DATA TYPES IN JAVASCRIPT

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DATA TYPES IN JS

- Data type is the property that denotes type of the data declared.
- JavaScript supports several data types, which can be categorized into three main categories:
  - primitive data types
  - Reference data types
  - Special data types.

PRIMITIVE DATA TYPES

- Primitive data types are immutable (cannot be changed) and are stored directly in memory.
  - Number
  - Float
  - String
  - Boolean
  - Undefined
  - Null
  - symbol

PRIMITIVE DATA TYPES

- Number:
  - Represents numeric Values
  - Example:
    - Var a = 10;
    - Let b = 20;
    - const c = 30;

PRIMITIVE DATA TYPES

- String:
  - Represents a sequence of characters, enclosed within single (' ') or double (" ") quotes.
  - Examples:
    - Var a = "hello";
    - Let b = "World";
    - const c = "abcd";

PRIMITIVE DATA TYPES

- Boolean:
  - Represents a logical value, either true or false.
  - Examples:
    - Var a = true;
    - Let b = false;
    - Const c = true;

PRIMITIVE DATA TYPES

- Undefined
  - Represents a variable that has been declared but has not been assigned a value yet.
  - Examples:
    - Var a;
    - Let b;
    - Const c;

PRIMITIVE DATA TYPES

- Null:
    - Represents the intentional absence of any object value.
    - Examples:
        - Var a = null;
        - Let b = null;
        - Const c = null;

PRIMITIVE DATA TYPES

- Symbol:
  - Represents a unique identifier.
  - Examples:
    - Var a = Symbol("abcd");
    - Let b = Symbol(123);
    - Const c = Symbol(null);

REFERENCE DATA TYPES IN JS

- Reference data types are mutable (can be changed) and are stored as references in memory.
  - OBJECT
  - ARRAY
  - FUNCTION

REFERENCE DATA TYPES IN JS

- OBJECT:
  - Represents a collection of key-value pairs.
  - Examples:
    - Let a = {name:"abc" , age:30};
    - Var b = {1:10 , 2:20};
    - Const c = {1:200 , a:"Sai"};

REFERENCE DATA TYPES IN JS

- ARRAY:
  - Represents a collection of elements stored in a linear sequence
  - Examples:
    - Var a = [1,2,3,4,4,5];
    - Let b = ["sai","vardhan","codegnan"];
    - Const c = [1,2,3,4];

REFERENCE DATA TYPES IN JS

- FUNCTION:
  - Represents a reusable block of code that perform specifc task
  - Example:
    - Function greet(name){
      Console.log("Hello"+name);
      }

SPECIAL DATA TYPES IN JS

- There are some special data types apart from primitive and reference data types as follows:
  - NaN (Not a Number)
  - Infinity
  - BigInt

SPECIAL DATA TYPES IN JS

- NaN:
  - It represents the value which is not valid
  - Examples:
    - Var a = NaN;
    - Let b = Number.NaN;

SPECIAL DATA TYPES IN JS

- Infinity:
  - Represents both positive infinity and negative infinity
  - Examples:
    - Var a = Infinity;
    - Let b = -Infinity;

SPECIAL DATA TYPES IN JS

- BigInt:
  - Represents arbitrary-precision integers
  - Examples:
    - Var a = 13456789875434567898754345678 9;
    - Let b = 1234567898765432345678098765456 78;
    - Const c = 234579097532345789;