Social Media Apps Programming

Mobile Apps using HTML5/CSS3/JavaScript

1071SMAP05
TLMXM1A (8550) (M2143) (Fall 2018)
(MIS MBA) (2 Credits, Elective) [Full English Course]
Thu 8,9 (10:10-12:00) B206

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Assistant Professor
Department of Information Management
Tamkang University

http://mail.tku.edu.tw/myday

2018-10-11
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Subject/Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2018/09/13</td>
<td>Course Orientation and Introduction to Social Media and Mobile Apps Programming</td>
</tr>
<tr>
<td>2</td>
<td>2018/09/20</td>
<td>Introduction to Android / iOS Apps Programming</td>
</tr>
<tr>
<td>3</td>
<td>2018/09/27</td>
<td>Developing Android Native Apps with Java (Android Studio)</td>
</tr>
<tr>
<td>4</td>
<td>2018/10/04</td>
<td>Developing iPhone / iPad Native Apps with Swift (XCode)</td>
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<td>5</td>
<td>2018/10/11</td>
<td>Mobile Apps using HTML5/CSS3/JavaScript</td>
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<tr>
<td>6</td>
<td>2018/10/18</td>
<td>jQuery Mobile</td>
</tr>
<tr>
<td>7</td>
<td>2018/10/25</td>
<td>Create Hybrid Apps with Phonegap</td>
</tr>
<tr>
<td>8</td>
<td>2018/11/01</td>
<td>jQuery Mobile/Phonegap</td>
</tr>
<tr>
<td>9</td>
<td>2018/11/08</td>
<td>jQuery Mobile/Phonegap</td>
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## Course Schedule (2/2)

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Subject/Topics</th>
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<tbody>
<tr>
<td>10</td>
<td>2018/11/15</td>
<td>Midterm Exam Week / Project Presentation</td>
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<tr>
<td>11</td>
<td>2018/11/22</td>
<td>Case Study on Social Media Apps Programming and Marketing in Google Play and App Store</td>
</tr>
<tr>
<td>12</td>
<td>2018/11/29</td>
<td>Google Cloud Platform</td>
</tr>
<tr>
<td>13</td>
<td>2018/12/06</td>
<td>Google App Engine</td>
</tr>
<tr>
<td>14</td>
<td>2018/12/13</td>
<td>Google Map API</td>
</tr>
<tr>
<td>15</td>
<td>2018/12/20</td>
<td>Facebook API (Facebook JavaScript SDK) (Integrate Facebook with iOS/Android Apps)</td>
</tr>
<tr>
<td>16</td>
<td>2018/12/27</td>
<td>Twitter API</td>
</tr>
<tr>
<td>17</td>
<td>2019/01/03</td>
<td>Final Project Presentation</td>
</tr>
<tr>
<td>18</td>
<td>2019/01/10</td>
<td>Final Exam Week / Final Project Presentation</td>
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</table>
Android /iOS Apps Programming

Native Apps

Hybrid Apps

Mobile Web Apps
App Development Comparison

<table>
<thead>
<tr>
<th>Device Access</th>
<th>Speed</th>
<th>Development Cost</th>
<th>App Store</th>
<th>Approval Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native Apps</td>
<td>Full</td>
<td>Very Fast</td>
<td>Expensive</td>
<td>Available</td>
</tr>
<tr>
<td>Hybrid Apps</td>
<td>Full</td>
<td>Native Speed as Necessary</td>
<td>Reasonable</td>
<td>Available</td>
</tr>
<tr>
<td>Web Apps</td>
<td>Partial</td>
<td>Fast</td>
<td>Reasonable</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

Outline

• Mobile Apps
• HTML5
  – Hyper Text Markup Language (version 5)(2014)
  – Content and Structure
• CSS3
  – Cascading Style Sheets (version 3)
  – Presentation, Layout and User Interface
• JavaScript
  – Behavior and Business Logic
Building Android Apps with HTML, CSS, and JavaScript: Making Native Apps with Standards-Based Web Tools, Jonathan Stark & Brian Jepson, O’reilly, 2012

Learn HTML5 and JavaScript for iOS: Web Standards-based Apps for iPhone, iPad, and iPod touch, Scott Preston, Apress, 2012

Source: http://www.amazon.com/Learn-HTML5-JavaScript-iOS-Standards-based/dp/1430240385
Learn HTML5 and JavaScript for iOS

This site features a series of examples for every chapter. Look at the site on your desktop, iPad or iPhone as you read the book. Click "View Source" in your browser or go to the Apress download zip to see the source code for each example.

