DATA TYPES IN JAVASCRIPT

There are six basic data types in JavaScript which can be divided into three main categories

THREE MAIN CATEGORIES

Special data types

Composite

(Reference)

Primitive

(Primary)

1.**PRIMITIVE DATA / PRIMARY**

The data types which can hold only one value at a time

(i) String Data Type

The string data type is used to represent textual data (i.e. sequences of characters). Strings are created using single or double quotes surrounding one or more characters

(ii) Number Data Type

The number data type is used to represent positive or negative numbers with or without decimal place, or numbers written using exponential notation

(iii) Boolean Data Type

The Boolean data type can hold only two values: true or false. It is typically used to store values like yes (true) or no (false), on (true) or off (false), etc

**2.COMPOSITE DATA / REFERENCE**

When you manipulate an object, you work on the reference of that object, rather than the actual object. It means a variable that stores an object is accessed by reference.

(i)Object Data Type

The object is a complex data type that allows you to store collections of data.

An object contains properties, defined as a key-value pair. A property key (name) is always a string, but the value can be any data type, like strings, numbers, Booleans, or complex data types like arrays, function and other objects.

(ii)Array Data Type

An array is a type of object used for storing multiple values in single variable. Each value (also called an element) in an array has a numeric position, known as its index, and it may contain data of any data type-numbers, strings, Booleans, functions, objects, and even other arrays. The array index starts from 0, so that the first array element is arr[0] not arr[1].

The simplest way to create an array is by specifying the array elements as a comma-separated list enclosed by square brackets,

(iii) Function Data Type

The function is callable object that executes a block of code. Since functions are objects, so it is possible to assign them to variables,

Functions can be used at any place any other value can be used. Functions can be stored in variables, objects, and arrays. Functions can be passed as arguments to other functions, and functions can be returned from functions.

**3.SPECIAL DATA TYPES**

**˘(i)**Undefined Data Type

The undefined data type can only have one value-the special value undefined. If a variable has been declared, but has not been assigned a value, has the value undefined.

## (ii)Null Data Type

This is another special data type that can have only one value-the null value. A null value means that there is no value. It is not equivalent to an empty string ("") or 0, it is simply nothing.

A variable can be explicitly emptied of its current contents by assigning it the null value.

Examples for Datatypes

(i)STRING

var a = 'Hi there!'; // using single quotes

var b = "Hi there!"; // using double quotes

(ii)NUMBER

var a = 25; // integer

var b = 80.5; // floating-point number

var c = 4.25e+6; // exponential notation, same as 4.25e6 or 4250000

var d = 4.25e-6; // exponential notation, same as 0.00000425

(iii)BOOLEAN

var isReading = true; // yes, I'm reading

var isSleeping = false; // no, I'm not sleeping

(iv)OBJECT

var emptyObject = {};

var person = {"name": "Clark", "surname": "Kent", "age": "36"};

// For better reading

var car = {

"modal": "BMW X3",

"color": "white",

"doors": 5

}

(v)ARRAY

var colors = ["Red", "Yellow", "Green", "Orange"];

var cities = ["London", "Paris", "New York"];

alert(colors[0]); // Output: Red

alert(cities[2]); // Output: New York

(vi)FUNCTION

var greeting = function()

{

return "Hello World!"; } // Check the type of greeting variable alert(typeof greeting) // Output: function

alert(greeting()); // Output: Hello World!