**JAVA SCRIPT**

JavaScript is the **Programming Language** for the Web.

JavaScript can update and change both **HTML** and **CSS.**

JavaScript can **calculate**, **manipulate** and **validate** data.

**/\*\*\*\* Section 2👉 we need to do it in console \*\*\*\*/**

**// alert("Welcome, to Complete JavaScript course");**

**// console.log('Welcome, to complete JavaScript Course');**

**/\*\*\*\* Section 3👉 values and variables in JavaScript \*\*\*\*/**

// var myName = 'Sarosh Ahmed';

// var myAge = 26;

// console.log(myage);

// Naming Practice

// var \_myName = "Sarosh";

// var 1myName = "Ahmed";

// var \_1my\_\_Name = "Khan”;

// var $myName = "Sarosh Ahmed";

// var myNaem% = "Sarosh AHmed";

// console.log(myNaem%);

**/\*\*\*\* Section 4👉 Data Types in JavaScript \*\*\*\*/**

// var myName = "Sarosh AHmed";

// console.log(myName);

// var myAge = 26;

// console.log(myAge);

// var iamsarosh = false;

// console.log(isarosh);

// // typeof operator

// console.log(typeof(iAmsarosh));

// DataTypes Practice

// console.log( 10 + "20");

// 9 - "5"

// console.log( 9 - "5"); //bug

// "Java" + "Script"

// console.log( "Java "+ "Script");

// " " + " "

// console.log( " " + 0);

// " " + 0

// "sarosh" - "Ahmed"

// true + true

// true + false

// false + true

// false - true

// 🙋‍👨‍🏫 Interview Question 1 🙋‍👨‍🏫

// Difference between null vs undefined?

// var iAmUseless = null;

// console.log(iAmUseless);

// console.log(typeof(iAmUseless));

// //2nd javascript bug

// var iAmStandBy;

// console.log(iAmStandBy);

// console.log(typeof(iAmStandBy));

// 🙋‍👨‍🏫 Interview Question 2 🙋‍👨‍🏫

// What is NaN?

// NaN is a property of the global object.

// In other words, it is a variable in global scope.

// The initial value of NaN is Not-A-Number

// var myPhoneNumber = 9876543210;

// var myName = "Sarosh";

// console.log(isNaN(myPhoneNumber));

// console.log(isNaN(myName));

// if(isNaN(myName)){

// console.log("plz enter valid phone no");

// }

**/\*\*\*\* Section 5👉 Arithmetic operators in JavaScript \*\*\*\*/**

// console.log(5+20);

// 1️⃣Assignment operators

// An assignment operator assigns a value to its left operand

// based on the value of its right operand.

// The simple assignment operator is equal (=)

// var x = 5;

// var y = 5;

// console.log("is both the x and y are equal or not" + x == y );

// I will tell you when we will see es6

// console.log(`Is both the x and y are equal : ${x == y}`);

// 2️⃣Arithmetic operators

// An arithmetic operator takes numerical values

// (either literals or variables) as their operands and

// returns a single numerical value.

// console.log(3+3);

// console.log(10-5);

// console.log(20/5);

// console.log(5\*6);

// console.log("Remainder Operator " + 27%4);

// 🙄Increment and Decrement operator

// Operator: x++ or ++x or x-- or --x

// If used postfix, with operator after operand (for example, x++),

// the increment operator increments and returns the value before incrementing.

// var num = 15;

// var newNum = num-- + 5;

// console.log(num);

// console.log(newNum);

// Postfix increment operator means the expression is evaluated

// first using the original value of the variable and then the

// variable is incremented(increased).

// If used prefix, with operator before operand (for example, ++x),

// the increment operator increments and returns the value after incrementing.

// var num = 15;

// var newNum = --num + 5;

// console.log(num);

// console.log(newNum);

// Prefix increment operator means the variable is incremented first and then

// the expression is evaluated using the new value of the variable.

// 3️⃣Comparison operators

// A comparison operator compares its operands and

// returns a logical value based on whether the comparison is true.

// var a = 30;

// var b = 10;

// Equal (==)

// console.log(a == b);

// Not equal (!=)

// console.log(a != b);

// // Greater than (>)

// console.log(a > b);

// // Greater than or equal (>=)

// console.log(a >= b);

// // Less than (<)

// console.log(a < b);

// // Less than or equal (<=)

// console.log(a <= b);

// 4️⃣ Logical operators

// Logical operators are typically used with Boolean (logical) values;

// when they are, they return a Boolean value.

// var a = 30;

// var b = -20;

// Logical AND (&&)

// The logical AND (&&) operator (logical conjunction) for a set of

// operands is true if and only if all of its operands are true.

// console.log(a > b && b > -50 && b < 0);

// Logical OR (||)

// The logical OR (||) operator (logical disjunction) for a set of

// operands is true if and only if one or more of its operands is true.

// console.log((a < b) || (b > 0) || (b > 0));

// Logical NOT (!)

