Web and Social Media “Wordsearch” Miniproject report

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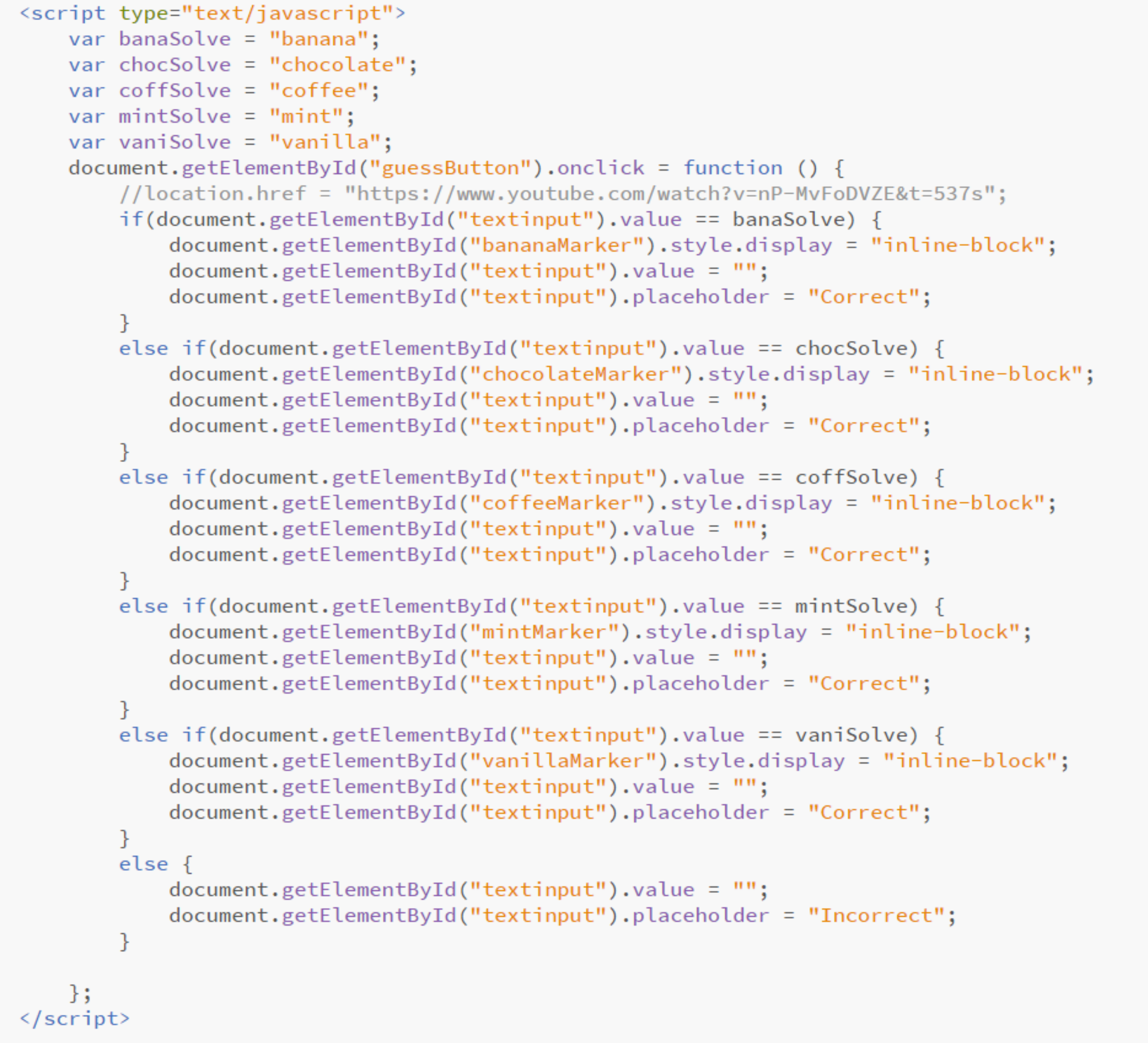
Link to Github repository

The mini project is a website containing a simple word search puzzle, where the user is meant to find five words hidden among the chaos of several random letters.

