Training part 1 - General Stuff

How to use?

Below is a list of materials that explains most of what you need to become a junior web developer. Mainly these materials are (links to) explanatory videos. Unfortunately, only watching videos will not make you a web developer. I propose the following work method. Every week we discuss what would be a good study target for this week. Part of meeting that target will be watching the videos, while making notes of what is explained. We then go over your notes and discuss them. Finally you create a small practice app/script that incorporates what you have learned.

General skills

Typing

You will be typing A LOT. It is therefore advisable to learn ten finger typing if you haven't already. The website below offers excellent training courses, both free and paid. Commit to doing 10 - 15 minutes of training every morning and sooner or later you will be able to ten finger type!

https://www.typingclub.com/

Learning

Becoming a developer means learning lots of new things. The Feynmann technique is a known way to help you do that.

https://www.youtube.com/watch?v=_f-qkGJBPts

Doocument creation with Markdown

Markdown is a very popular yet simple file format to store structured text in. Knowing the basics of markdown will definitely come in handy later on.

https://www.youtube.com/watch?v=HUBNt18RFbo

Tools

IDE

- VS Code

  https://code.visualstudio.com/

- Vim

  - http://neovim.io/

- Emacs

- https://www.gnu.org/software/emacs/
- https://github.com/hlissner/doom-emacs

- Atom

  https://atom.io/

Note taking in Orgmode

As far as I know the best note taking programs in existence is Orgmode. This is a mode (a sort of plugin) for Emacs, a highly configurable text-editor that doubles as IDE. Both tools have a bit of a learning curve, but will be worth learning in the long run. By the way the "best" Emacs config I know is Doom Emacs which adds vim-keys to Emacs. If you decide to learn vim keys, then I recommend you check out Vim-adventures.

- https://orgmode.org/
- https://vim-adventures.com/
- https://www.youtube.com/watch?v=Ea_-TaEGa7Y&t=533s

Generic IT Skills

Linux

I recommend installing a Linux (i.e. Ubuntu or Manjaro) on your personal computer. Linux is by far the best operating system for a developer.

Study materials

- Linux for programmers, basic linux concepts clearly explained

  https://www.youtube.com/playlist?list=PLzMcBGfZo4-nUIIMsz040W_X-03QH5c5h

- The Linux Command Line, free book

  http://linuxcommand.org/tlcl.php

Git

The de-facto standard version control system of the world.

Study materials

- Introduction by Bogdan Stashchuk

  https://www.youtube.com/watch?v=LGQYfBJkz6A&list=PLWkguCW KqN9MBd_1HmFl_xZQlMWem0oUV

- Net ninja tutorial, clear explanation of the basics

https://www.youtube.com/playlist?list=PL4cUxeGkcC9goXbgTDQ0n_4TBzOO0ocPR

- Creating good commits

  https://www.youtube.com/watch?v=Uszj_k0DGsg

- Pull request

  - https://www.youtube.com/watch?v=Mfz8NQncwiQ
  - https://www.youtube.com/watch?v=58zsLtwzL60
  - https://www.youtube.com/watch?v=For9VtrQx58

- Extra background

  - 11h deep explanation by Bogdan

    https://www.youtube.com/watch?v=3FKrszHcIsA&t=11961s

  - Really comprehensive playlist

    https://www.youtube.com/playlist?list=PLu-nSsOS6FRIg52MWrd7C_qSnQp3ZoHwW

  - Another walkthrough of the basics

    https://www.youtube.com/watch?v=WBg9mlpzEYU&list=PL0M0zPgJ3HSesuPIObeUVQNbKqlw5U2Vr&index=5

Front-end design basics

As a front-end developer, you should know some design theory as well as how to structure a design process.

Study materials

- Typography

  https://www.youtube.com/watch?v=agbh1wbfJt8

- Mobile first design

  https://www.youtube.com/watch?v=AqK05HjkwBE

- Wireframing 30 min, desktop first

  https://www.youtube.com/watch?v=pN92rnO_n5U

Webdesign basics

HTML

HTML is THE web technology that you really cannot do without.

Study materials

- Basics

    - https://www.youtube.com/watch?v=pQN-pnXPaVg&t=6507s

    - https://www.youtube.com/playlist?list=PL4cUxeGkcC9ibZ2TSBa
      GGNrgh4ZgYE6Cc

- Validation

    https://www.youtube.com/watch?v=79qAXqE3Qz8

- More advanced: UML, XML

CSS

How to style your HTML. CSS has become extensive over time and although it
is quite simple, there is a lot to know.