What you see in the book might only be part of the code needed to demonstrate an idea or concept, but the this site has everything you need, like additional JS, or CSS, or rendered HTML.

The Real World Example Site

www.grandviewave.com/m

The Grandview Avenue site was written in 2010 and continues to evolve. It's a real site designed to give local businesses an app and mobile site presence.

Each chapter in the book ends with a section called "Putting It All Together", in which I show you how I apply the concepts in the chapter to this real world application.

Hopefully you can see how this site works and either build one like it yourself, or do something completely different.

http://www.learnhtml5book.com/
Mobile Apps

- Mobile Website  
  - Classic Website

- Mobile Apps  
  - Web Apps

- Responsive Web Design (RWD)

Source: Scott Preston, Learn HTML5 and JavaScript for iOS: Web Standards-based Apps for iPhone, iPad, and iPod touch, Apress, 2012
Mobile Website
Classic Website

http://grandviewave.com/
Mobile Apps (Web Apps)

http://grandviewave.com/
Responsive Web Design (RWD)

http://grandviewave.com/m/
Mobile Web App

- HTML
- CSS
- JavaScript
- Templates
- Phone Data
- External Data

Mobile frameworks and Libraries

Source: Scott Preston, Learn HTML5 and JavaScript for iOS: Web Standards-based Apps for iPhone, iPad, and iPod touch, Apress, 2012
MVC Framework of Mobile Apps (HTML5, CSS3, JavaScript)

Source: http://sc5.io/blog/2012/02/anatomy-of-a-html5-app/
jQuery Mobile

A Touch-Optimized Web Framework

jQuery Mobile is a HTML5-based user interface system designed to make responsive web sites and apps that are accessible on all smartphone, tablet and desktop devices.

Seriously cross-platform with HTML5

jQuery Mobile framework takes the "write less, do more" mantra to the next level: Instead of writing unique applications for each mobile device or OS, the jQuery mobile framework allows you to design a single highly-branded responsive web site or application that will work on all popular smartphone, tablet, and desktop platforms.

Developer Links

- Source Code (GitHub)
- jQuery Mobile Git (WIP Build)
  - JavaScript
  - CSS
- Report an issue
- Browser Support

https://jquerymobile.com/
Bootstrap

Build responsive, mobile-first projects on the web with the world's most popular front-end component library.

Bootstrap is an open source toolkit for developing with HTML, CSS, and JS. Quickly prototype your ideas or build your entire app with our Sass variables and mixins, responsive grid system, extensive prebuilt components, and powerful plugins built on jQuery.

Get started  Download

Currently v4.0.0-beta.2

http://getbootstrap.com/
React
A JavaScript library for building user interfaces

Declarative
React makes it painless to create interactive UIs. Design simple views for each state in your application, and React will efficiently update and render just the

Component-Based
Build encapsulated components that manage their own state, then compose them to make complex UIs.

Learn Once, Write Anywhere
We don't make assumptions about the rest of your technology stack, so you can develop new features in React without rewriting existing code.

https://reactjs.org/
React Native

Learn once, write anywhere: Build mobile apps with React

Get Started Learn the Basics

Build native mobile apps using JavaScript and React

React Native lets you build mobile apps using only JavaScript. It uses the same design as React, letting you compose a rich mobile UI from declarative components.

```javascript
import React, { Component } from 'react';
import { Text, View } from 'react-native';

class WhyReactNativeIsSoGreat extends Component {
  render() {
    return (
      <View>
        <Text>
          If you like React on the web, you'll like React Native.
        </Text>
      </View>
    );
  }
}
```

https://facebook.github.io/react-native/
Vue.js

The Progressive JavaScript Framework

GET STARTED  GITHUB

Approachable
Already know HTML, CSS and JavaScript? Read the guide and start building things in no time!

Versatile
An incrementally adoptable ecosystem that scales between a library and a full-featured framework.

Performant
20KB min+gzip Runtime
Blazing Fast Virtual DOM
Minimal Optimization Efforts

https://vuejs.org/
PhoneGap: Mobile Apps Powered by Open Web Tech

Build amazing mobile apps powered by open web tech.

START NOW  LEARN MORE

https://phonegap.com/
Ionic: Framework for Developing Native and Progressive Web Apps

The top open source framework for building amazing mobile apps.

Ionic is the beautiful, free and open source mobile SDK for developing native and progressive web apps with ease.

