

You scored 43.00 points out of the maximum of 50 points; that is success of 86.00 %.

Only absolutely correct answers can earn points. No points will be given for partially correct answers.

Question no.	Question	Points
1.	<p>Napiste funkciu o2a(obj) ktora bude transformovat objekt na pole podla prikladu:</p> <pre>var obj = { "a": 1, "b": 2, ... }; var ret = o2a(obj); // ret = [[1, "a"], [2, "b"], ...]</pre> <p>This question can be answered using any number of words. This answer will be assessed manually by the examiner.</p> <pre>function o2a(obj) { const arr = [] for (const key in obj) { arr.push([key, obj[key]]) } return arr }</pre> <p>Comments:</p> <p>neotocene</p>	1 out of 2 points
2.	<p>Napiste HTTP server pre node.js, ktory bude pocuvat na porte 8084 a odpovedat na cesty:</p> <p>/fileContent - vrati obsah lokalneho suboru file.html</p> <p>/data - vrati (vo formate JSON) data vytiahnute z http://meteo.data/today (tiez vracia JSON)</p> <p>Pre zjednodusenie predpokladame ze v node.js existuje fetch fungujici rovnako ako verzia z prehliadaca.</p> <p>This question can be answered using any number of words. This answer will be assessed manually by the examiner.</p> <pre>const http = require("http") const fs = require("fs") const server = http.createServer((req, res) => { if (req.url === "/fileContent") { const file = fs.readFileSync("./file.html", { encoding: "utf-8" }) res.writeHead(200, {"Content-Type": "text/html"}) res.write(file) res.end() return } if (req.url === "/data") { fetch("http://meteo.data/today") .then(res => res.json()) .then(res => { res.writeHead(200, {"Content-Type": "application/json"}) res.write(JSON.stringify(res)) res.end() }) } }) server.listen(8084)</pre> <p>Comments: Assessed with no comments</p>	4 out of 4 points
3.	<p>Napiste triedu Laptop s konstruktorom pomocou class syntaxe, ktora bude mat atributy: vyrobca, model, rocnik.</p> <p>Napiste triedu ExtLaptop, ktora rozsiruje triedu Laptop o funkciu "vypis" ktora bude vraciat všetky tri atributy ako dlhy retazec spojeny ",".</p> <pre>var a = new ExtLaptop("HP", "Omen, 2015"); console.log(a.vypis()) // "HP,Omen,2015"</pre> <p>This question can be answered using any number of words. This answer will be assessed manually by the examiner.</p> <pre>class Laptop { constructor(vyrobca, model, rocnik) { this.vyrobca = vyrobca this.model = model this.rocnik = rocnik } } class ExtLaptop extends Laptop { vypis() { return this.vyrobca + "," + this.model + "," + this.rocnik } }</pre> <p>Comments: Assessed with no comments</p>	2 out of 2 points
4.	<pre><canvas id="canvas"></canvas> <button id="draw"></button> <script></script></pre> <p>Predpokladame stranku s vyssie uvedenym obsahom.</p> <p>Napiste obsah elementu <script> tak, aby po stlaceni tlacidla sa do elementu <canvas> vykreslil zeleny stvorec o velkosti strany 10px na suradnice x=10, y=10.</p> <p>This question can be answered using any number of words. This answer will be assessed manually by the examiner.</p> <pre>const button = document.getElementById("draw") const canvas = document.getElementById("canvas") const ctx = canvas.getContext("2d") button.onclick = () => { ctx.fillStyle = "green" ctx.fillRect(10, 10, 10, 10) }</pre> <p>Comments: Assessed with no comments</p>	3 out of 3 points
5.	<p>Napiste funkciu conv(str) ktora na retazec daneho formatu (podla prikladu dole) vracia pole obsahujuce samostatne pismena odzadu:</p> <pre>var str = "a,b;c,d,e,f,g,h;i,j,k;l"; // pismena su oddelene ";", "a " a ".", vzdy v tomto poradl var arr = conv(str); // arr = ["l","k","j","i","h","g","f","e","d","c","b","a"]</pre> <p>This question can be answered using any number of words. This answer will be assessed manually by the examiner.</p> <pre>function conv(str) { return str.split(/, ; \. g).reverse() }</pre> <p>Comments: Assessed with no comments</p>	3 out of 3 points