The wordsearch game itself was built in HTML, the wordsearch is made from different PNG images overlaid on top of each other, and CSS was used to force them to be in the same spot on the web page rather than being placed next to each other.
HTML and CSS are the standard tools for creating webpages, so standard in fact that I am not even sure if alternatives for them even exist.
HTML is a markup language that provides basic building blocks for building a website. When writing an HTML document you are basically placing elements in the form of code which the webbrowser will place on the page in the order that they are written on the document starting at the top and going down to the bottom.
The easiest part is adding text, but HTML also allows for adding images and links to other pages, and as of HTML 5, HTML also allows for video and audio content to be added directly to the webpage without third-party plugins.
CSS is a different document kept in the same folder as the documents for the web pages. While CSS has its own syntax, it is more of a programming technique, than its own language.
CSS makes it easier to control and modify the way the webpage is displayed on screen by applying certain display commands to specific, reusable, tags in the CSS document and then applying those tags to elements within the HTML document, for example applying commands for text size, font and placement on the page, onto a tag named “<PageTitle>” and then applying this tag to the parts of the different HTML documents that is meant to be the title of their webpage.

Adding functionality to the site was done with JavaScript, allowing the “guess” button underneath the text area to highlight the words within the wordsearch when the correct word is typed into the text area.
Like HTML and CSS Javascript is one of the three essential tools for building a webpage. Javascript scripts can be written inside of HTML documents in order to give them more functionality, common practice is use Javascript to build functions inside the HTML document that will run when certain conditions are met, like when specific elements on the page are clicked or when the user has scrolled to a certain area of the wepage.
In my case the biggest use of Javascript was in how the wordsearch checks the content of the textarea, and then displays a message saying “correct” or “incorrect” based on the input, and also highlights the words within the wordsearch by revealing hidden PNG’s when the correct word is typed in.



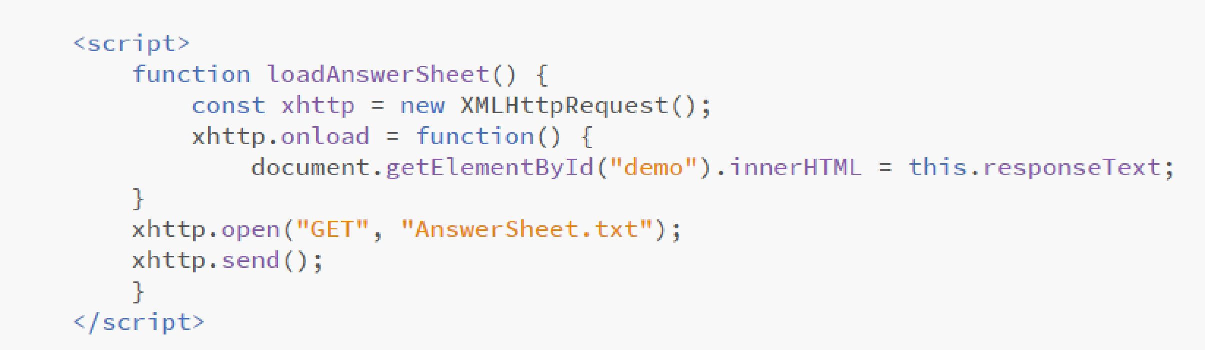
```
<script type="text/javascript">
    var banaSolve = "banana";
    var chocSolve = "chocolate";
    var coffSolve = "coffee";
    var mintSolve = "mint";
    var vaniSolve = "vanilla";
    document.getElementById("guessButton").onclick = function () {
        //location.href = "https://www.youtube.com/watch?v=nP-MvFoDVZE&t=537s";
        if(document.getElementById("textinput").value == banaSolve) {
            document.getElementById("bananaMarker").style.display = "inline-block";
            document.getElementById("textinput").value = "";
            document.getElementById("textinput").placeholder = "Correct";
        }
        else if(document.getElementById("textinput").value == chocSolve) {
            document.getElementById("chocolateMarker").style.display = "inline-block";
            document.getElementById("textinput").value = "";
            document.getElementById("textinput").placeholder = "Correct";
        }
        else if(document.getElementById("textinput").value == coffSolve) {
            document.getElementById("coffeeMarker").style.display = "inline-block";
            document.getElementById("textinput").value = "";
            document.getElementById("textinput").placeholder = "Correct";
        }
        else if(document.getElementById("textinput").value == mintSolve) {
            document.getElementById("mintMarker").style.display = "inline-block";
            document.getElementById("textinput").value = "";
            document.getElementById("textinput").placeholder = "Correct";
        }
        else if(document.getElementById("textinput").value == vaniSolve) {
            document.getElementById("vanillaMarker").style.display = "inline-block";
            document.getElementById("textinput").value = "";
            document.getElementById("textinput").placeholder = "Correct";
        }
        else {
            document.getElementById("textinput").value = "";
            document.getElementById("textinput").placeholder = "Incorrect";
        }

    };
</script>
```