Get started

Explore the docs

https://ionicframework.com/
Mobile Web App
Organizing files in directories

• Classic Website
  – / - for all HTML files
  – /css - for all CSS
  – /js - for all JavaScript
  – /images - for all images

• Mobile Web App
  – /m -for all HTML files
  – /m/css - for all CSS
  – /m/js - for all JavaScript
  – /m/images - for all images.

Source: Scott Preston, Learn HTML5 and JavaScript for iOS: Web Standards-based Apps for iPhone, iPad, and iPod touch, Apress, 2012
HTML5
<!DOCTYPE html>
<html>
    <head>
        <meta charset="UTF-8">
        <title>My Title</title>
    </head>
    <body>
        Hello World
    </body>
</html>
HTML5 Game

http://www.cuttherope.ie/
Objective-C to JavaScript

http://www.cuttherope.ie/dev/
Cut the Rope
By Chillingo Ltd
Open iTunes to buy and download apps.

Description
Cut the rope to feed candy to little monster Om Nom®! 400 million downloads around the world of this phenomenal puzzle game. 375 levels and more to come!

Chillingo Ltd Web Site  Cut the Rope Support  Application License Agreement

What’s New in Version 2.3.1
It’s time to update! To ensure all in-app purchases and data are saved, please update Cut the Rope now.

$0.99
Category: Games
Updated: Sep 10, 2013
Version: 2.3.1
Size: 26.8 MB
Languages: English, Chinese, Dutch, French, German, Italian, Japanese, Korean, Portuguese, Russian, Spanish
Seller: Chillingo Ltd
© ZeptoLab
Rated 4+
# HTML Versions

<table>
<thead>
<tr>
<th>Version</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTML</td>
<td>1991</td>
</tr>
<tr>
<td>HTML+</td>
<td>1993</td>
</tr>
<tr>
<td>HTML 2.0</td>
<td>1995</td>
</tr>
<tr>
<td>HTML 3.2</td>
<td>1997</td>
</tr>
<tr>
<td>HTML 4.01</td>
<td>1999</td>
</tr>
<tr>
<td>XHTML 1.0</td>
<td>2000</td>
</tr>
<tr>
<td>HTML5</td>
<td>2014</td>
</tr>
</tbody>
</table>

The `<!DOCTYPE>` Declaration

**HTML5**

```html
<!DOCTYPE html>
```

**HTML 4.01**

```html
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
```

**XHTML 1.0**

```html
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

What is HTML?

• HTML is a language for describing web pages.
  – HTML stands for Hyper Text Markup Language
  – HTML is a markup language
  – A markup language is a set of markup tags
  – The tags describe document content
  – HTML documents contain HTML tags and plain text
  – HTML documents are also called web pages

```html
<!DOCTYPE html>
<html>
  <head>
    <meta charset="UTF-8">
    <title>My Title</title>
  </head>
  <body>
    Hello World
  </body>
</html>
```

Source: http://www.w3schools.com/html/html_intro.asp
HTML Tag, Element, Attribute

HTML Element

<title>My Title</title>

<p>This is a paragraph.</p>

<tagname>content</tagname>
HTML Tag, Element, Attribute

HTML Element

<title>My Title</title>

Tag
Start Tag
Opening Tag

Tag
End Tag
Closing Tag
HTML Tag, Element, Attribute

<meta charset="UTF-8">

Tag

Element

Attribute
What is HTML5

• HTML5 is The New HTML Standard
  – What HTML5 is Not

• The new HTML5 structural elements and attributes

• The new HTML5 form input types and attributes
What HTML5 is Not

• It’s Not XHTML
  – `<div id=container> This is a div<br/></div>`
  – `<div id="container"> This is another div<br/></div>`

• It’s Not HTML4+1

• HTML5 is Not Just Markup
  – Not just tags
  – It’s also a set of JavaScript APIs
    • Provide a richer user experience

Source: Scott Preston, Learn HTML5 and JavaScript for iOS: Web Standards-based Apps for iPhone, iPad, and iPod touch, Apress, 2012
HTML5 is The New HTML Standard

Imagination, meet implementation. HTML5 is the cornerstone of the W3C's open web platform; a framework designed to support innovation and foster the full potential the web has to offer. Heralding this revolutionary collection of tools and standards, the HTML5 identity system provides the visual vocabulary to clearly classify and communicate our collective efforts.

Giving meaning to structure, semantics are front and center with HTML5. A richer set of tags, along with RDFa, microdata, and microformats, are enabling a more useful, data driven web for both programs and your users.

Source: [http://www.w3.org/html/logo/](http://www.w3.org/html/logo/)
HTML5 is The New HTML Standard

- New Elements
- New Attributes
- Full CSS3 Support
- Video and Audio
- 2D/3D Graphics
- Local Storage
- Local SQL Database
- Web Applications

Source: http://www.w3schools.com/html/html5_intro.asp
HTML5 is The New HTML Standard

• New Elements
• New Attributes
• Full CSS3 Support
• Video and Audio
• 2D/3D Graphics
• Local Storage
• Local SQL Database
• Web Applications

Source: http://www.w3schools.com/html/html5_intro.asp
With HTML5, playing video and audio is easier than ever.

• HTML5 `<video>`

• HTML5 `<audio>`

