



Școala
informală
de IT

Front-end Web Development Curriculum

Școala Informală de IT

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Learning Objectives

The purpose of this course is to get familiar with front-end technologies like HTML, CSS and Javascript and to get ready to develop simple front-end applications. Next technologies (but not limited to) will be used: HTML, HTML5, CSS, CSS3, Javascript, jQuery, ReactJS.



Content

1. Web Introduction:

- Internet
- Client-Server architectures
- TCP/IP Protocol (IP address, URL)
- DNS Protocol
- HTTP Protocol (request-response model, headers, methods, status codes)
- HTTP Caching
- HTTP Cookies
- HTTPS Protocol (SSL)
- Cookies
- Browsers (DOM, page building, rendering and layout)
- Developer Tools (Dev Tools, Fiddler, Firebug)

2. HTML

- HTML Standards
- HTML Basics
- HTML Elements
- HTML Attributes
- HTML Tables
- HTML iFrames
- HTML Form Elements
- HTML5 Elements and Semantics
- Canvas, SVG
- Media
- APIs (geolocation, local storage, app cache)



3. CSS

- CSS Syntax (rules and selectors)
- CSS Base Rules
- CSS Positioning and Layout (box model)
- CSS Pseudo-class and Pseudo-elements
- CSS3 Basics
- CSS3 Flexbox
- CSS3 Gradients and Backgrounds
- CSS3 Transforms, Transitions and Animations
- Responsive Web Design (media queries)

4. JavaScript

- JavaScript Introduction
- Javascript Syntax
- Expressions and Operators (arithmetic, logic, bitwise)
- Variables and Types (numbers, booleans, strings, arrays, objects)
- Flow Control (decisions, iterations, break, continue)
- Functions
- Scope
- Exceptions
- Events
- DOM (methods, document, elements, html, css, events, nodes, navigation)
- JSON (syntax, types, objects, arrays, parse, stringify, JSONP)
- Client Storage (local and session storage)
- jQuery Basics
- Coding Standards (clean code, naming conventions)



5. Javascript Advanced

- Functions - Advanced Topics (function scope, closure, hoisting)
- Objects - Advanced Topics (properties, methods, prototypes)
- ECMAScript 6 (scoping, let, arrow functions, classes)
- Javascript BOM (window, screen, location, history, navigation, timing, cookies)
- AJAX (XMLHttpRequest, request, response)

6. Introduction to ReactJS

- Introduction (architecture, virtual DOM)
- Environment Setup
- JSX
- Components (props, state, lifecycle)
- Forms (refs, routing)
- Events (DOM events, component events)