Question no.	Question	Points
6.	<p>Vytvorte ws.js beziaci na localhost:8084 a client.js.</p> <p>ws.js bude node.js WebSocket server pociuvajuci na porte 8084 a po nadviazani spojeniia s klientom bude posielat klientovi bez jeho vyziadania (push) kazdu 2. sekundu vratat stav pocitadla. Pocitadlo sa na pozadi inkrementuje o 2 kazdu sekundu.</p> <p>client.js bude obsahovat funkcionalitu pripojenia sa na WS server localhost:8084 a po kazdom prijati spravy zo servera prida do tela stranky (body) novy element ktorý bude obsahovat text:</p> <p>"Aktualny stav pocitadla: "+pocitadlo</p> <p>so stavom pocitadla prijateho z WS serveru.</p> <p>This question can be answered using any number of words. This answer will be assessed manually by the examiner.</p> <pre>// ws.js ----- const { createServer } = require("http") const { WebSocketServer } = require("ws") const wss = new WebSocketServer({ server }); let n = 0 wss.on('connection', (ws) => { setInterval(() => ws.send(n++), 2000) }) server.listen(8084) // client.js ----- const socket = new WebSocket("ws://localhost:8084") socket.addEventListener('message', (event) => { const span = document.createElement("span") span.innerText = "Aktualny stav pocitadla: " + event.data document.body.appendChild(span) })</pre> <p>Comments: Assessed with no comments</p>	5 out of 5 points
7.	<pre><div class="container"> <div class="row"><div class="col">Row 1</div></div> <div class="row"><div class="col">Row 2</div></div> <div class="row"><div class="col">Row 3</div></div> <div class="row"><div class="col">Your 1</div></div> <div class="row"><div class="col">Boat 1</div></div> <button id="remove">Remove</button> </div></pre> <p>Pre vyššie uvedeny obsah stránky napíšte <script> ktorý prida funkcionality tlačidlu ktorá sa vykona po jeho stlačení. Stlačenie tlačidla má vyvolať zmazanie elementov s triedou "row" ktoré obsahujú retazec "Row".</p> <p>This question can be answered using any number of words. This answer will be assessed manually by the examiner.</p> <pre><script> document.getElementById("remove").addEventListener("click", () => { const rows = document.querySelectorAll("row") rows.forEach((el) => { if (el.innerHTML.includes("Row")) { el.remove() } }) }) </script></pre> <p>Comments: Assessed with no comments</p>	3 out of 3 points
8.	<p>Napíšte React aplikáciu, ktorá bude mať komponenty <Inp>, <But> a <Out> pričom komponent <Inp> bude obsahovať <input>, <But> tlačidlo <button> a <Out> element <div> ktorého text sa nastaví na hodnotu z <Inp> po stlačení tlačidla z komponentu <But>.</p> <p>This question can be answered using any number of words. This answer will be assessed manually by the examiner.</p> <pre>import { useState } from "react" import ReactDOM from "react-dom" function Inp(props) { return <input type="text" onChange={(ev) => props.onChange(ev.target.value)}> } function But(props) { return <button onClick={props.onClick}>Click</button> } function Out(props) { return <div>{props.text}</div> } function App() { const [text, setText] = useState("") const [visibleText, setVisibleText] = useState("") return (<Inp onChange={(val) => setText(val)} /> <But onClick={() => setVisibleText(text)} /> <Out text={visibleText} />) } const root = ReactDOM.createRoot(document.getElementById('root')); root.render(<App />);</pre> <p>Comments: Assessed with no comments</p>	5 out of 5 points
9.	<p>Vysvetlite ako je JavaScript v moderných prehliadacoch single-thread a ako je multi-threaded?</p> <p>This question can be answered using any number of words. This answer will be assessed manually by the examiner.</p> <p>Jazyk javascript beží defaultne na jednom jadre. Na organizáciu toho kedy má byť spustená ktorá funkcia, používa event loop. Taktiež aj napriek tomu že je jazyk single-threaded môžeme písať asynchrónny kód.</p> <p>Multi-threaded funkcionality vieme dosiahnuť pomocou builtin API ktoré sa nazývajú WebWorker. Toto API umožňuje beh paralelných procesov v javascripte.</p> <p>Comments:</p> <p>Taby v browséri majú vlastné JS thready, takže tiež JS v prehliadači multi-thread.</p>	2 out of 3 points
10.	<p>Vysvetlite aký je postup vykonávania príkazov JavaScriptu v prehliadacoch. (nie event loop v node.js!!!)</p> <p>This question can be answered using any number of words. This answer will be assessed manually by the examiner.</p> <p>prehliadač si precita kód ako text rozparšuje ho na AST spraví optimalizácie interne si ho za behu kompiluje do bytecode ktorý potom za behu kontroluje. Pôčas tejto kontroly sa engine pozerá na to ktoré funkcie sú ako často volané, ako moc náročné vypočítavo a podľa toho ich skúša optimalizovať ešte viac.</p> <p>Comments: Assessed with no comments</p>	5 out of 5 points
11.	<p>Pre stránku search.yahoo.com napíšte funkciu hľadaj(vyraz), ktorá vloží hľadaný výraz a prejde na stránku s výsledkami hľadania pomocou click/submit/location.</p> <p>Pre stránku s výsledkami hľadania napíšte funkciu otvor(n) ktorá ľubovoľným spôsobom otvorí n-ty výsledok.</p> <p>This question can be answered using any number of words. This answer will be assessed manually by the examiner.</p> <pre>function hľadaj(vyraz) { // TODO function otvor(n) { window.location = document.querySelector("ol.searchCenterMiddle a.d-ib")[n] }</pre> <p>Comments: Assessed with no comments</p>	1 out of 3 points