For the sake of demonstration of this miniproject, an answer sheet containing all the correct answers for the wordsearch was added to the repository, for some extra convenience, AJAX was used to add a button that, when clicked, will collect the answers from the sheet and display them on the web page.

AJAX, like CSS, is a programming technique that technically has its own syntax, because it makes use of the “XMLHttpRequest” object which can be used to exchange data between the webpage and a server, behind the scenes.

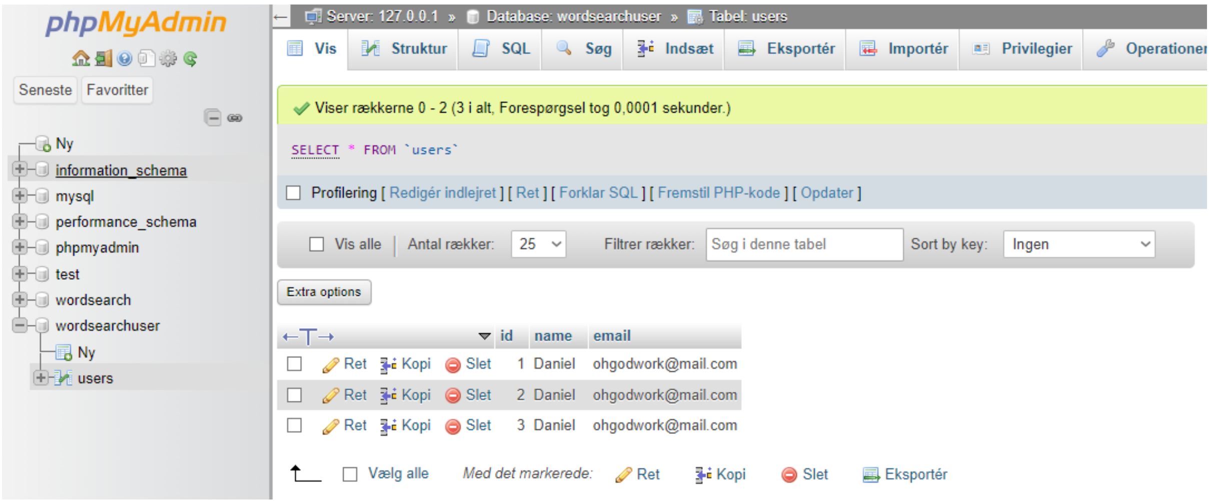
In order to use the XMLHttpRequest object the webpage needs to be opened in a web browser which supports this object, but that is not much of a problem as all, widely used, modern browsers (Chrome, Firefox, Edge, Safari, Opera) support the use of this object.



```
<script>
    function loadAnswerSheet() {
        const xhttp = new XMLHttpRequest();
        xhttp.onload = function() {
            document.getElementById("demo").innerHTML = this.responseText;
    }
    xhttp.open("GET", "AnswerSheet.txt");
    xhttp.send();
    }
</script>
```

