Einzelprojekt – Web Engineering

General Requirements (10 Points):

> Responsive page content (at least: 1920×1080, 1440×900, 360x640)

> **No Javascript Frameworks/Libraries** (JQuery, Angular, React, Vue and so on) – CSS Libraries are ok

> Clean project structure (e.g. folders, resources, …)

> Separate resource files (e.g. css, html and scripts)

> WAI compliant (Lighthouse analysis)

Learning Objective: Know how to apply a modern webtoolchain with npm and Webpack

Project setup with npm and Webpack (15 Points)
> Build the application with npm and Webpack
> Define 2 Builds (in npm scripts):
>> > Development
>> > Production (obfuscated and minified)

Learning Objective: Create a basic HTML5 project with multiple linked pages

Multiple Pages (Home, About, Contents) (5 Points)

> Implement multiple pages with proper navigation

Learning Objective: Know how to use APIs and request their service via Ajax from JS

Consume API Data with Ajax (10 Points)

> API samples:

- o List public APIs: https://github.com/public-apis/public-apis/blob/master/README.md
- o https://english.api.rakuten.net/matchilling/api/chuck-norris
- o https://http.cat/
- o https://dog.ceo/dog-api/documentation/

Learning Objective: Use the DOM API to manipulate the UI dynamically

DOM Manipulation (15 Points)

> Render requested API data in HTML (table, list, containers, …)

> Add/remove data from list to a favorites or shopping cart container

Learning Objective: Know how to implement HTML5 forms an how to properly validate user input with JS and HTML5

Implement a form (10 Points)

> that consists of following fields: text, number, password, email

- o make use of attributes

> input is validated on user event (click, hover, enter, …)

   o choose at least 1 event handler

> input validation (error/success) is presented to the user (modal, in-form highlighting, …)

Learning Objective: Know the basics of webpage hosting; know how to host a frontend application; possibly know how to implement a CI/CD pipeline to automate the release process

Webpage Hosting (5 Points)

> Host your production build

   o Free Hosting Services: Hostman, Netlify (see lecture repo wiki)

   o Others: AWS, Azure, …

Learning Objective: Understand and apply advanced Web-frontend topics and technologies

Optional extra points (2 Points each)

> Use Typescript (at least 1 file)

> Use SASS/SCSS

> Configure ESLint

> Use Babel

Overall Points: 60