**Chapter 1 (Alerts)**

1. Alert these following (individually):
2. First Name

var firstName = "Zeshan";

alert(firstName);

1. Last Name

var lastName = "Ashraf";

alert(lastName);

1. Email

var email = "ali.zeeshan290@gmail.com";

alert(email);

1. Phone Number

var phoneNumber = "0307-4058498";

alert(phoneNumber);

1. Password

var password = "myPcPassword";

alert(password);

1. Correct this statement: **alert"You're learning JavaScript!";**

**Correct Aler:** alert("You're learning JavaScript!");

1. Code an alert statement displaying any message you like.

var customMessage = "Hello, Be Happy always a custom message!";

alert(customMessage);

**Chapter 2 (Variables for string)**

1. Declare any variable in the camelCase format.

Ans: var myVariableName = "This is a camelCase variable.";

1. Declare a variable of your choice without defining it. Then, in a second statement, assign it a string of your choice.

Ans: var myVariable; // Declaring without defining

myVariable = "This is a string assignment.";

1. Declare the variable teamName and Alert your Team name.

Ans: var teamName = "The Ali Team";

alert(teamName);

1. This statement has already been coded. var bestMan = "Charlie"; Assign the variable a new string.

Ans: var bestMan = "Charlie";

bestMan = "Zeshan";

**Chapter 3 (Variables for numbers)**

1. Declare a variable “caseQty”

Ans: var caseQty;

1. Assign to the variable caseQty, which has already been declared, the value 144.

Ans: caseQty = 144;

1. Rewrite this statement so the variable can be used in a math operation. var num = "9";

Ans: var num = 9;

1. In one statement declare a variable. In a second statement assign it the sum of 2 numbers.

Ans: var sum;

sum = 5 + 6;

1. What is the value of orderTotal?

var merchTotal = 100;

var shippingCharge = 10;

var orderTotal = merchTotal + shippingCharge;

Try it yourself.

Ans: var merchTotal = 100;

var shippingCharge = 10;

var orderTotal = merchTotal + shippingCharge;

1. In the first statement declare a variable and assign it a number. In the second statement, change the value of the variable by adding it together with a number.

Ans: var number1 = 15;

number1 = number1 + 7;

**Chapter 4 (Variable names Legal and Illegal)**

1. Correct this statement.

var product cost = 3.45;

var productCost = 3.45;

1. Rewrite this using camelCase. var Nameofband;

var nameOfBand;

1. In a single statement declare a legally-named variable and assign a number to it.

Ans: var myNumber = 42;

1. Declare a variable that is a combination of your first and last names. Use camelCase.

var firstName = "Zeshan";

var lastName = "Ali";

var fullName = firstName + lastName;

1. List the legal and Illegal Variables.

Legal Variable Names: myVariable, user\_name , \_privateVar ,camelCase ,anotherVariable123

Illegal Variable Names: 123variable, $specialVariable, 2ndName,

-illegalName , variable with spaces

**Chapter 5 (Math Expression I)**

1. What is the name and symbol of the arithmetic operator that gives you the remainder when one number is divided by another?

Operator: Modulus (%)

1. What is the value of num? var num = 20 % 6;

Value of num: 2

1. In a single statement, declare the variable largeNum and assign it the result of 1,000 multiplied by 2,000.

var largeNum = 1000 \* 2000;

1. Assign to a variable the value represented by one variable subtracted from the value represented by another variable

Example: var result = variable1 - variable2;

1. Assign to a variable the remainder when one number is divided by another. The variable hasn't been declared beforehand. Make up the variable name.

Example: var remainder = 15 % 4;

1. Code an alert that displays the result of a multiplication on 2 numbers.

var number1 = 5;

var number2 = 10;

alert(number1 \* number2);

**Chapter 6 (Math Expression II)**

1. Code a short form of x = x + 1; Use either of the two legal expressions.

Ans: Short Form: x++; or x += 1;

1. If x has a value of 100, what is the fastest way to reduce it to 99 with a math expression?

Ans: Fastest Way: x--;

1. var x = 50;

var y = x++;

Ans: Value of y: 50

What is the value of y?

