Lesson: JavaScript

October 3, 2018

Objective

We will learn about JavaScript, applications and why is it so popular

What is JavaScript

- JavaScript & Java are different, don't confuse

- JavaScript was designed to *"make webpages alive"*

- The code can be written inside HTML and will get executed whenever page loads.

- Scripts don't require compilation, they are executed as plain text

- JavaScript can be executed anywhere where we have JavaScript Engine

JavaScript Engine

- Script Engine is pretty complicated to understand, however lets get a basic knowledge on how it works
  - Script embedded in browser reads or parses the script
  - Next it converts to machine language
  - Finally machine code runs fast

JavaScript Capabilities

- It does not provide access to CPU, low-level memory access
- JavaScript is capable of manipulating web page content
- When we use Jquery and JavaScript we can modify CSS of the web-page and make the website dynamic
- Most real-world websites are dynamic in nature

JavaScript Limitations

- JavaScript has no access to your data stored in your hardware -- Security
- If your workstation has camera and microphone, JavaScript can be used with permission to use those devices
- JavaScript can be used to get permissions from users and get sensitive information from users

Benefits of JavaScript

- Can be used with HTML/CSS
- Supported by all major browsers
- Easy to use

JavaScript- Usage

- JavaScript makes life easy for developers, however it is further simplified by new languages which compiles to JavaScript
  - CoffeeScript
  - TypeScript

Developer Console & IDE

- Developer Console is the place to check first, if we have any JavaScript related error
- Developer Console allows to run commands, examine variables (pretty handy for JavaScript)
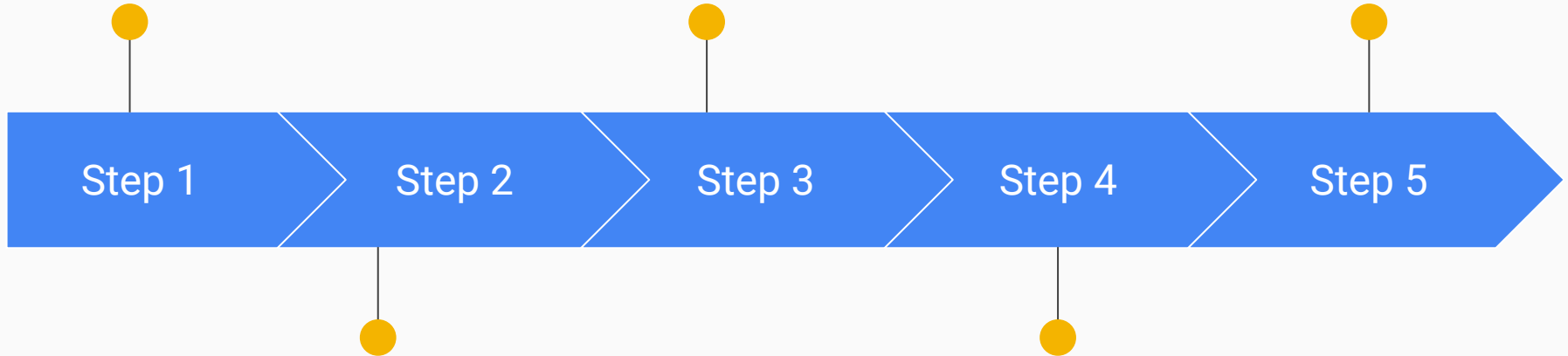- We will use IDE for JavaScript- Sublime IDE, recommended is Webstrom

Java Script Fundamentals

- Few examples via coding, we will just focus today on alert function and data types

Create Lab7 folder
copy Lab6 web pages
to Lab7

Make sure the input fields in
index page is required and
you validate them

Sync your git, push to
loki and complete
reflections for Lab7

Step 1

Step 2

Step 3

Step 4

Step 5

Create index.html page in
Lab7, and use Bootstrap to
get user information such as
name, and email address.

Add javaScript to your
index.html and use alert
function to display welcome
message.