

Mobile Web Applications Development with HTML5



Lab 1: The Challenge

Claudio Riva
Aalto University - Fall 2012

THE CHALLENGE

OVERVIEW OF THE ASSIGNMENT

WAY OF WORKING

TEAMS

DEVELOPMENT ENVIRONMENT

COURSE EXAMPLES

Congratulations!

You have been hired!

The Challenge

Build a Mobile Web App

- Using some of the HTML5 API (e.g. canvas, local storage, websockets)
- Using some of the mobile device features (e.g. GPS, camera, sensors)
- Make it working on selected mobile devices
- Using some client/server communication (e.g. REST, websockets)

Build it as a team

- Work in sub-teams
- One delivery

Schedule

- **2 Nov** : Kick-off
- **30 Nov** : Mid-term review
- **17 Dec** : Demo day (final review)

Evaluation Criteria

- Functionality
- Usability of the application (e.g. touch interactions)
- Application design and code style
- Extra credits for a PhoneGap version or additional achievements

Meet the customer



Meet the customer



World provider for digital weather services

Meet the customer



World provider for digital weather services

Our customer already has a website

Meet the customer



World provider for digital weather services

Our customer already has a website

Our customer already has mobile app for several platforms

Meet the customer



World provider for digital weather services

Our customer already has a website

Our customer already has mobile app for several platforms

Now they want a **cool** mobile web app based on HTML5

The Android App

HELSINKI

LATEST OBSERVATIONS

+4°C

Mostly clear → 8 m/s

Today 28/11 **+4°C** **+1°C** Partly cloudy → 9 m/s

Tomorrow 29/11 **+6°C** **0°C** Cloudy ↑ 5 m/s

Wednesday 30/11 **+7°C** **+3°C** Cloudy ↗ 7 m/s

Thursday 01/12 **+7°C** **+3°C** Cloudy ↗ 8 m/s

Friday 02/12 **+6°C** **+3°C** Overcast and showers ↑ 10 m/s

Saturday 03/12 **+5°C** **+3°C**

The Latest on HTML5
Get the latest articles now at: The HTML5 Development Center

LONDON

Cloudiness 28/11 00:00

Booking.com Hotels FREE App
Ads by AdMob

NEW YORK CITY, NY

Rain 28/11 12:50

Booking.com Hotels FREE App
Ads by AdMob

Your current skills

Your current skills

Who knows the basic of Web Development ?

Your current skills

Who knows the basic of Web Development ?

Who is proficient with Javascript ?

Your current skills

Who knows the basic of Web Development ?

Who is proficient with Javascript ?

Who is proficient with CSS ?

Your current skills

Who knows the basic of Web Development ?

Who is proficient with Javascript ?

Who is proficient with CSS ?

Who has server-side development skills ?

Your current skills

Who knows the basic of Web Development ?

Who is proficient with Javascript ?

Who is proficient with CSS ?

Who has server-side development skills ?

Who knows Ruby and Ruby on Rails ?

Way of Working

All code, documentation and discussions on GitHub at:

<https://github.com/aaltowebapps/ForecaApp>

- Keep everyone informed
- Branch often, merge asap, commit often
- Comment on the pull requests
- Don't be shy in the discussions

Way of Working

All code, documentation and discussions on GitHub at:
<https://github.com/aaltowebapps/ForecaApp>

- Keep everyone informed
- Branch often, merge asap, commit often
- Comment on the pull requests
- Don't be shy in the discussions

Everyone has the right (and obligation) to:

- Commit code to master
- Create a pull request before merging a big feature
- Create and assign issues

The sub-teams

Small sub-teams are responsible for implementing the features

2-3 members for each sub-team

Sub-teams are responsible for

- Concepting and designing a new feature
- Creating a new branch
- Implementing the feature
- Creating a pull request
- Merging with master

Some special roles

Key contact points for

- Overseeing a particular area of the development
- Status reporting
- Initiating discussions

Some special roles

Key contact points for

- Overseeing a particular area of the development
- Status reporting
- Initiating discussions

Roles:

- Project manager
- A UI designer
- A client architect
- A server architect
- A quality manager

The Foreca API

Summary of Foreca API

Homework 1

1. Create a Github account
2. Send the account to me: clody69@gmail.com
3. Clone: `git@github.com:aaltowebapps/ForecaApp.git`
4. Start coding!

Homework 2

1. Study the [Foreca API](#)
2. Try to concept the Foreca Mobile Web App

Homework 2

1. Study the [Foreca API](#)
2. Try to concept the Foreca Mobile Web App
 - Content
 - How to structure it ?
 - What's essential and what's not ?
 - How to present it on a small device and a tablet ?

Homework 2

1. Study the [Foreca API](#)
2. Try to concept the Foreca Mobile Web App
 - Content
 - How to structure it ?
 - What's essential and what's not ?
 - How to present it on a small device and a tablet ?
 - Interaction
 - How will the user interact with the content ? For doing what ?
 - What about the navigation ?
 - How will it differ between a handheld device, tablet and PC ?

Homework 2

1. Study the [Foreca API](#)
2. Try to concept the Foreca Mobile Web App
 - Content
 - How to structure it ?
 - What's essential and what's not ?
 - How to present it on a small device and a tablet ?
 - Interaction
 - How will the user interact with the content ? For doing what ?
 - What about the navigation ?
 - How will it differ between a handheld device, tablet and PC ?
 - Mobility
 - What mobile capabilities can improve the experience ?
 - Geolocation ?
 - Sensors ?

DEVELOPMENT TOOLS

BROWSERS & EMULATORS

HTML/CSS/JS/RUBY EDITOR

GIT CLIENT

RUBY

Browsers on PC

With debugging support (important)

Webkit-based browsers are recommended

- Same engine used in most mobile devices
- Good development tools
- Google Chrome or Apple Safari

Alternatives:

- Firefox + Firebug
- Opera
- [Opera Mobile Emulator](#)

Emulators and Remote Debugging

iOS (Mac)

- Apple Xcode emulator
- Safari + Remote Web Inspector (for iOS6 onwards)
- Safari ([iWebInspector](#))

Android SDK

[Opera Mobile Emulator + Dragonfly](#)

[Remote Debugging on Firefox for Android](#)

Firefox and Fennec

[Adobe Edge Inspect \\$\\$\\$](#)

Code Editor

Any editor with support for HTML/CSS/JS

Aptana Studio (Win, Mac, Linux)

TextMate / TextWranger (Mac)

Notepad++ (Windows)

Git

Mac

- Install Git with Homebrew (see instructions on GitHub course examples)
- [Git OSX Installer](#)
- [SourceTree](#)
- [GitHub for Mac](#)

Windows

- [msysGit](#)

Linux

- Use package manager (sudo apt-get install git-core)

Configuring Git for GitHub

See GitHub instructions <https://help.github.com/articles/set-up-git>

Steps:

1. Install a Git client
2. Set up a SSH key
3. Set up your info

Ruby

Ruby version 1.8.7 or later is required for course examples that have a server component

Bundler is also required

Check the instructions at the [course examples git](#)