

## HTML ---- Validations

- Input tags will have validation attributes
- Validation = to verify the data entered by the user
  - Validation attributes  
maxlength, minlength , max, min , required, readonly , pattern , email validation by type
  - A flag is maintained to decide whether the field is valid or invalid

Form Html Element = it will group together a set of form elements that are sent when the form is submitted

- Pattern validation - it takes a Regular Expression  
All the strings that PASS the regular expression are VALID  
All the strings that FAIL the regex are INVALID

`[0-9]{2,3}`

`[0-9]*` = 0 or any number of occurrences of anything between 0 to 9  
blank = valid  
22, 1234,

`.{8,}` = . Means any single character

`https?://.+` ? Optional

`[A-Z][a-z]+` = `[A-Z][a-z]{1,}`

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.	any character
[A-Z]	Any character between capital A to Z
[a-z]	Any char bet lowercase a to z
[a-z A-Z]	Any caps or lowercase alphabet
[0-9]	Any digit
[#@&]	Any char between the given set
+	At least 1 or more than 1 chars occurrence
*	0 or more chars from the set
?	the char preceding it is optional 0 or 1 occurrence

Refer

[Regular expression syntax cheatsheet - JavaScript | MDN \(mozilla.org\)](#)

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## Javascript -

Scripting Language = The source code is directly interpreted ( translated and executed ) , no output file is generated.

To run javascript file

1. Install NODE JS on your machine . Use the node interpreter.  
OR
2. Embed the JS in HTML and run on Browser

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SET up NODE on your machine,

<https://nodejs.org/en/download/>      download for windows 64 bit installer

2 add the path of node installation to the PATH variable in System Environment

3. open any terminal , CMD or through VS Code IDE and go the path where you have save the js file ,

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Ex 1 --- Hello World in JS on NODE

Hello World in JS in HTML

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Ex2 ----- Declare variables

NO STRONG TYPING ---- variables do not have fixed data type

Date type is **INFERRED** ---- Type Inference

var , let, const

var	let
Double declaration of variable is allowed	TypeError on redeclaration of the variable
Hoisting - variable can be used before declaration variable value is "undefined"	Variable cannot be used before declaration Leads to Reference Error

Ex3 ----

If else, for , while , switch case --- similar to Java

Ex4 ---- Arrays in Javascript -----

Arrays are objects in javascript

Data Types in Javascript

1	number
2	string
3	boolean
4	undefined
5	object

HW -----

1. To try out the html validation code done in the class

2. Try out ex1 to ex5 js done in class
  3. Create an array of 3 numbers,
    - Use splice to insert 3 more numbers from index2 onwards
    - Print the array
    - Use splice to delete all elements after index 3
    - Print the array
    - Use push to append 3 more numbers to the array
    - Print the array and its length
    - Use splice to delete 0th and 1st elements from the array
    - Print the array
    - Use splice to delete 0th element and insert 2 more elements there
    - Print the array
  4. Try DOM manipulation in Ex 6
    - Modify the code -- add a p tag after the div
    - Populate the p tag with a line Happy New Year from Javascript
    - In the P tag make the text as bold and underline using <b> and <u> tag
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Ex5 --- show hello world on the browser screen