MySQL and PHP were also used to make a fake login page that the user must type a name and a email address into to reach the word search, as if one would log into a game page to save their scores, that does not really make sense for a word search, but that was the idea. MySQL is a database system which can store data sent from a website to be retrieved and used later, MySQL does have it's own syntax and language if one wishes to use it, but with tools like XAMPP and phpMyAdmin, it is not really necessary to use MySQL's syntax.

PHP is a server-side programming language used send and use data to a database, allowing a web page to change or adapt based on the users input, such as sending account information to a database in order to allow a user to log into their own account using their own name and password, and also customise their account page on sites like facebook for example.
In this case PHP and MySQL are used for the wordsearch's fake login page, the index pages takes in user input and saves it in the MySQL database, using PHP.



✓ Viser rækkerne 0 - 2 (3 i alt, Forespørgsel tog 0,0001 sekunder.)

```
SELECT * FROM `users`
```

□ Profilering [Redigér indlejret] [Ret] [Forklar SQL] [Fremstil PHP-kode] [Opdater]

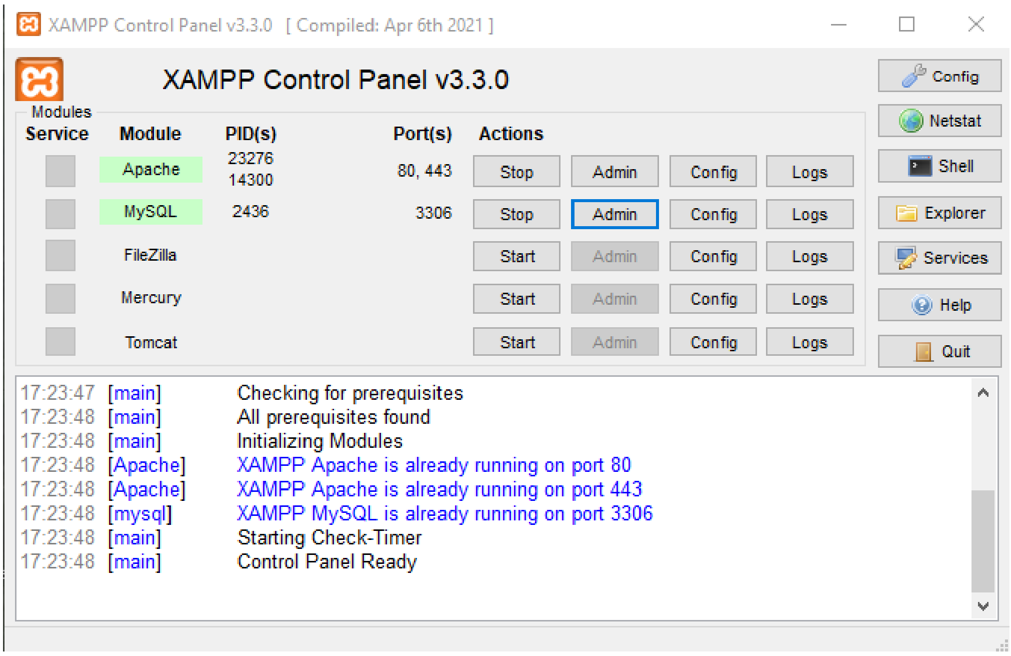
□ Vis alle | Antal rækker: 25 Filtrer rækker: Søg i denne tabel Sort by key: Ingen

←T→				id	name	email
□	Ret	Kopi	Slet	1	Daniel	ohgodwork@mail.com
□	Ret	Kopi	Slet	2	Daniel	ohgodwork@mail.com
□	Ret	Kopi	Slet	3	Daniel	ohgodwork@mail.com