Study materials

- Basics

    https://www.youtube.com/playlist?list=PL4cUxeGkcC9gQeDH6xYhm
    O-db2mhoTSrT

- CSS Variables

    https://www.youtube.com/playlist?list=PL4cUxeGkcC9ii5PB2UMyYH7
    QFZWfGnVgZ

- CSS Grid

    - https://www.youtube.com/watch?v=x7tLPhnA06w&list=PL4cUx
      eGkcC9itC4TxYMzFCfveyutyPOCY
    - https://www.youtube.com/watch?v=T-slCsOrLcc&list=PLu8EoSx
      DXHP5CIFvt9-ze3IngcdAc2xKG

- CSS FlexBox

    https://www.youtube.com/watch?v=JJSoEo8JSnc&t=578s

- Mobile First

    https://www.youtube.com/playlist?list=PL4cUxeGkcC9hH1tAjyUPZPj
    bj-7s200a4

- 4h video on responsive webdesign, mostly CSS focused

    https://www.youtube.com/watch?v=srvUrASNj0s

- Comprehensive webdesign courses

    - https://www.youtube.com/playlist?list=PLr6-GrHUlVf8JIgLcu3s
      HigvQjTw_aC9C

- – https://www.youtube.com/playlist?list=PL0eyrZgxdwhwNC5ppZo_dYGVjerQY3xYU

- Building a responsive HTML5 website

  https://www.youtube.com/watch?v=Wm6CUkswsNw&list=PLillGF-RfqbZTASqIqdvm1R5mLrQq79CU&index=3

- More advances: LESS, SASS

Javascript

- Basics

  https://www.youtube.com/watch?v=NQMhuolQPtU

- Array functions

  https://www.youtube.com/watch?v=rRgD1yVwIvE

- Functional Programming concepts

  https://www.youtube.com/playlist?list=PL0zVEGEvSaeEd9hlmCXrk5yUyqUag-n84

- OOP

  https://www.youtube.com/watch?v=PFmuCDHHpwk

- Recursion

  https://www.youtube.com/watch?v=LteNqj4DFD8

  - – Fibonacci

    https://www.youtube.com/watch?v=FusB-KqZfXc

- WebSockets

  https://www.youtube.com/watch?v=8ARodQ4Wlf4

- jslint

  https://www.youtube.com/watch?v=bN_M4QLcFdQ

- Testing with mocha and chai

  https://www.youtube.com/watch?v=MLTRHc5dk6s

- jsdoc

  https://www.youtube.com/watch?v=YK-GurROGIg&t=1557s

Javascript Exercises

- Tetris

  https://www.youtube.com/watch?v=QDp8BZbwOqk&list=PLGLfVvz
  _LVvTP2Op3wZlaGTUcgCfDuwn8&index=1

- Game of Life

  https://www.youtube.com/watch?v=FWSR__7kZuYg&t=19s

- Additional material and tips

  – Nature of code series

    https://www.youtube.com/watch?v=70MQ-FugwbI&list=PLRq
    wX-V7Uu6ZV4yEcW3uDwOgGXKUUsPOM

React

Over the course of ~20 yrs, many frameworks have been developed for javascript, such as jQuery, Backbone, Angular, Vue.js and React. Our app uses React, as that framework has become the most popular one.

- Netninja Full Tutorial

  https://www.youtube.com/playlist?list=PL4cUxeGkcC9gZD-Tvwfod2g
  aISzfRiP9d

- React for beginners

  https://www.youtube.com/playlist?list=PLzMcBGfZo4-nRV61oEu3K
  fMwWKI571uPT

State management

- Redux

  https://www.youtube.com/watch?v=poQXNp9ItL4

- xState

  https://www.youtube.com/watch?v=73Ch__EL4YVc

Javascript build tools

Over time many build tools have been developed for javascript. Study materials to follow.

- Babel
- Webpack
- Bower
- Gulp
- Grunt

Web Components

An idiomatic web technology to use components in websites without the need for additional frameworks.

Study materials

- Introduction

  https://www.youtube.com/watch?v=PFpUCnyztJk&t=610s