1. var y = 50;

var z = --y;

What is the value of z?

Ans: Value of z: 49

1. In a single statement, decrement num and assign its original value to newNum.

Ans: var newNum = --num;

1. In a single statement add 1 to a variable and assign its original value to another variable.

Ans: var num1 = 5;

var num2 = num1++;

1. Assign a number value to a variable. Increment the variable. Display the new value in an alert

Ans: var num = 10;

num++;

alert(num);

**Chapter 7 (Math Expression III)**

1. var calculatedNum = 2 + (2 \* 6); What is the value of calculatedNum?

Ans: Value of calculatedNum: 14

1. var calculatedNum = (2 + 2) \* 6; What is the value of calculatedNum?

Ans: Value of calculatedNum: 24

1. var calculatedNum = (2 + 2) \* (4 + 2); What is the value of calculatedNum?

Ans:Value of calculatedNum: 24

1. var calculatedNum = ((2 + 2) \* 4) + 2; What is the value of calculatedNum?

Ans: Value of calculatedNum: 18

Note: Try all the above equations yourself.

1. Write a statement that assigns to cost the result of 2 + 2 \* 4 + 10, clarified with parentheses, producing 56.

var cost = (2 + 2) \* (4 + 10);

1. Write a statement that assigns to units the result of 2 + 2 \* 4 + 10, clarified with parentheses, producing 20.

var cost = (2 + 2) \* (4 + 10);

1. Write a statement that assigns to pressure the result of 4 / 2 \* 4, clarified with parentheses, producing 5.

var cost = (2 + 2) \* (4 + 10);

**Chapter 8 (Concatenating Text Strings)**

1. var num = "2" + "2"; What is the value of num? Include quotation marks.

Ans: Value of num: "22"

1. message = ("Hello," + "Dolly"); What is the value of message? (Include the quotation marks.)

Ans: Value of message: "Hello,Dolly"

Alert the statement

1. alert("33" + 3); What message displays in the alert box?

Ans: Message in alert: "333"

1. Write an alert that displays the concatenation of the two parts of Ans: "Pakistan Zindabad".

alert("Pakistan " + "Zindabad");

1. Write a statement that assigns to a variable the concatenation of a string with a number

Ans: Example: var combined = "Hello" + 123;

1. Assign strings to two variables. Then concatenate them and assign the result to a third variable.

Ans: Example: var str1 = "Hello"; var str2 = "World"; var combined = str1 + str2;

**Chapter 9 (Prompts)**

1. Code a prompt with the message "Enter first name". The user's response is assigned to firstName.

Ans: var firstName = prompt("Enter first name");

1. Code a prompt with the message "Country?" and the default answer "China". The user's response is assigned to country.

Ans: var country = prompt("Country?", "China");

1. Correct this statement var yourName = prompt(Enter Your Name");

Ans: Corrected statement: var yourName = prompt("Enter Your Name");

1. Code a prompt that specifies a string as the message Include a default input.

Ans: Example: var userInput = prompt("Please enter a value:", "Default Value");

1. Assign strings to two variables. Code a prompt specifying the first variable as the message and the second variable as the default response. Assign the user's response to a third variable.

Ans: Example: javascript var str1 = "Hello"; var str2 = "World"; var userResponse = prompt(str1, str2);

1. Display a prompt, including both a message and a default response. Display the user's response in an alert

Ans: javascript var userResponse = prompt("Enter something:", "Default Value");

alert("User entered: " + userResponse);

**Chapter 10 (if statments)**

1. var city = "Karachi"

if (city = "Karachi") {

console.log("The City OF Lights")

Correct the above statement:

Also try this statement by yourself

Ans:

Corrected statement: javascript var city = "Karachi";

if (city === "Karachi") { console.log("The City OF Lights"); }

1. This is the first line of an if statement:

if (x === y) {

Complete the statement. If the condition is true, display a box that asks the user value of z? and assign it to another variable.

