

## ASSIGNMENT - 1 (JS Refresher)

Q1. Declare a variable for your name, your age, and whether you are a student or not. Log these values to the console. Using Template literal.

main.js	Output
<pre>1 // Online Javascript Editor for free 2 // Write, Edit and Run your Javascript code using JS Online Compiler 3 const name="Kowsalya"; 4 const age=22; 5 const IsStudent="Not a Student"; 6 console.log(`Name=\${name}`); 7 console.log(`Age=\${age}`); 8 console.log(`\${name} is a Student or not = \${IsStudent}`);</pre>	<pre>node /tmp/p5yyVILdDr.js Name=Kowsalya Age=22 Kowsalya is a Student or not = Not a Student</pre>

Q2. Write a arrow function that takes a string as an argument and returns the string in reverse order.

main.js	Output
<pre>1- const reverseString = (inputString) =&gt; { 2   return inputString.split('').reverse().join(''); 3 }; 4 5 // Example usage: 6 const originalString = `👋 Good Morning 🍌`; 7 const reversedString = reverseString(originalString); 8 console.log(reversedString); // Outputs: "H e l l o , M o r n i n g 👋" 9 10 //function split usage here. If I give '' in split('') then it split each char in     string otherwise as below 11 const multilineString = "Line 1\nLine 3"; 12 const stringsplit= multilineString.split('n'); 13 console.log(stringsplit); 14</pre>	<pre>node /tmp/OtMGKmRKL0.js 👋 gniroM dooG 👋 [ 'Li', 'e 1', 'Li', 'e 3' ]</pre>

Q3. Write a function that takes two numbers as arguments and returns their sum, difference, product, and quotient.

main.js	Output
<pre>1 const a=5; 2 const b=4; 3- const operations=(a,b)=&gt;{ 4   const sum = a + b; 5   const difference = a - b; 6   const product = a * b; 7   const quotient = a / b; 8+  return { 9    sum, 10   difference, 11   product, 12   quotient 13 }; 14 } 15 const op=operations(a,b); 16 console.log(` sum is \${op.sum} \n difference is \${op.difference} \n product is     \${op.product} \n quotient is \${op.quotient}`)</pre>	<pre>node /tmp/7sB52DK2GJ.js sum is 9 difference is 1 product is 20 quotient is 1.25</pre>

Q4. Write a function that checks if a given number is positive, negative, or zero and logs the result to the console using ternary operator.

main.js	Output
<pre> 1 2- const checknumber=(a)=&gt;{ 3   return a&gt;0?'Positive Number':a&lt;0?'Negative Number':'Zero' 4 } 5- console.log( 6   ` 5 is a \${checknumber(5)} \n-5 is a \${checknumber(-5)} \n 0 is not a positive    and negative number but simply it is \${checknumber(0)}` 7 ) </pre>	<pre> node /tmp/yb88w7XJ4L.js 5 is a Positive Number -5 is a Negative Number 0 is not a positive and negative number but simply it is Zero </pre>

Q5. Create an array of your favorite fruits. Use a `for` loop to print each fruit to the console.

main.js	Output
<pre> 1 const favoriteFruits = ["apple", "banana", "orange", "grapes", "kiwi"]; 2 const emojis=["🍏","🍌","🍊","🍇","🥝"] 3- for(let i=0;i&lt;favoriteFruits.length;i++){ 4   console.log(`Fruite \${i+1} is \${favoriteFruits[i]}\${emojis[i]} `) 5 } </pre>	<pre> node /tmp/hFJfcsqTLA.js Fruite 1 is apple🍏 Fruite 2 is banana🍌 Fruite 3 is orange🍊 Fruite 4 is grapes🍇 Fruite 5 is kiwi🥝 </pre>

Q6. Write a function called `greet` that takes a name as a parameter and returns a greeting message, like "Hello, [name]!".