```html
<!DOCTYPE HTML>
<html>
<body>
  <video width="320" height="240" controls>
    <source src="movie.mp4" type="video/mp4">
    <source src="movie.ogg" type="video/ogg">
    Your browser does not support the video tag.
  </video>
</body>
</html>
```

HTML5 Graphics

With HTML5, drawing graphics is easier than ever:

• Using the <canvas> element
• Using inline SVG
• Using CSS3 2D/3D

Source: http://www.w3schools.com/html/html5_intro.asp
With HTML5, web application development is easier than ever.

- Local data storage
- Local file access
- Local SQL database
- Application cache
- Javascript workers
- XHTMLHttpRequest 2

Source: http://www.w3schools.com/html/html5_intro.asp
Semantic Elements

HTML5 Forms

• Semantic Elements
  – New elements for headers, footers, menus, sections, and articles.

• HTML5 Forms
  – New form elements,
  – new attributes,
  – new input types,
  – automatic validation.

HTML5 uses CSS3

- New Selectors
- New Properties
- Animations
- 2D/3D Transformations
- Rounded Corners
- Shadow Effects
- Downloadable Fonts

Source: http://www.w3schools.com/html/html5_intro.asp
<!DOCTYPE html>
<html>
  <head>
    <meta charset="UTF-8">
    <title>My Title</title>
  </head>
  <body>
    Hello World
  </body>
</html>
CSS3
Cascading Style Sheets (CSS)

• a simple mechanism for adding style (e.g., fonts, colors, spacing) to Web documents.

```html
<style>
  body {background-color:yellow;}
  h1 {color: green}
  p {color: red;}
  div {color: blue; font-size:18px;}
</style>
```
CSS3

• CSS3 is the latest standard for CSS.
• CSS3 is completely backwards-compatible with earlier versions of CSS.

Source: http://www.w3schools.com/css/css3_intro.asp
CSS

Selector: h1

Declaration: {color:blue; font-size:12px;}

Property: color
Value: blue
Property: font-size
Value: 12px

http://www.w3schools.com/css/css_syntax.asp
<link rel="stylesheet" type="text/css" href="mystyle1.css">
<style>
  body {background-color: yellow;}
  h1 {color: green}
  p {color: red;}
  div {color: blue; font-size: 18px;}
</style>
JavaScript
JavaScript

- JavaScript is a **Scripting Language**
  - A scripting language is a **lightweight** programming language.
  - JavaScript is **programming code** that can be inserted into **HTML pages**.
  - JavaScript code can be executed by all **modern web browsers**.
  - JavaScript is easy to learn.

```html
<script language="javascript">
    function sayHello()
    {
        var strNameInput = document.getElementById('txtNameInput').value;
        var strOutput = "Hello, my friend, " + strNameInput;
        document.getElementById('divOutput').innerHTML = strOutput;
    }
</script>
```

Source: [http://www.w3schools.com/js/js_intro.asp](http://www.w3schools.com/js/js_intro.asp)
JavaScript Introduction

This page contains some examples of what JavaScript can do.

JavaScript Can Change HTML Content

One of many JavaScript HTML methods is `getElementById()`.

This example uses the method to "find" an HTML element (with id="demo") and changes the element content (innerHTML) to "Hello JavaScript":

```
document.getElementById("demo").innerHTML = "Hello JavaScript";
```
JavaScript: Writing Into HTML Output

document.write("<h1>This is a heading</h1>");
document.write("<p>This is a paragraph</p>");
JavaScript: Reacting to Events

<button type="button" onclick="alert('Welcome!')">Click Me!</button>
JavaScript: Changing HTML Content

