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JS- Functions and Objects

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Capstone Project

Description

Version Control, push and cloning

Introduction to HTML

HTML Tables

HTML Forms

Personal Portfolio - (Create a personal portfolio page showcasing your skills, projects, and information about yourself. Use HTML to structure the content and CSS for styling.)

Introduction to CSS

CSS height, width and units

CSS colors, Text, Fonts

CSS Backgrounds

CSS Selectors

CSS Box Model

CSS Layouts

Flexbox and Grids

Animations and webkit

Blog Website -

Design a webpage to mention the places you have visited, movies you have watched, books you have read.

*** Include images for each item card and add hover and flip effect to the cards to display review of that place/movie/books.**

*** Include Navigation Bar to scroll to the specific section - movies/news/travel_places/books.**

*** Include footer section and embed a google map as well.**

Media Queries, Responsive Web Design

Bootstrap

Google Home Page- Clone

JS intro, Ways to include JS in HTML, 3 Identifiers

Operators: Arithmetic, Comparison, Logical, Assignment.

Practice exercises

Temperature Converter:

Build a temperature converter that allows users to convert between Celsius and Fahrenheit. Use the arithmetic operators (+, -, *, /) to perform the conversions.

Conditional Statements - (if, if-else, nested if, switch-case statements and ternary operator)

Control Flow - (for-loop, while, do-while)

Practice exercises

FizzBuzz:

Implement the classic FizzBuzz problem using a loop. Print numbers from 1 to 100, but replace multiples of 3 with "Fizz," multiples of 5 with "Buzz," and multiples of both 3 and 5 with "FizzBuzz."

Health Web Application -

Design a webpage to check your health status.

There should be 2 sections- Water Consumption in Liters, BMI calculator.

- * Section 1: Take input from user about no. of glasses of water intake, convert it to liters and display on screen.**

- * Section 2: Take weight and height from user and calculate BMI and display the result (underweight/ overweight/ fit)**

- * Include a slideshow (autoplay) using bootstrap to display ways to keep a healthy lifestyle with images in background**

- * Include a footer section with an embedded map, feedback form and contact form.**

Introduce strings and implementation, declaration, String Methods

Introduce arrays and implementation, declaration, Array Methods

forEach, for-of loop

map, filter, reduce methods

Practice exercises

String Compression:

Create a function that takes a string as input and returns a compressed version of the string. For example, "aaabbbbccccc" would become "a3b4c4".

Define all types of functions, implementation practice
Introduce objects and implementation, declaration, Methods to create objects (literal methods, constructor method)
for-in loop,

Hoisting, Scope Closures, 'this' keyword, call, apply, bind methods

Write a JavaScript program which accept a number as input and insert dashes (-) between each two even numbers. For example if you accept 025468 the output should be 0-254-6-8.

Introduce events and trigger functions using events
Practice Exercises based on events and functions

Introduce DOM Model, Hierarchy explanation, nth child, targetting n

Hangman Game:

Build a hangman game where users have to guess a word by guessing individual letters. Use functions and objects to manage the game's state and handle user input.

Real-Time To-Do List:

Build a simple to-do list application using arrays and DOM manipulation. Allow users to add new tasks, mark tasks as completed, and remove tasks from the list.

- *Include the Lecture and the time by till which task should be due.**
- *Include a functionality to mark the task red if the due time is over.**
- *Make the application interactive and add animations and bootstrap to make it look more appealing**

Difference b/w sync and async JS, flexible JS
setTimeout, setInterval, clearTimeout, clearInterval
Event Loop Callstack, Web API, Callback Queue
Callbacks, implementation using callstack and event loop

Stopwatch:

Build a simple stopwatch using JavaScript's Date object and the DOM. Add buttons to start, stop, and reset the timer.

Pyramid of Doom, Promises intro
implementation using promises and its methods (all, finally...), benefits of promises
Calling API using fetch and display responses(json format)
Introduce async await methods in JS
implementations using fetch api and axios

Random Quote Generator:

Create a random quote generator that fetches quotes from an external API. Every time a user clicks a button or performs a certain action, the app should display a new random quote. You can use a public quote API for this project. Promises can be used to handle the API calls and update the UI with the new quotes.

Quiz Game: Create an interactive quiz game with multiple-choice questions and keep track of the user's score.

***Include Login / Logout functionality to store the user details (use localStorage)**

***Include functionality to keep track of previous users who played the game and their scores.**

***Add appreciation and rewarding (Good Job!, Amazing!...) messages on keeping a streak of correct answers**

***Display Bonus Reward when user achieves high-score.**

React intro, Features of react

ES6 and JSX syntax,

Webpack, Babel

node installation, node npm, create first app

Purpose of all files and folders in react installation

JSX fragments, virtual DOM

Types of components in React

syntax of function based components

No Assignment

named and default export

Ways to include styles

Specifying Multiple Classes, CSS Modules

"Currency Converter:

Build a currency converter app that converts between different currencies using a currency exchange API. Apply styling to make the UI intuitive and user-friendly."

hooks introduction,

states in react

props in react

Practice exercise

Note-taking App:

Build a note-taking application where users can create, edit, and delete notes. Use state to manage the list of notes and pass them as props to display in the UI.

Conditional Rendering
Conditionally Applying a Style
Event handling,
Practice exercise
Form Handling, Practice exercise

Login/Authentication Form:

Design a login form that takes a username and password as inputs. Implement state to store the form data and an event handler to handle form submission. Use conditional rendering to display a welcome message once the user is logged in successfully.

Mental Health Awareness Application:

***Generate a questionnaire and take inputs
*Switch between different screens and manage result as per user input,
*If user is stressed->give ideas to relax / If user is agitated-> give some music/movie suggestion**

List Rendering
Controlled vs Uncontrolled Components
useEffect, useRef
useMemo, useCallback

Fetch API and organize data on the output screen

Lifting Up State, props drilling, useContext
useContext Hook
Custom hooks
Navigation bar, Brower Router, Routes, Route
Link, NavLink
useNavigate Hook

Travel Guide with suggestions of famous restaurants

Amazon - Clone

useReducer Hook,
Redux install, setup
useSelector and useDispatch hooks
Higher Order Components in React

Amazon - Clone with Redux

Movie player with various sections and categories listed.



Projects

html, css -> toggle button project

css -> animated css menu

css -> image slider

html,css, js -> Signup/login page

grid -> image gallery

html,css,Js -> groceries list

HTML,CSS-> Modern landing

page like udemy

js --> website color switcher

js-->Animated product card

js-->captcha generator

html,css,js -> groceries list

html,css,js --> coin tossed

website

html,css,js -->Music website

like spotify

Mern -> Chat website

Mern--> Shoe shopping
website

Mern-->online voting system

Mern-->online resume builder

Mern-->health website

Mern-->blood donation

Mern-> Gym equipment &
protein selling website

Mern-->Food/clothes donation

Mern -->Zoom clone

Mern->Job hiring website

Mern->HDFC Bank website

Mern->astrotalk website

Mern->library mangement
system

Mern->Animal grooming

Mern->car rental website

Mern->Hotel Booking website

Mern-> E-learning platform

Mern->service booking

methods Manipulation methods, Query Selector manipulation Practice Exercises