**Java script exam**

1. Strings

How do you declare a string in JavaScript? Provide an example.

What will be the output of the following code?

let firstName = "John";

let lastName = "Doe";

console.log(firstName + " " + lastName);

How can you find the length of a string in JavaScript?

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1. let str1 = "Hello, World!";
2. output : John Doe
3. using .length property

let text = "JavaScript";

console.log(text.length); // Output: 10

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2. Booleans

What are the two possible boolean values in JavaScript?

Predict the output of the following:

let x = 10 > 5;

console.log(x);

How do you check if a variable is true in an if-statement?

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1. boolean values in JavaScript : true / false
2. the output : true
3. if (isActive === true) {

console.log("The variable is true!");

}

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3. Objects

How do you create an object in JavaScript?

Given the following object:

let person = {

name: "Ali",

age: 25,

country: "Jordan",

};

How would you access the age property?

What will be the output of the following code?

let user = {

name: "Sara",

age: 22,

job: "Engineer",

};

console.log(user["job"]);

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1. let person = {

name: "Ali",

age: 25,

country: "Jordan" };

2. console.log(person.age); // Output: 25

3. Engineer

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4. Array Objects

How do you declare an array in JavaScript?

What will be the output of this code?

let fruits = ["apple", "banana", "cherry"];

console.log(fruits[1]);

How can you add an item to the end of an array?

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1. let fruits = ["apple", "banana", "cherry"];

2. banana

3. fruits.push("orange");

console.log(fruits)

5. Date Objects

How do you create a new Date object in JavaScript?

How do you get the current day of the week from a Date object?

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1. let currentDate = new Date();

console.log(currentDate);

2. let today = new Date();

let dayOfWeek = today.getDay();

console.log(dayOfWeek); // Output: a number from 0 to 6

**Convert the Number to a Day Name**

let days = ["Sunday", "Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday"];

console.log("Today is " + days[dayOfWeek]);

output: Today is Monday

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6. Functions

What will be the output of the following function call?

function multiply(x, y) {

return x \* y;

}

console.log(multiply(4, 5));

How do you define a function that converts Fahrenheit to Celsius?

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1. 20

2. function fahrenheitToCelsius(fahrenheit) {

return (fahrenheit - 32) \* 5 / 9;

}

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7. Objects with Methods

How do you define a method inside a JavaScript object?

What will be the output of the following code?

let car = {

brand: "Toyota",

model: "Corolla",

getDetails: function () {

return this.brand + " " + this.model;

},

};

console.log(car.getDetails());

How can you add a new method to an existing object?

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1. let person = {

name: "Ali",

greet: function() {

return "Hello, " + this.name + "!";

}

};

console.log(person.greet()); // Output: Hello, Ali!

2. Toyota Corolla

3. car.getYear = function() {

return "This car was made in 2020.";

};

console.log(car.getYear()); // Output: This car was made in 2020.

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8. Looping through Objects

How can you loop through an object’s properties?

What will be printed by the following loop?

let person = {

name: "Hussam",

age: 30,

city: "Amman",

};

for (let key in person) {

console.log(key + ": " + person[key]);

}

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1. let person = {

name: "Hussam",

age: 30,

city: "Amman"

};

for (let key in person) {

console.log(key + ": " + person[key]);

}

2. name: Hussam age: 30 city: Amman

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9. Conditional Statements

What is the difference between if and else if?

Identify the issue in the following code:

let age = 25;

if (age > 30) {

console.log("Older than 30");

} else if ((age = 30)) {

console.log("Exactly 30");

} else {

console.log("Younger than 30");

}

Correct the mistake in the above code.

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1. **if**: The if statement is used to test a condition. If the condition evaluates to true, the block of code inside the if is executed.

 **else if**: The else if statement is used to specify a new condition if the previous if condition was false. It allows you to check multiple conditions in sequence.

2. The issue: else if ((age = 30)) {

**Corrected Code:**

let age = 25;

if (age > 30) {

console.log("Older than 30");

} else if (age === 30) { // Use comparison (===) instead of assignment (=)

console.log("Exactly 30");

} else {

console.log("Younger than 30");

}

**Output (with age = 25):**

Younger than 30

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10. Switch Statements

What will be the output of this switch statement if today is Monday?

let day;

switch (new Date().getDay()) {

case 0:

day = "Sunday";

break;

case 1:

day = "Monday";

break;

default:

day = "Invalid day";

} console.log(day);

How does the break statement work in a switch case?

What happens if you forget to include a break statement in a switch case?

1. Monday

2. The break statement is used to **exit** the switch statement once a matching case is found and the corresponding code is executed.

3. If you forget to include the break statement, the program will **fall-through** to the next case without checking the condition, even if it doesn't match. This can lead to unexpected behavior.