Ans: Example: javascript if (x === y) { var z = prompt("Enter the value of z:"); }

1. Code an if statement that tests if ZipCode is "10010" so, Alert that "Karachi". if not then alert ("Please write correct city")

Ans: javascript if (ZipCode === "10010") { alert("Karachi"); } else { alert("Please write correct city"); }

1. Code an if statement. Test whether a variable has a particular numerical value. If so, assign a new value to that variable, as in x = 1;

Ans: Example: javascript if (someVariable === 5) { someVariable = 10; }

**Chapter 11 (Comparison Operators)**

1. Code the first line of an if statement that tests whether one variable is unequal to another. (Use !)

Ans: Example: javascript if (variable1 !== variable2) {

1. Code the first line of an if statement that tests whether the value represented by a variable is greater than or equal to the value represented by another variable.

Ans: Example: javascript if (variable1 >= variable2) {

1. Code an if statement. Test whether a variable is unequal to a particular number. If so, assign a number to that variable.

Ans: Example: javascript if (variable !== 5) { variable = 10; }

1. Code an if statement that tests whether a number is unequal to a different number. If the condition is true (it will be), display a congratulations alert.

Ans: Example: javascript if (number1 !== number2) { alert("Congratulations!"); }

1. Code a prompt asking for your first name.

Code an if statement that tests whether the name you entered is unequal to another name.

If the condition is true (it will be), display an alert that says "No match"

Ans: Example: javascript var firstName = prompt("Enter your first name:"); if (firstName !== "John") { alert("No match"); }

**Chapter 12 (if…else and else if statements)**

1. Code an if statement that tests whether the value represented by a variable is greater than or equal to the value represented by another variable. If so, display an alert. If not, display a different alert.

Ans: Example: javascript if (variable1 >= variable2)

{ alert("Greater than or equal"); }

else { alert("Not greater than or equal"); }

1. Write a program using if else and else if statement which take marks from user. And the program will calculate your percentage and give you grade A/C to Your percentage. (MARKSHEET)

Ans:

Example: javascript

var marks = parseFloat(prompt("Enter your marks:"));

if (marks >= 90) { alert("Grade A"); }

else if (marks >= 80) { alert("Grade B"); }

else if (marks >= 70) { alert("Grade C"); }

else { alert("Fail"); }

1. This is the if statement that begins the code.

if (a === 10) {

alert("a is 10");

}

If a isn't 10, display an alert that says The correct value of a is \_\_\_\_

Note: Try this by yourself

Ans:  
Example: javascript

if (a !== 10) { alert("The correct value of a is " + a); }

1. Prompt the user to enter a city.

If the city is Karachi, display an alert acknowledging it is Karachi.

If not, check to see if it's Lahore.

If it is, display an alert acknowledging it's Lahore.

Otherwise, display a different alert.

Ans: Example: javascript

var city = prompt("Enter a city:");

if (city === "Karachi") { alert("It is Karachi"); }

else if (city === "Lahore") { alert("It is Lahore"); }

else { alert("It is a different city"); }

**Chapter 13 (Testing sets of conditions)**

1. Code the first line of an if statement that tests whether both are true: a has the same value as b and c has the same value as d.

Ans: Example: javascript if (a === b && c === d) {

1. Code the first line of an if statement that tests whether either or both are true: a has the same value as b or c doesn't have the same value as d.

Ans: Example: ```javascript if (a === b)

1. Code the first line of an if statement that tests whether
2. name is either "Hamza" or "Arsalan".
3. age is Less than 60.

Ans: Example: `if ((name === "Hamza")

1. Declare two variables and assign them number values.

If the first variable is less than the second variable or greater than the second variable, display an alert.

