - <Section>
- <Aside>
- <Footer>

- HTML

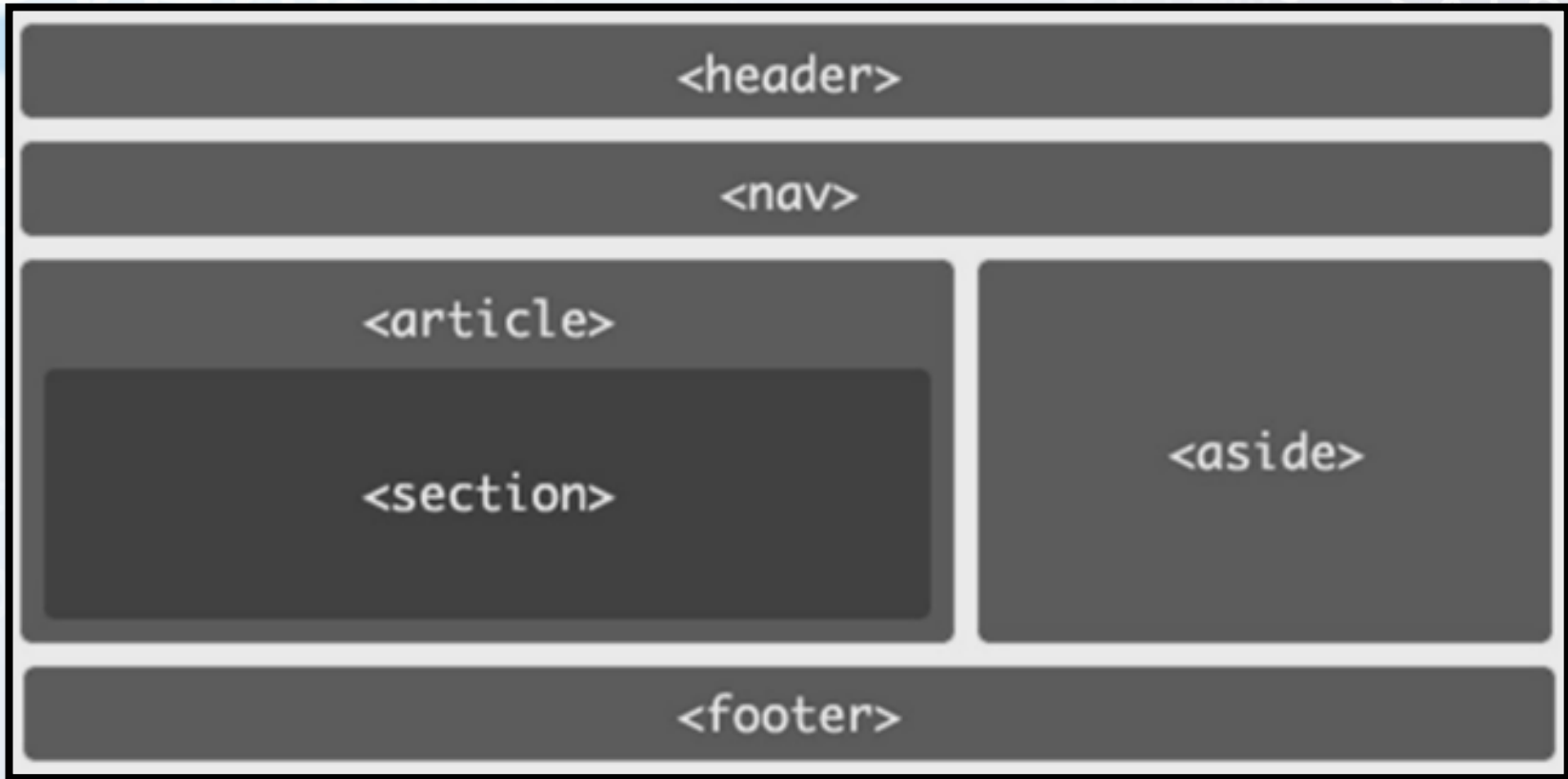
- N/A

**HTML**





# MainActivity



```
public void onClick(View view) {  
    Intent intent = new Intent(this, Call
```

# Required

- HTML5
  - `<input type="text" name="someInput" required>`
- HTML
  - N/A

HTML



# Autofocus

- HTML5

- `<input type="text" name="someInput" placeholder="Douglas Quaid" required autofocus>`

