JavaScript Practice Workbook: Exercises from Chapters 1–11

This is a JavaScript practice containing exercises from **Chapters 1 to 11**. Each chapter includes basic questions based on what you've learned It covers essential topics from Chapters 1 to 11.**Read each question carefully and write your answers using proper JavaScript syntax.**

Each chapter includes short coding tasks that reinforce what you've learned and help you build real coding skills, step by step. just focused practice.

Keep Learning !

Interacting with Users and Storing Text

1.Alerts: Showing Messages to the User

The **alert()** function is a simple way to display a message box to the user. It's often used for quick notifications or to show results.

Exercises:

- Write an alert that shows “Hello, World!”
- Show an alert with your name.
- Show a number using alert().
- Store a message in a variable and show it in an alert.
- Combine two strings and display them in an alert.

```
let name = "Ali";
let greet = "Hello " + name;
alert(greet);
```

2.Variables for Strings: Declaring and Using Text Data

Variables are containers for storing data values. String variables are used to hold text.

Exercises:

1. Declare a variable **userName** and assign your name to it.
2. Store a welcome message in a variable and **alert()** it.
3. Combine first name and last name into one variable.
4. Store your favorite quote in a variable.
5. Create a variable **city** and show “Welcome to [city]!” in an alert.

Working with Numbers and Basic Arithmetic

3.Variables for Numbers: Storing and Using Numerical Data

Just like strings, numbers can also be stored in variables. This allows you to perform calculations and manipulate numerical data.

Exercises:

- Declare a variable **age** and assign your age to it.
- Store two numbers in variables and add them.
- Subtract one number from another.
- Multiply two numbers stored in variables.
- Show a message like: “You are 20 years old.”

4.Math Expressions: Performing Arithmetic Operations

JavaScript allows you to perform various arithmetic operations using operators like +, -, *, /, and %. These are fundamental for any kind of numerical processing.

Exercises:

1. Create two variables: **x = 10**, **y = 5** — add them and show result.
2. Subtract **y** from **x** and alert the answer.
3. Multiply **x** and **y**, and log result to the console.
4. Divide **x** by **y**.
5. Find the remainder of **x % y**.

Getting User Input and Conditional Logic

5.Prompt: Getting Input from the User

The **prompt()** function allows you to get input from the user, which can then be used in your program. It displays a dialogue box with an optional message, prompting the user to enter some text.

Exercises:

- Ask the user's name and greet them.

```
let name = prompt("What is your name?");
alert("Hello, " + name);
```

- Ask the user's age and display it.
- Ask the user for a number, double it, and show the result.
- Ask for favorite colour and show a message like: "Wow! I like blue too!"
- Ask for city name, and say: "You are from [city]."

6.If Statement and Comparison Operators: Controlling Flow

Conditional statements like **if** allow your program to make decisions based on certain conditions. Comparison operators are used to evaluate these conditions.

Exercises:

1. Ask user age. If age < 30, show "You're still young man."
2. Ask for a number. If it's even, show "Even number".
3. Compare two numbers and show which one is greater.
4. Ask the user for password. If correct, say "Access granted".
5. Use **==**, **===**, **!=**, **!==** to compare two values:
    - **==** (loose equality)
    - **===** (strict equality)
    - **!=** (loose inequality)
    - **!==** (strict inequality)

Key Concepts in JavaScript

User Interaction with Alerts & Prompts

Understanding how to display messages to users with **alert()** and gather input using **prompt()** is crucial for creating interactive web applications. These functions are the first step in communicating with your application's users.

Variables for Data Storage

Variables are fundamental to any programming language. Learning to declare and use variables for different data types, such as strings (text) and numbers, allows you to store and manipulate information dynamically within your programs.

Performing Math Operations

JavaScript provides robust support for mathematical expressions. Mastering arithmetic operators (+, -, *, /, %) enables you to perform calculations essential for everything from simple counting to complex data processing in your code.

Conditional Logic with If Statements

The **if** statement, combined with comparison operators, is a cornerstone of programming logic. It allows your code to execute different blocks of instructions based on whether certain conditions are met, making your programs smart and responsive.

By completing these exercises, you will have gained practical experience with fundamental JavaScript concepts, setting a strong base for more advanced topics. Continue to practice and experiment to deepen your understanding!