Chapter 1 - Practice Set

1. Create a variable of type string and try to add a number to it.

2. Use typeof operator to find the datatype of the string in last question

3. Create a const object in javascript. Can you change it to hold a number later?

4. Try to add a new key to the const object in Problem 3. Were you able to do it?

5. Write a Js program to create a word-meaning dictionary of 5 words.

Chapter 1 - Variables & Data

Just like we follow some rules while speaking english (the grammar), we have some rules to follow while writing a javascript program. The set of these rules is called syntax in javascript.

What is a Variable?

A variable is a container that stores a value. This is very similar to the containers used to store rice, water and oats (Treat this as an analogy!)

The value of a javascript variable can be changed during the execution of a program

```
var a = 7;  ——→ literal
let a = 7;     ⟹ Declaring Variables
  Identifier    assignment operator
```

Rules for choosing variable names

→ letters, digits, underscores & $ sign allowed.
→ Must begin with a $, _ or a letter.
→ JavaScript reserved words cannot be used as a variable name
→ Harry & haRRy are different variable (case sensitive)

Var vs let in JavaScript

1. Var is globally scoped while let & const are block scoped
2. Var can be updated & re-declared within its scope
3. let can be updated but not re-declared
4. const can neither be updated nor be re-declared.

5. var variables are initialized with undefined whereas let and const variables are not initialized.
6. const must be initialized during declaration unlike let and var

Primitive Data Types & Objects
Primitive data types are a set of basic data types in javascript
Object is a non primitive datatype in javascript

These are the 7 primitive datatypes in javascript

- Null
- Undefined
- Number
- Boolean
- String
- BigInt
- Symbol

Object
An object in JavaScript can be created as follows.

```
Const item = {
        name: "Led Bulb",
        price: "150"
}
```

key ← name: "Led Bulb", → value
price: "150" → value

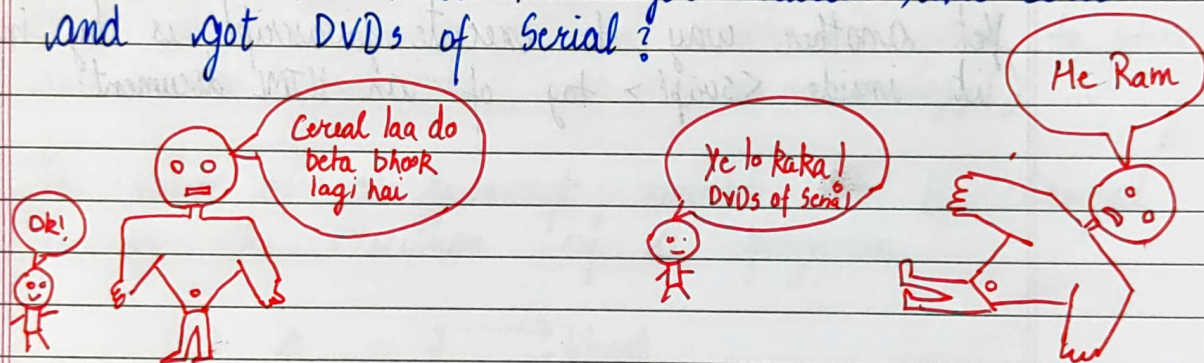Quick Quiz: Write a JavaScript program to store name, phone number and marks of a student using objects.

Introduction to programming

Programming is a way to talk to computers.
A language like Hindi, English or Bengali can be used to talk to a human but for computers we need straightforward instructions

Computer is Dumb!

When was the last time you ordered some cereal and got DVDs of Serial?

Programming is the act of constructing a program, a set of precise instructions telling a computer what to do.

What is Ecmascript?

ECMA Script is a standard on which Javascript is based! It was created to ensure that different documents on javascript are actually talking about the same language.

JavaScript & ECMA Script can almost always be used interchangably JavaScript is very liberal in what it allows.

How to execute Java Script?

JavaScript can be executed right inside one's browser. You can open the javascript console and start writing javascript there

Another way to execute javascript is a runtime like Node.js which can be installed and used to run javascript code.

Yet another way to execute javascript is by inserting it inside <script> tag of an HTML document.

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