Ans: Example: `var num1 = 5;

var num2 = 10;

if (num1 < num2)

1. Declare 2 variables. Assign one of them your first name and the other one your last name.

Code 2 prompts, asking for your first and your last name.

If your answers match the two variables, display an alert.

Ans: Example: var firstName = "Zeshan";

var lastName = "Ali";

var userFirstName = prompt("Enter your first name:");

var userLastName = prompt("Enter your last name:");

if (userFirstName === firstName && userLastName === lastName)

{ alert("Names match"); }

**Chapter 14 (If statements nested)**

1. Code an if statement enclosing a nested if. If password is not empty, then check if password is not greater than 5 , then display an alert that says "Password must be greater than 5" if greater than 5 then Alert "OK".

Ans: Example: javascript if (password !== "")

{ if (password > 5) { alert("OK"); }

else { alert("Password must be greater than 5"); } }

1. Try this statement by yourself

if (a === 1) {

if (c === "Max") {

alert("OK");

}

}

Ans: This statement checks if a is equal to 1 and if c is equal to "Max," and if both conditions are true, it displays an "OK" alert.

1. Code the first line of an if statement that avoids the nesting above by testing for multiple conditions.

if (a === 1) {

if (c === "Max") {

alert("OK");

}

}

Ans: This statement checks if a is equal to 1 and c is equal to "Max" without using nested if statements.

1. Declare two variables and assign them the same number value.

Test two conditions, using nested if statements. Test whether the first variable equals the second variable and also whether it is less than or equal to the second variable. If the test passes—and it will—display an alert message.

Ans: Example: javascript var num1 = 5; var num2 = 5; if (num1 === num2) { if (num1 <= num2) { alert("Both conditions are true!"); } }

**Chapter 15 (Array I)**

1. Declare an empty array. Ans: var emptyArray = [];
2. Code an array with 1 string element

Ans: var stringArray = ["Hello"];

1. var alphabet = ["h","i","j","k"]. Now print the letter “j” in alert using array index

Ans:alert(alphabet[2]);

1. var alphabet=["h","i","j","k", “l”,”m”, “n”, “o”]. Find the total length of array.

Ans: var length = alphabet.length;

1. Declare an array with one element and Add a second element with index in array. Create an alert whose message is the new element.

Ans: var myArray = ["Element 1"]; myArray[1] = "Element 2"; alert(myArray[1]);

**Chapter 16 (Array II)**

1. Code an array with 1 string element. Add an additional element to the array using push. Create an alert whose message is the last element.

Ans: var myArray = ["Element 1"]; myArray.push("Element 2"); alert(myArray[myArray.length - 1]);

1. var Alphabet=["h","i","j","k"] Remove the last element from the array Alphabet.

Ans: Alphabet.pop();

1. var Alphabet=["h","i","j","k"] Add a new element, a number, to the end of an array.

Ans: Alphabet.push(42);

**Chapter 16 (Array III)**

1. var sizes = ["S", "M", "XL", "XXL", "XXXL"]. Remove the first element of an array.

Ans: sizes.shift();

1. var sizes = ["S", "M", "XL", "XXL", "XXXL"]. Add three number elements to the beginning of an array.

Ans: sizes.unshift(1, 2, 3);

1. Declare an array with one element. Add a second element to the beginning of the array. Create an alert whose message is the new first element.

Ans: var myArray = ["Element 1"]; myArray.unshift("Element 2"); alert(myArray[0]);

1. var sizes = ["S", "M", "XL", "XXL", "XXXL"]. Insert "L" into the array between "M" and "XL".

Ans: javascript sizes.splice(2, 0, "L");

1. var sizes = ["S", "M", "XL", "XXL", "XXXL"]. Copy the first 3 sizes of the array and put them into a new array, regSizes.

Ans: javascript var regSizes = sizes.slice(0, 3);

1. var pets = ["dog", "cat", "ox", "duck", "frog"]. Add 2 elements after "dog" and remove "cat", "ox", and "duck".

