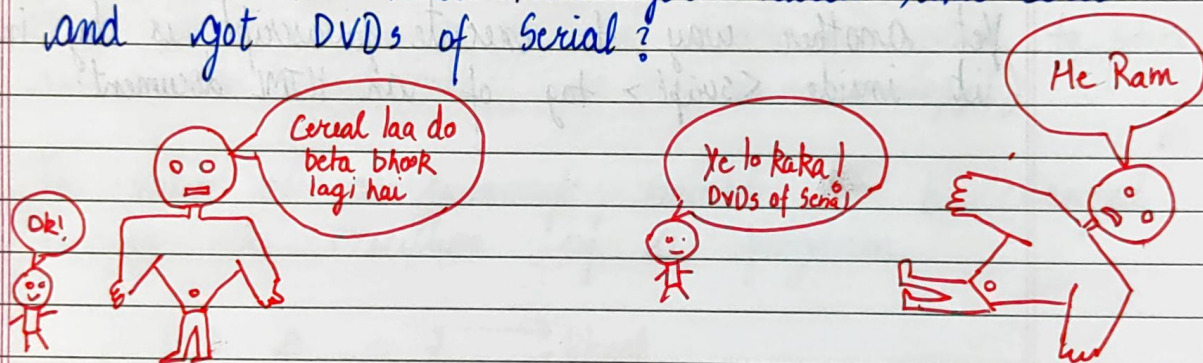# Introduction to programming

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 straight-forward 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.

almost
JavaScript & ECMA Script can 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.

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

$$var \ a = 7; \rightarrow literal$$
$$let \ a = 7; \Rightarrow Declaring \ Variables$$

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.