```javascript
x=document.getElementById("demo");
x.innerHTML="Hello JavaScript";
```
<!DOCTYPE html>
<html>
<body>

<h2>Hello JavaScript Demo</h2>
<p id="demo">HTML content</p>

<button type="button" onclick="document.getElementById('demo').innerHTML = 'Hello JavaScript'">Click Me</button>

</body>
</html>

Source: http://www.w3schools.com/js/js_intro.asp
Hello if else

<!DOCTYPE html>
<html>
<body>
<p>JavaScript if else</p>
<button onclick="myFunction()">Try it</button>
<p id="demo"></p>
<script>
function myFunction() {
    var greeting;
    var time = new Date().getHours();
    if (time < 10) {
        greeting = "Good morning";
    } else if (time < 20) {
        greeting = "Good day";
    } else {
        greeting = "Good evening";
    }
    document.getElementById("demo").innerHTML = greeting;
}
</script>
</body>
</html>

Source: https://www.w3schools.com/js/tryit.asp?filename=tryjs_elseif
HTML5 Editors
Maqetta: Online HTML5 WYSIWYG Editor

http://maqetta.org/
Aloha Editor: HTML5 WYSIWYG editor

Aloha Editor - HTML5 WYSIWYG Editor

The world's most advanced browser HTML5 based WYSIWYG editor lets you experience a whole new way of editing. It's faster than existing technologies and offers unprecedented WYSIWYG functionalities.

Aloha Editor is available for:

- CONTENT.NODE
- WordPress
- Drupal
- TYPO3
- ektron
- Create
- MeteorJS

http://www.aloha-editor.org/
Adobe Dreamweaver

The new standard in web standards.

New features, instant access to new updates, and more efficient tools let you work faster and code smarter.

Develop more web content, more quickly. A streamlined user interface, connected tools, and new visual CSS editing tools let you code efficiently and intuitively. And now, Dreamweaver CC lets you share work directly from within the application, and helps you keep up with web standards by giving you access to new features as soon as they're available. Your entire creative world, together in one place. Only in

BlueGriffon: WYSIWYG content editor

http://www.bluegriffon.org/
Online Editor: http://jsbin.com

```
<!DOCTYPE html>
<html>
<head>
<meta charset=utf-8 />
<title>JS Bin</title>
</head>
<body>
</body>
</html>
```
Aptana Studio 3

Download Aptana Studio 3.6.1

Aptana Studio 3.6.1 is our code base and complete environment that includes extensive capabilities to build Ruby and Rails, PHP, and Python applications, along with complete HTML, CSS and JavaScript editing.

You are about to download:

Aptana Studio 3.6.1
Mac OS X, Intel

System Requirements
Mac OS X 10.5 or better, Java 1.6

Getting Started Guide
Release Notes

Looking for a different OS, download format, or architecture?

Customize Your Download

Please provide us your name and email address so that we can get a better sense for who uses our product. We may use this email to occasionally communicate product and company news.

Email Address

DOWNLOAD
APTANA STUDIO 3

TextEdit in Mac OSX

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>My Title</title>
</head>
<body>
Hello World
</body>
</html>
```
Sublime Text

Sublime Text is a sophisticated text editor for code, markup and prose. You'll love the slick user interface, extraordinary features and amazing performance.

http://www.sublimetext.com/
Notepad++ is a free (as in "free speech" and also as in "free beer") source code editor and Notepad replacement that supports several languages. Running in the MS Windows environment, its use is governed by GPL License.

Based on the powerful editing component Scintilla, Notepad++ is written in C++ and uses pure Win32 API and STL which ensures a higher execution speed and smaller program size. By optimizing as many routines as possible without losing user friendliness, Notepad++ is trying to reduce the world carbon dioxide emissions. When using less CPU power, the PC can throttle down and reduce power consumption, resulting in a greener environment.
Build jQuery Mobile apps, the easy way.

Codiqa is a powerful drag-and-drop builder for creating cross-platform HTML5 mobile apps and websites. It’s simple, easy to use, and so damn useful.

Get started now!  ▶ Or try the demo
Welcome to Codiqal!

Try dragging some elements from the left over here.

You can also add pages, and link buttons to them, like below!

This is just a simple demo, upgrade to the full version to get a lot more!

https://codiqa.com/demo
HTML5 Mobile Apps Simulators
Ripple Emulator

https://chrome.google.com/webstore/detail/ripple-emulator-beta/geelfhhabnejhdaljkjhgipohgpnoc?hl=en
Online browser simulator: ipadpeek.com

http://ipadpeek.com/
Opera Mobile Emulator

Opera Mobile Classic Emulator

Do your mobile development straight from your desktop, and pair it with Opera Dragonfly for advanced debugging.

