App Development

Updated dates and time:

May 5/6/7/12/14 from 12PM-15PM

(hours may be shifted to accommodate time conflicts with other courses)

Description

Goal

The goal of this workshop is to get a good overview of the broad and evolving array of web technologies, and use the acquired knowledge to develop a small app. Possible projects include (roughly in order of complexity):

- A Chrome-based browser extension (https://developer.chrome.com/extensions),
- A web app in Node.JS (e.g., with the Express framework https://expressjs.com/),
- A game theory experiment with the nodeGame platform (https://nodegame.org),
- A mobile app with the Ionic Framework (https://ionicframework.com/).

Format

Fully virtual with frontal lectures, videos, and exercises/materials.

A group discussion channel will be created for questions and requests outside of the teaching schedule.

Requirements

This workshop follows the course on Fundamentals of Computer Programming, therefore some basic programming knowledge is expected. The main language of this course is JavaScript, one of the most popular languages, currently the top language on GitHub (https://github.com/) for pull requests. Students with prior knowledge in a different programming language are welcome to join. Some knowledge of git/Github and familiarity with a modern text editor (e.g., Atom or Visual Studio) is also expected.

Before the beginning of this course:

- a short JavaScript/Git refresher will be offered for those in need,
- materials (video and or slides) will be provided to setup the programming environment.

Tentative Schedule

Schedule subject to change based on interest and knowledge of participants.

Prior to May 5th (if needed)

- JavaScript/GitHub/Atom refresher,
- Developing environment checkup.

May 5th

- Asynchronous code in JavaScript,
- REST API calls,
- Node.JS and NPM,
- The golden triad of web development: HTML, CSS, and JavaScript (Part 1).

May 6th
- The golden triad of web development: HTML, CSS, and JavaScript (Part 2),
- Introduction to Web frameworks: JQuery, Twitter Bootstrap, SASS.
- A simple web app with Express.

May 7th

- Introduction to the Ionic Framework.
- Introduction to Chrome-based browser extensions.
- Introduction to the nodeGame framework for behavioral research.

May 12th
- Targeted material and exercises and custom support for students' projects.

May 14th
- Targeted material and exercises and custom support for students' projects.