// The logical NOT (!) operator (logical complement, negation)

// takes truth to falsity and vice versa.

// console.log(!((a>0) || (b<0)));

// console.log(!true);

// 5️⃣ String Concatenation(operators)

// The concatenation operator (+) concatenates two string values together,

// returning another string that is the union of the two operand strings.

// console.log("Hello World");

// console.log("hello " + "world");

// var myName = "Sarosh";

// console.log(myName + " Khan");

// console.log(myName + " Ahmed");

// console.log(myName + " Khanzada");

// 😳 4 Challenge Time

// What will be the output of 3\*\*3?

// What will be the output, when we add a number and a string?

// Write a program to swap two numbers?

// Write a program to swap two numbers without using third variable?

// sol 1: ✔

// console.log(9\*\*2); // 9\*9

// console.log(10 \*\* -1); 1/10

// sol 2: ✔

// console.log(5 + "");

// sol 3: ✔

// var a = 5;

// var b = 10;

// output b=5; a=10

// var c = b; //c = 10

// b = a; // b = 5;

// a = c;

// console.log("the value of a is " + a);

// console.log("the value of b is " + b);

// sol 4: ✔

// var a = 5;

// var b = 10;

// // output b=5; a=10

// a = a + b; // a = 15

// b = a - b; // b = 5;

// a = a - b; // a = 10;

// console.log("the value of a is " + a);

// console.log("the value of b is " + b);

// 🙋‍👨‍🏫 Interview Question 4 🙋‍👨‍🏫

// What is the Difference between == vs === ?

// sol

// var num1 = 5;

// var num2 = '5';

// console.log(typeof(num1));

// console.log(typeof(num2));

// console.log(num1 == num2 );

// var num1 = 5;

// var num2 = '5';

// console.log(typeof(num1));

// console.log(typeof(num2));

// console.log(num2);

// console.log(num1 === num2 );

// \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**/\*\*\*\* Section 6👉 Control Statement -**

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\* 1️⃣If...Else \*/

// The if statement executes a statement if a specified condition is truthy.

// If the condition is falsy, another statement can be executed.

// if raining = raincoat

// else no raincoat

// var tomr = 'sunny';

// if(tomr == 'rain'){

// console.log('take a raincoat');

// }else{

// console.log('No need to take a raincoat');

// }

// 2️⃣Conditional (ternary) operator

// The conditional (ternary) operator is the only JavaScript operator

// that takes three operands

// var age = 17;

// if(age >= 18){

// console.log("you are eligible to vote");

// }else{

// console.log("you are not eligible to vote");

// }

// var age = 18;

// console.log((age >= 18) ? "you can vote" : "you can't vote");

// 3️⃣ switch Statement

// Evaluates an expression, matching the expression's value to a

// case clause, and executes statements associated with that case.

// 1st without break statment

// Find the Area of circle, triangle and rectangle?

// var area = "square" ;

// var PI = 3.142, l=5, b=4, r=3;

// if(area == "circle"){

// console.log("the area of the circle is : " + PI\*r\*\*2);

// }else if(area == "triangle"){

// console.log("the area of the triangle is : " + (l\*b)/2);

// }else if(area == "rectangle"){

// console.log("the area of the rectangle is : " + (l\*b));

// }else{

// console.log("please enter valid data");

// }

// var area = "dsfsad" ;

// var PI = 3.142, l=5, b=4, r=3;

// switch(area){

// case 'circle':

// console.log("the area of the circle is : " + PI\*r\*\*2);

// break;

// case 'triangle':

// console.log("the area of the triangle is : " + (l\*b)/2);

// break;

// case 'rectangle':

// console.log("the area of the rectangle is : " + (l\*b));

// break;

// default:

// console.log("please enter valid data");

// }

// 🤗break

// Terminates the current loop, switch, or label

// statement and transfers

// program control to the statement following the terminated statement.

// 🤗continue

// Terminates execution of the statements in the current iteration of the

// current or labeled loop, and continues execution of the loop with the

// next iteration.

// 4️⃣ While Loop Statement

// The while statement creates a loop that executes a specified statement

// as long as the test condition evaluates to true.

// var num=20;

// // block scope

// while(num <= 10){

// console.log(num); //infinte loop

// num++;

// }

// 5️⃣ Do-While Loop Statement

// var num = 20;

// do{

// debugger;

// console.log(num); //infinte loop

// num++;

// }while(num <= 10);

// 6️⃣ For Loop

// for(var num = 0; num <= 10; num++){

// debugger;

// console.log(num);

// }

// 😀6: challenge Time 🏁

// JavaScript program to print table for given number (8)?

// output : 8 \* 1 = 8

// 8 \* 2 = 16(8\*2)

// => 8 \* 10 = 80

// for(var num = 1; num<= 10; num++){

// var tableOf = 12;

// console.log(tableOf + " \* " + num + " = " + tableOf \* num);

// }

// \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*