Ans: javascript pets.splice(2, 3, "elephant", "giraffe");

1. var pets = ["dog", "cat", "ox", "duck", "frog"]; Remove "cat" and "ox".

Ans: javascript pets.splice(1, 2);

1. var pets = ["dog", "cat", "ox", "duck", "frog", "flea"]; Reduce it to "duck" and "frog" using slice.

Ans: javascript var selectedPets = pets.slice(3, 5);

**Chapter 17 - 20 (for Loops)**

1. Write a statement in which loop is to run 10 times.

Ans: for (var i = 0; i < 10; i++) { ... }

1. Code the first line of a for loop with the usual counter name, usual starting value, and usual increment. Run it 12 times using <= to specify how many loops.

Ans: for (var i = 0; i <= 11; i++) { ... }

1. What are the 5 characters missing from this code, excluding any spaces that are missing? Type them in order, with no spaces or commas between them. for var i = 0 i <= 4 i++ Note: Complete this statement by yourself

Ans: for (var i = 0; i <= 4; i++) { ... }

1. Code the first line of a for loop with a counter name that's not i. Code the usual starting value and usual increment. Run it 100 times using < to specify how many loops.

Ans: for (var j = 0; j < 100; j++) { ... }

1. Code the first line of a for loop with the usual counter and the usual starting value. Run it 3 times using > to specify how many loops. Decrement it with each iteration.

Ans: for (var k = 3; k > 0; k--) { ... }

1. The statement assigns the number of elements in the array to the variable.

Ans: var arrayLength = myArray.length;

1. Set a variable named “flag” with an initial Boolean value of your choice.

Ans: var flag = true;

1. Code the first line of a for loop with the usual counter, the usual starting value, and the usual incrementing. Limit the number of loops by the number of elements in the array pets.

Ans: for (var i = 0; i < pets.length; i++) { ... }

1. Coding Exercise: Set a for loop to run 10 iterations.

On the second iteration, display the counter in an alert. (It should be 1.) Break out of the loop.

Ans: javascript for (var i = 0; i < 10; i++) { if (i === 1) { alert(i); break; } }

1. Create an array which contains user names

Code a prompt with the message "Enter first name". The user's response is assigned to firstName. Code the first line of a for loop with the usual counter, the usual starting value, and the usual incrementing. Limit the number of loops by the number of elements in the array user names. Code an if statement that tests the presense of (user name) in an array. If user name match Alert that "Enter". if not then alert ("Please write correct user name").

Ans: javascript var userNames = ["Alice", "Bob", "Charlie"];

var firstName = prompt("Enter first name");

for (var i = 0; i < userNames.length; i++)

{ if (firstName === userNames[i])

{ alert("Enter"); break; } }

if (i === userNames.length)

{ alert("Please write correct user name"); }

1. Complete this code to display an alert if a match isn't found.

var matchFound = false;

for (var i = 0; i < list.length; i++) {

if (userInput === list[i]) {

alert("Match found");

matchFound = true;

break;

}

};

Ans:

var matchFound = false;

for (var i = 0; i < list.length; i++)

{ if (userInput === list[i])

{ alert("Match found");

matchFound = true; break; } }

if (!matchFound) { alert("No match found"); }

1. var firstArr = [“a”, “b”, “c”, “d”, “e”, “f”];

var secondArr = [1, 2, 3, 4, 5, 6];

Code the first line of a for loop with the usual counter, the usual starting value, and the usual incrementing. Limit the number of loops by the number of elements in the array firstArr.

In the scope of main loop Code the nested loop. Limit the number of nested loops by the number of elements in the array secondArr.

After that concatenate the both loops.

Expected Output:

a1

a2

a3

a4

…

f6

Ans: javascript for (var i = 0; i < firstArr.length; i++)

{ for (var j = 1; j <= secondArr.length; j++)

{ console.log(firstArr[i] + j); } }

================= THE END =================