main.js	Output
<pre> 1- const greet = (name)=&gt;{ 2   console.log(`Hello, \${name}!`); 3 } 4 greet('Kowsalya') </pre>	<pre> node /tmp/rYERNP6ytV.js Hello, Kowsalya! </pre>

Q7. Create an object representing a car with properties like `make`, `model`, and `year`. Write a function that logs the make and model of the car.

main.js	Output
<pre> 1- const car = { 2   make: 'Nissan', 3   model: 'Bluebird', 4   year: 2022, 5-   drive: function() { 6     return 'Vroom!'; 7   } 8 }; 9 10- const carproperty=(car)=&gt;{ 11   return `Car Make is \${car.make} \nCar Model is \${car.model}\nCar Year is     \${car.year}` 12 }; 13 14 const cp=carproperty(car); 15 16 console.log(cp); 17 18 </pre>	<pre> node /tmp/Vmw72Mv237.js Car Make is Nissan Car Model is Bluebird Car Year is 2022 </pre>

Q8. Given an array of numbers, write a function that returns a new array containing only the even numbers.

main.js	Output
<pre>1 const getEvenNumbers = (inputs) =&gt; inputs.filter(x =&gt; x % 2 === 0); 2 console.log(getEvenNumbers([1, 2, 3, 4, 5, 6])); 3 4 5</pre>	<pre>node /tmp/TjJPTURwbh.js [ 2, 4, 6 ]</pre>

Q9. Create an HTML button element. Write JavaScript code that listens for a click event on the button and displays an alert saying "Button clicked!".

```
const button = document.createElement("button");
button.textContent = "Click me!";
```

```
button.addEventListener("click", () => {
  alert("Button clicked!");
});
```

```
document.body.appendChild(button);
```

Q10. Write a function that logs the current date and time in the format "YYYY-MM-DD HH:MM".

<pre>1 function logFormattedDate() { 2   const now = new Date(); 3   const year = now.getFullYear(); 4   const month = String(now.getMonth() + 1).padStart(2, '0'); 5   const day = String(now.getDate()).padStart(2, '0'); 6   const hours = String(now.getHours()).padStart(2, '0'); 7   const minutes = String(now.getMinutes()).padStart(2, '0'); 8 9   const formattedDate = `\${year}-\${month}-\${day} \${hours}:\${minutes}`; 10  console.log(formattedDate); 11 } 12 13 // Call the function to log the current date and time 14 logFormattedDate(); 15</pre>	<pre>node /tmp/53e1A0ibRR.js 2024-08-08 04:06</pre>
--	---

Q11. You have an array of numbers. Write a function that uses the `map` method to create a new array where each number is doubled. For example, given the array `[1, 2, 3, 4, 5]`, the function should return `[2, 4, 6, 8, 10]`.

main.js	Output
<pre>1 const numbers = [1, 2, 3, 4, 5]; 2 3 const doubledNumbers = numbers.map((num) =&gt; num * 2); 4 5 console.log(doubledNumbers); 6</pre>	<pre>node /tmp/jCP1F04VMW.js [ 2, 4, 6, 8, 10 ]</pre>

Q12. Write a function `mergeArrays` that takes any number of arrays as arguments and returns a single array containing all elements from the given arrays, without duplicates. Use the rest operator to gather the input arrays and the spread operator to merge them.

main.js	Output
<pre>1- const mergeArrays=(...arrays) =&gt; { 2   const mergedArray = [...new Set([].concat(...arrays))]; 3   return mergedArray; 4 } 5 6 // Example usage: 7 const array1 = [1, 2, 3]; 8 const array2 = [3, 4, 5]; 9 const array3 = [5, 6, 7]; 10 11 const result = mergeArrays(array1, array2, array3); 12 console.log(result); // Output: [1, 2, 3, 4, 5, 6, 7] 13 14</pre>	<pre>node /tmp/5G8cDqHpMG.js [   1, 2, 3, 4,   5, 6, 7 ]</pre>