□ Vælg alle *Med det markerede:* Ret Kopi Slet Eksportér

Instructions for Installing and running project

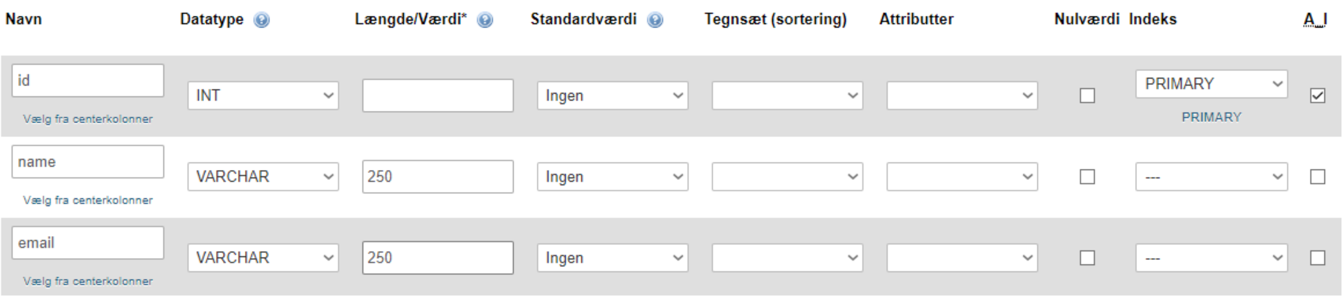
1. Install XAMPP from this Page: https://www.apachefriends.org/index.html
2. When the installation is complete, locate and open the XAMPP installation folder.
    a. Within the installation folder locate and open the “htdocs” folder
    b. Within the htdocs folder, create a new folder and name it “Miniproject”
3. Clone my GitHub repository into the new Miniproject folder
4. Open XAMPP-control
    a. Start the Apache Module and the MySQL module
    b. Press the “Admin” button in the MySQL row to open phpMyAdmin, in your browser


XAMPP Control Panel v3.3.0 [Compiled: Apr 6th 2021]
XAMPP Control Panel v3.3.0
Modules
Config
Netstat
Shell
Explorer
Services
Help
Quit

Service	Module	PID(s)	Port(s)	Actions			
□	Apache	23276 14300	80, 443	Stop	Admin	Config	Logs
□	MySQL	2436	3306	Stop	Admin	Config	Logs
□	FileZilla			Start	Admin	Config	Logs
□	Mercury			Start	Admin	Config	Logs
□	Tomcat			Start	Admin	Config	Logs

```
17:23:47  [main]      Checking for prerequisites
17:23:48  [main]      All prerequisites found
17:23:48  [main]      Initializing Modules
17:23:48  [Apache]    XAMPP Apache is already running on port 80
17:23:48  [Apache]    XAMPP Apache is already running on port 443
17:23:48  [mysql]     XAMPP MySQL is already running on port 3306
17:23:48  [main]      Starting Check-Timer
17:23:48  [main]      Control Panel Ready
```

5. In phpMyAdmin create a new database and call it “wordsearchuser”
    a. In wordsearchuser create a new table with 3 columns and call it “users”
    b. Name and type the columns as shown here and save the table



Navn	Datatype	Længde/Værdi*	Standardværdi	Tegnsæt (sortering)	Attributter	Nulværdi	Indeks	A_I
id Vælg fra centerkolonner	INT		Ingen			□	PRIMARY PRIMARY	☑
name Vælg fra centerkolonner	VARCHAR	250	Ingen			□	---	□
email Vælg fra centerkolonner	VARCHAR	250	Ingen			□	---	□

6. That is it, you are done, with the Apache and the MySQL modules running you should now be able to run my project in your web browser, starting from this URL: http://localhost/Miniproject/wordsearchminiproject/Miniproject/