**JavaScript Notes**

-Variables

All JavaScript **variables** must be **identified** with **unique names**.

These unique names are called **identifiers**.

Identifiers can be short names (like x and y) or more descriptive names (age, sum, totalVolume).

The general rules for constructing names for variables (unique identifiers) are:

* Names can contain letters, digits, underscores, and dollar signs.
* Names must begin with a letter
* Names can also begin with $ and \_
* Names are case sensitive (y and Y are different variables)
* Reserved words (like JavaScript keywords) cannot be used as names
* Variable can be declaring by **var**, **let**, **const** .

//var -- function scoped

var a = "Hello world"

console.log(a);

//let --global scoped

let num = 50

console.log(num);

//Camel Case – Recommended

let firstName

//underscore

let first\_name

//Pascal Case (Object, Constructor, function)

let FistName

var a = "Hello world"

a = "hi" // can be reassign

console.log(a);

let num = 50

num = 60 // can be reassign

console.log(num);

const city = "NewYork"

city = "Florida" //can't reassign

console.log(city);

//it can be modified

const bigCity = ['NewYork', 'Florida', 'MeryLand'];

bigCity.push('Arizona');

console.log(bigCity);

-Datatype

1. Primitive Data Types

* string
* number
* Boolean
* null (due to JavaScript bug it shows object)
* symbol
* undefined

1. Complex Data Types

* object
* array
* function

//########## Number ##########

let num = 25.50;

console.log(typeof num);

//########## String ##########

let str = "This is String";

console.log(typeof str);

//########## Bollean ##########

let bol = true;

console.log(typeof bol);

//########## null ##########

let x = null;

console.log(typeof x);

//########## symbol ##########

let y = Symbol();

console.log(typeof y);

//########## Undefine ##########

let z = undefined;

console.log(typeof z);

//########## Object ##########

let obj = {

    name : 'Faisal',

    age : 26

}

console.log(typeof obj);

//########## Array ##########

let arr =['NewYork', 'MaryLand', 'Arizona'];

console.log(typeof arr);

-Type Conversions

Number/array/Boolean to String

let x ;

//number to string

x = String(150);

x = String(5 + 5);

//date to string

x = String(new Date());

//boolean to string

x = String(true);

//array to string

x = String([1,2,3,4,5]);

//another way to convert string

x = (150).toString();

console.log(x);

console.log(typeof x);

console.log(x.length);

String/boolean/text to number

let y;

//string to number

y = Number("250");

//bollean to number

y = Number(true);

//text to number

y = Number("Hello World");

//another way to convert number

y = parseInt("350.651651");

y = parseFloat("350.651651");

console.log(y);

console.log(typeof y);

console.log(y.length);

console.log(y.toFixed(2));

var1 = "5";

var2 = 9;

result = var1 + var2;

console.log(result)

console.log(typeof result);

console.log(result.length);

console.log(result.toFixed(2));