Workout Tracker App

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github repo link:
https://github.com/FocusCK

github.io hosted page:
https://github.com/FocusCK/workout-tracker
```

Project Concept and Planning:

The concept of my app aims to show the user how much progress they've made based on weekly, monthly and annually progress with a reminder of how far they've come from the first time a workout was logged no matter how long ago they started working out.

One of my biggest hobbies and interests since I was young is the gym and general health and well being. One thing that has kept me motivated to workout is the results that are both visible, ie. my physique, and the side that only me the gym goer sees which is the mental health aspect of incorporating the gym as a lifestyle and consistently making progress.

I have been using both copy books and a notes app on my mobile phone to track my progress over the last number of years however there is no easy way to analyse data collected from my workouts such as weight or reps increasing over time and the recorded data can be quite tricky to organise. Although I still receive that 'dopamine hit' from consistently going to the gym I'd still like to maximise the value I get out of my time spent in the gym. For this reason I believe an application to track various aspects of my workouts would be a great asset to compliment my lifestyle.

I often see other gym goers writing into a notepad in the gym and I sometimes start a conversation with them about what they log and how it helps them with their progress in the gym. Oftentimes I'm told that people are only recording how many reps they do with a certain weight which shows them when they can increase weight. This can be helpful with making progress as people often only make small progress over a long period of time. This small progress, in my opinion, is a big reason as to why so many people quit the gym within the first year of joining.

Project Structure:

The app will consist of one page which is personal to the user. However my knowledge of databases is limited as it is a module which I have not yet started. For this reason I will be using local storage to store data for now. I am aware that this will limit the users ability to perform

actions on different devices but this is a project which can be improved upon in the future as I become proficient in database structure and SQL.

There will be a form for the user to input new workouts and various stats associated with the workout such as date, exercise and how many reputations and how many sets.
The exercise dropdown selector will be populated by a section that allows the user to input exercises that are regularly performed such as bench press or squat. There will also be a delete feature to remove exercises from the list in case there are spelling mistakes or if the user no longer performs them exercises so the dropdown doesn't get over populated over time.

The user can store previous workouts on the application so they can be easily analysed in future.

There will be a feature which allows users to set goals which will help the user to be motivated to keep progressing and push towards their goals and in time overcome them and set new ones to suit their needs. I chose to put this section at the top of the page below the title to remind the user about what they are pushing towards.

The app will be primarily designed for mobile phones as most people would keep a mobile phone with them in the gym for music. Media queries will be used to make the application responsive to tablets and desktop monitors allowing the user to analyse their workouts and track progress.

Please follow the link below to see a short loom video giving a quick walkthrough of my application:

https://www.loom.com/share/4de3f6dd3c2c41e3a24e43119f631938?sid=3bb8d6d6-8bc2-41a3-869b-00b2d8160f92

Wireframes:

Wireframes are available in the assignment file and will include the planned layouts for various devices and for handheld devices will show both portrait and landscape.

HTML Structure and Content:

I will use my comprehensive understanding of HTML to create simple markup which will lay a base for various JavaScript functions and DOM manipulation. Semantic markup and proper organisation are crucial to a web application to ensure ease of access when styling and for collaborating with other developers to ensure they can easily navigate the written code.

The title image used contains nice text and attractive colours to compliment the rest of the web application. It was generated on looka.com.

CSS Styling:

The selection of a suitable colour will be necessary for positive user experience. The colours chosen will be both motivating and attractive for the user. The background image will be of a gym because that's where the application will be used most and when the user is analysing data at home they're reminded of the hard work which had been put in at the gym. The background image will be selected from unsplash.com which has a wide range of free images which can be used without copyright issues. The colours used should compliment the background image by using a similar palette. The colour way will be obtained from colorhunt.co as they have a wide collection of colours which work well together.

Background image URL:
https://unsplash.com

Colours:
https://colorhunt.co/palette

JavaScript Interactivity:

JavaScript will be utilised to provide various interactivity on the application. The core functionality of the app will give the user the ability to add new workouts to their profile. The app will also hold records of past workouts and various stats such as date and duration of the workouts. Form validation will alert a user whether the figures they enter are valid by restricting them from inputting negative numbers for weight, reps and sets. The user will also be restricted from entering 0 as an input for these options.

The exercise list will be populated and managed by the user allowing them to add the exercises that they practise. This will make the application more personal for the user and streamline the exercise entry process by simply selecting the appropriate exercise. The user will also have the ability to remove exercises from the list with a delete button. Including the option to add various exercises to a list will make it easier to add workouts to the list.

For the purpose of this assignment I want to avoid the use of frameworks and external libraries which will help to showcase my understanding of core concepts and fundamentals of JavaScript.

GitHub Pages Hosting:

Github will be used to host the page and will allow future improvements and bug fixes to be made as I use the app more and come up with new features to add or see areas where there are improvements to make.

Design decisions:

User Interface:

The user interface was designed to be clean and user-friendly. I achieved this by applying best practices in various sections. Ensuring margins around items to create some space is vital in creating an attractive application.
The forms were kept simple and elegant. I found the important thing was to keep the information required to a minimum while also capturing the important stats required to analyse a workout.

Responsiveness:

As the display becomes wider than a mobile the display adapts to allow at least two columns of content to avoid large space between the content and the edge of the display. This is achieved by changing the flex container layout using media queries.

I also added scrollable sections in the divs of class “exercises” and “workouts” to prevent large spaces in the adjoining divs as the information will become too large to accommodate in a list over time.