- HTML

- N/A

HTML





# Audio

- HTML5

- `<audio autoplay="autoplay" controls="controls">`
  - `<source src="file.ogg" />`
  - `<source src="file.mp3" />`
  - `<a href="file.mp3">Download this file.</a>`
- `</audio>`

- HTML

- N/A

**HTML**



- Supported formats

Browser	MP3	Wav	Ogg
Internet Explorer 9+	YES	NO	NO
Chrome 6+	YES	YES	YES
Firefox 3.6+	NO	YES	YES
Safari 5+	YES	YES	NO
Opera 10+	NO	YES	YES

# Video

- HTML5

- `<video controls preload>`

- `<source src="video.ogv" type="video/ogg" />`

- `<source src="video.mp4" type="video/mp4"/>`

- `<p> Your browser is old. <a href="video.mp4">Download this video instead.</a> </p>`

- `</video>`

- HTML

- N/A

**HTML**





# Video

- Supported formats

Browser	MP4	WebM	Ogg
Internet Explorer 9+	YES	NO	NO
Chrome 6+	YES	YES	YES
Firefox 3.6+	NO	YES	YES
Safari 5+	YES	NO	NO
Opera 10.6+	NO	YES	YES

**HTML**



# Data Attributes

- HTML5

- `<div id="myDiv" data-custom-attr="My Value">  
Text</div>`

- HTML

- N/A

HTML



Demo

**HTML**





HTML5 & CSS3

## CSS3 VS CSS: NEW FEATURES



# First Child

- CSS3
  - #big\_section p:first-child{ }
- CSS
  - N/A



# First Letter

- CSS3
  - #p\_line:first-letter{ }
- CSS
  - N/A





# Border Radius

- CSS3
  - border-radius: 10px 90px 90px 10px;
- CSS
  - N/A



# Transition

- CSS3
  - transition: width 2s, height 2s, color 3s, transform 2s, linear 2s;
- CSS
  - N/A



# Transformation

- CSS3
  - transform: rotate(7deg);
  - transform: translate(70px);
- CSS
  - N/A





# CSS 3 Demos

- [Borders](#)
- [Animations](#)
- [Transitions](#)
- [2D and 3D Trannsforms](#)
- [Text Effects](#)
- [Backgrounds](#)



HTML5 & CSS3

# RESPONSIVE WEB DESIGN



# What is?

- “A website that responds to the device that accesses it and delivers the appropriate output for it uses responsive design. Rather than designing multiple sites for different-sized devices, this approach designs one site but specifies how it should appear on varied devices.”

<https://itservices.stanford.edu/service/web/mobile/about/terminology>





# What isn't?

- A small website
- Different url's for different devices
- Having 100% width elements



# Viewports

- `<meta name="viewport" content="width=device-width, user-scalable=false;">`



# Media Queries

- CSS3 module
- Adapt to conditions like screen resolution
- Breakpoint
  - @media only screen and (max-device-width: 480px) { }





# Examples

- Fixed Design: <http://www.corvusart.com/>
- Elastic Design: <http://clearleft.com/>
- Responsive Web Design: Demo



MainActivity extends  
@Override  
public void onCreate(Bundle savedInstanceState)  
super.onCreate(savedInstanceState)  
setContentView(R.layout.activity\_main)  
public void onClick(View view)  
Intent i = new

HTML5 & CSS3

**MODERNIZR**

**HTML**



# Modernizr

- Use HTML5 on old browsers
- Simple: Add reference to the js file
- Download: [www.modernizr.com](http://www.modernizr.com)

**HTML**





# Links

- Lynda:
  - Responsive Design Fundamentals
  - CSS3 First Look
- [www.modernizr.com](http://www.modernizr.com)
- [www.html5test.com/compare/browser/index.html](http://www.html5test.com/compare/browser/index.html)

**Thank you for  
your attention!**