Question no.	Question	Points
12.	<p>Predpokladame element <code><div class="uniq-class" id="uniq-id"></code>.</p> <p>Ktore funkcie nam vedia vratit tento element?</p> <p>For the individual options decide whether they are correct or not.</p> <div> <div>Correct</div> <div>Selected</div> <div>Not selected</div> </div> <div> <div><input type="radio"/></div> <div>document.querySelector("#uniq-class")</div> </div> <div> <div><input type="radio"/></div> <div>document.getElementById('uniq-id')</div> </div> <div> <div><input type="radio"/></div> <div>document.getElementById("#uniq-id")</div> </div> <div> <div><input type="radio"/></div> <div>document.querySelector("uniq-id")</div> </div>	0 out of 1 points
13.	<p>Napiste nazov JavaScript funkcie prehliadaca, ktora sa v sucasnosti pouziva na vymenu udajov cez HTTP?</p> <p>This question can mostly be answered using one word.</p> <p>fetch</p> <p>Correct options: fetch(, fetch()), fetch, fetch()</p>	1 out of 1 points
14.	<p>Zotriedte podla pouzitia v jazyku JavaScript od najstarsieho konceptu (1) po najnovsi (3).</p> <p>Put the items in the correct order.</p> <div>2</div> <div>promise</div> <div>1</div> <div>callback</div> <div>3</div> <div>async/await</div>	1 out of 1 points
15.	<p>Vyberte tvrdenia ktore platia pre vymenu udajov cez HTTP a WS pomocou JavaScriptu?</p> <p>For the individual options decide whether they are correct or not.</p> <div> <div>Correct</div> <div>Selected</div> <div>Not selected</div> </div> <div> <div><input type="radio"/></div> <div><input type="radio"/></div> <div><input type="radio"/></div> </div> <div> <div><input type="radio"/></div> <div>WS umoznuje serveru poslat udaje klientovi bez vyziadania klientom</div> </div> <div> <div><input type="radio"/></div> <div>prenos udajov cez HTTP je standardne podporovany v ramci JavaScriptu vsetkymi modernymi popularnymi prehliadacmi</div> </div> <div> <div><input type="radio"/></div> <div>WS umoznuje rychlejsiu vymenu udajov stranky ako HTTP</div> </div> <div> <div><input type="radio"/></div> <div>HTTP umoznuje rychlejsiu vymenu udajov stranky ako WS</div> </div>	1 out of 1 points
16.	<p>Vyberte spravne vysledky operacii</p> <p>For the individual options decide whether they are correct or not.</p> <div> <div>Correct</div> <div>Selected</div> <div>Not selected</div> </div> <div> <div><input type="radio"/></div> <div>typeof '4' === number</div> </div> <div> <div><input type="radio"/></div> <div>typeof 4 === 'string'</div> </div> <div> <div><input type="radio"/></div> <div>typeof 4 === number</div> </div> <div> <div><input type="radio"/></div> <div>typeof '4' === 'number'</div> </div>	1 out of 1 points