```
.exercises,
.workouts {
   max-height: 13em;
   overflow-y: auto;
}
```

Please follow the link below to see a short loom video giving a quick walkthrough of my application:

https://www.loom.com/share/4de3f6dd3c2c41e3a24e43119f631938?sid=3bb8d6d6-8bc2-41a3-869b-00b2d8160f92

Development Process:

JavaScript:

Adding exercises
Removing them from the list
Populating the dropdown

Functions:

Initialisation:

- 'displayWorkouts()'
- 'displayGoal()'
- 'displayPersonalList()'

Event Handlers:

- 'addWorkout()'
- 'showMoreWorkouts()'
- 'setGoal()'
- 'addToPersonaList()'
- 'deleteExercise()'

Helper Functions:

- 'addWorkoutToTable()'

DOM Manipulation:

Adding elements to the DOM:

- Creating table rows and cells with the 'addWorkoutToTable()' function.
- Creating and adding elements to the dropdown selector with 'displayPersonalList()' function.

Event listeners:

- Event listeners for form submissions with 'addWorkout()' and 'addToPersonaList()'.
- Event listeners for button clicks with 'showMoreWorkouts()', 'setGoal()' and 'deleteExercise()'.

Updating existing elements:

- Setting innerHTML by using 'displayWorkouts()' and 'displayPersonalList()'.

- Setting the text content of elements using ‘displayGoal()’.
- Setting attributes and styles of elements using ‘displayWorkouts()’ and ‘showMoreWorkouts()’.

Form Features:

- Validation feedback prompting the user to enter valid information in the fields provided.
- Marking all fields as required to ensure consistent data logging accompanied by Input types which include ‘date’, ‘number’ and ‘text’.
- The dynamic dropdown for selecting the exercise completed.
- Saving data to local storage and retrieving it on page load.
- The goal setting feature adds a personal touch to the application.

Challenges faced:

Form Validation: All inputs which require validation are validated through Javascript using prompts. This ensures negative numbers cant be entered.

Responsive Design: Flexbox can be difficult to visualise when designing a webpage. I had to spend extra time centering items and the footer gave me trouble with sticking it to the bottom of the page. I had to revert back to older versions a small number of times and start over on various tasks.

Future work:

Like any application, the possibilities are endless as to what the developer can add over time depending on users needs. Here are a few ideas which I find interesting and will explore more as I progress as a programmer:

A user login page would be a nice feature as it would allow the user to store data and connect it to their username rather than keeping information on the local storage of the device. This would allow

Trainer log in which allows the user's personal trainer to check in on their performance and adapt their programme to suit their current needs and maximise their benefit from the gym. In theory this can be executed remotely as many personal trainers do work online in recent years.

Adding a user login would allow the user to interact with other devices easily allowing them to input data on a mobile device while in the gym and analyse data on their home desktop.

Incorporating separation of concerns to organise the JavaScript functions in an easier to manage format by separating various functions into folders.

Graphs and visualisation of progress:
Having the ability to view progress over time would be a nice feature to add to allow users to see how their fitness and strength has progressed over time. This could be achieved by adding a graph section which can be viewed on larger screens.

Implementing ‘Hamburger Menu’:
Currently there are a relatively small number of items on the applications which is why I chose not to use a hamburger style menu. When adding other features to the application it would be useful to have a hamburger menu to allow the user to quickly navigate the page.

Adding APIs to suggest exercises:
Although the application is more directed to regular gym goers a feature which could be beneficial to new gym goers would be an API which can suggest exercises for the user to try. This is a feature which I was willing to implement, however I couldn't find a suitable free API to use.

Conclusion:

This application has helped me reinforce what I have learned about Javascript since starting the module. I have increased my curiosity to learn about the possibilities of JavaScript and what can be achieved with the scripting language.

The workout tracker project successfully implements a web application that helps users log vital information for their workout progress as a gym goer. I set out to create a tool which can be used by many to maximise their time spent in the gym. I have used this application in the gym myself and I find it very useful. I will continue to develop this application and continue to utilise its functionality.

If I was to start this project again I may include frameworks and databases to make the app more user friendly and interactive. I would also look into incorporating new features such as a calorie tracker and a feature that allows users to find various exercises based on their goals using APIs. This may be something which can be added in the future.

To increase user experience I would incorporate more prompts for the user to ensure they can navigate and use the app effectively.

Works Cited

Looka: Logo Design & Brand Identity for Entrepreneurs, https://looka.com. Accessed 24 June 2024.

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Mancinelli, Francesco. “Black spin exercise bike lot photo – Free Fitness Image on Unsplash.” *Unsplash*, 25 October 2018, https://unsplash.com/photos/black-spin-exercise-bike-lot-LOA2mTj1vhc. Accessed 24 June 2024.