**Javascript Essentials | Batch 1**

**Assignment Day 1**

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**Question 1 :**

**Explore and explain the various methods in console function Explain them**

following method of the console function

* log()
* error()
* warn()
* clear()
* time() and timeEnd()
* table()
* count()

**log()**

Mainly used to *log/print* the output to the console.

**error()**

Used to log error message to the console.

**warn()**

Used to log warning message to the console.

**clear()**

Used to clear the console.

**time() and timeEnd()**

Whenever we want to know the amount of time spend by a block or a function, we can make use of the time() and timeEnd() methods

**table()**

This method allows us to generate a table inside a console

**count()**

This method is used to count the number that the function hit by this counting method.

**Question 2 :**

**Write the difference between var, let and const with code examples**

var and let are both used for variable declaration in javascript but the difference between them is that var is function scoped and let is block scoped. It can be said that a variable declared with var is defined throughout the program as compared to let. Variables defined with *const* behave like let variables, except they cannot be reassigned

**Var**

The JavaScript variables statement is used to declare a variable and, optionally, we can initialize the value of that variable.  
Example: var a =10;  
Variable declarations are processed before the execution of the code.  
The scope of a JavaScript variable declared with var is its current execution context.

**let**

The let statement declares a local variable in a block scope. It is similar to var, in that we can optionally initialize the variable.  
Example: let a =10;  
The let statement allows you to create a variable with the scope limited to the block on which it is used.

**const**

const statement values can be assigned once and they cannot be reassigned. The scope of const statement works similar to let statements.  
Example: const a =10;

An example will clarify the difference even better

Example of var:  
Input:  
var x=5;  
console.log(x);  
  
  
Example of let:  
Input:  
let x=5;  
console.log(x)  
  
  
Example of const:  
const PI = 3.14;  
console.log(PI)

**Question 3 :**

**Write a brief intro on available data types in Javascript.**

There are six basic data types in JavaScript which can be divided into three main categories: primitive (or primary), composite (or reference), and special data types. String, Number, and Boolean are primitive data types. Object, Array, and Function (which are all types of objects) are composite data types. Whereas Undefined and Null are special data types.  
Primitive data types can hold only one value at a time, whereas composite data types can hold collections of values and more complex entities

**The String Data Type**

The string data type is used to represent sequences of characters. Strings are created using single or double quotes surrounding one or more characters, as shown below:  
Example  
var a = 'Hi there!';  
var b = "Hi there!";

**The 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

Example  
var a = 25;  
var b = 80.5;

**The 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.  
Example  
var isReading = true;  
var isSleeping = false;

**The 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.  
Example  
var a;  
var b = "Hello World!";

**The 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.

**The 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.