Opera Mobile Classic Emulator 12.1 for Windows
Opera Mobile Classic Emulator 12.1 for Mac

http://www.opera.com/developer/mobile-emulator
iPhone5Simulator

http://iphone5simulator.com/
Note: Demo has a 60 second time limit

https://appetize.io/demo
Xcode iPhone Simulator

Learn HTML5 and JavaScript for iOS
http://grandviewave.com
Avenue Tours

Click below to take a tour of The Avenue.

Audio Tours
Five audio tours of Grandview Avenue either sequential or by nearest location.

Video Tours
Three video tours of Grandview Avenue either sequential or by nearest location.

Bar Crawls
Demo

Building Mobile Apps with HTML5, CSS3, and JavaScript

http://jsbin.com
<!DOCTYPE html>
<html>
<head>
<meta charset=utf-8 />
<meta name="viewport" content="width=device-width, initial-scale=1" />
<title>Hello World HTML5 by Myday</title>
<style>
body { background-color:yellow;}
h1 {color:green}
p {color:red,}
div {color:blue; font-size:18px;}
</style>
<script language="javascript">
function sayHello()
{
    var strNameInput = document.getElementById('txtNameInput').value;
    var strOutput = "Hello, my friend, " + strNameInput;
    document.getElementById('divOutput').innerHTML = strOutput;
}
</script>
</head>
<body>
<h1>Hello, World!</h1>
<p>What's your name?</p>
<input id="txtNameInput" type="text"><br>
<button type="button" id="btnClick1" onClick="sayHello()">Press Me!</button><br>
<div id="divOutput">Hi</div>
</body>
</html>
Online Editor: http://jsbin.com

```
<!DOCTYPE html>
<html>
<head>
<meta charset=utf-8 />
<title>JS Bin</title>
</head>
<body>
</body>
</html>
```
CompileOnline: Try jQueryMobile Online

http://www.compileonline.com/try_jquerymobile_online.php
<!DOCTYPE html>
<html>
<head>
    <meta charset=utf-8 />
    <meta name="viewport" content="width=device-width, initial-scale=1" />
    <title>Hello World HTML5 by Myday</title>
<style>
body {background-color: yellow;}
h1 {color:green}
p {color:red;}
div {color:blue; font-size:18px;}
</style>
<script language="javascript">
function sayHello()
{
    var strNameInput = document.getElementById('txtNameInput').value;
    var strOutput = "Hello, my friend, " + strNameInput;
    document.getElementById('divOutput').innerHTML = strOutput;
}
</script>
</head>
<body>
<h1>Hello, World!</h1>
<p>What's your name?</p>
<input id="txtNameInput" type="text"><br/>
<button type="button" id="btnClick1" onclick="sayHello()"">Press Me!</button><br/>
<div id="divOutput">Hi</div>
</body>
</html>
<!DOCTYPE html>
<html>
<head>
  <meta charset=utf-8 />
  <title>Hello World HTML5 by Myday</title>
</head>
<body>
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CSS3

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http://jsbin.com/oWOsUcI/1
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Summary

• Mobile Apps
• HTML5
  – Hyper Text Markup Language (version 5)(2014)
  – Content and Structure
• CSS3
  – Cascading Style Sheets (version 3)
  – Presentation, Layout and User Interface
• JavaScript
  – Behavior and Business Logic
References

• Learn HTML5 and JavaScript for iOS: Web Standards-based Apps for iPhone, iPad, and iPod touch, Scott Preston, Apress, 2012
• Building Android Apps with HTML, CSS, and JavaScript: Making Native Apps with Standards-Based Web Tools, Jonathan Stark & Brian Jepson, O’reilly, 2012
• Building iPhone Apps with HTML, CSS, and JavaScript: Making App Store Apps Without Objective-C or Cocoa, Jonathan Stark, O’reilly, 2010
• What is HTML5?
  – https://www.youtube.com/watch?v=4oX9DXH4fiA
• What is CSS3?
  – https://www.youtube.com/watch?v=oHmm9dMAW0s
• What is JavaScript?
  – https://www.youtube.com/watch?v=955L9-NoBoE
• HTML5 Tutorial For Beginners
  – https://www.youtube.com/watch?v=9gTw2EDkaDQ
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