17.	<p>Ako zistime ci premenna "a" je pole?</p> <p>For the individual options decide whether they are correct or not.</p> <div> <div>Correct</div> <div>Selected</div> <div>Not selected</div> </div> <div> <div><input type="radio"/></div> <div>typeof a === 'object' && typeof a.length === 'number'</div> </div> <div> <div><input type="radio"/></div> <div>Array.isArray(a)</div> </div> <div> <div><input type="radio"/></div> <div>typoef a === 'array'</div> </div> <div> <div><input type="radio"/></div> <div>Object.isArray(a)</div> </div>	0 out of 1 points
18.	<p>Ako sa oznamuje dodatocne pridaná emulovaná funkcionálnosť z novej špecifikácie jazyka JavaScript do staršej verzie špecifikácie jazyka JavaScript</p> <p>This question can mostly be answered using one word.</p> <p>polyfill</p> <p>Correct options: polyfill, polifil, polyfil, polifill, polifyl, polifyll</p>	1 out of 1 points
19.	<p>JavaScript a TypeScript</p> <p>For the individual options decide whether they are correct or not.</p> <div> <div>Correct</div> <div>Selected</div> <div>Not selected</div> </div> <div> <div><input type="radio"/></div> <div>TypeScript je prekladaný do JavaScriptu</div> </div> <div> <div><input type="radio"/></div> <div>JavaScript je prekladaný do TypeScriptu</div> </div> <div> <div><input type="radio"/></div> <div>JavaScript je podporovaný prehliadacmi</div> </div>	1 out of 1 points
20.	<p>Ktore z typov sú validné JSON typy?</p> <p>Select any number of options. None of the options may be correct as well as all of them may be correct.</p> <div> <div>Correct</div> <div>Selected</div> </div> <div> <div><input type="radio"/></div> <div>undefined</div> </div> <div> <div><input type="radio"/></div> <div>function</div> </div> <div> <div><input type="radio"/></div> <div>true/false (boolean)</div> </div> <div> <div><input type="radio"/></div> <div>number</div> </div>	0 out of 1 points
21.	<p>Ktore definície premennej po zmene jej hodnoty nevrátia chybu v jazyku JavaScript?</p> <p>For the individual options decide whether they are correct or not.</p> <div> <div>Correct</div> <div>Selected</div> <div>Not selected</div> </div> <div> <div><input type="radio"/></div> <div>let a = 4; a = 5;</div> </div> <div> <div><input type="radio"/></div> <div>var a = 4; a = '5';</div> </div> <div> <div><input type="radio"/></div> <div>let a = 4; a = '5';</div> </div> <div> <div><input type="radio"/></div> <div>const a = 4; a = 5;</div> </div>	1 out of 1 points

Question no.	Question	Points
22.	<p>Napiste funkciu a2o(arr) ktora bude transformovat objekt na pole podla prikladu:</p> <pre>var arr = [["a","1"], ["b", "2"], ...]; var ret = a2o(arr); // ret = { "a": "1", "b": "2", ... }</pre> <p>This question can be answered using any number of words. This answer will be assessed manually by the examiner.</p> <pre>function a2o(arr) { const obj = {} for (const item of arr) { obj[item[0]] = item[1] } return obj }</pre>	2 out of 2 points
Comments: Assessed with no comments		

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