**Part 1: Find the culprits and nail them — debugging javascript**

fix.html

<!DOCTYPE html>  
<html>  
<body>  
 <script>  
 alert( “I’m JavaScript!’);  
 </script>  
 Whats the error in this ?  
</body>  
</html>

The error in the code is a syntax error in the alert() function call. The quotation marks used around the message are not standard double quotes

<!DOCTYPE html>

<html>

<body>

<script>

alert("I'm JavaScript!");

</script>

Whats the error in this ?

</body>

</html>

**Find the culprit and invoke the alert**

fix.html

<!DOCTYPE html>  
<html>  
<body>  
 <script src=”script.js”></script>  
</body>  
</html>

scripts.js

alert(“I’m invoked!”);

Corrected code: script name specified inside the src is incorrect.

<!DOCTYPE html>  
<html>  
<body>  
 <script src=”scripts.js”></script>  
</body>  
</html>

**Explain the below how it works**

explain.html

<!DOCTYPE html>  
<html>  
<body>  
 <script src=”script.js”></script>  
</body>  
</html>

script.js

alert("I'm JavaScript!");  
alert('Hello') // this line is not having semicolon  
alert(`Wor  
 ld`)  
alert(3 +  
1  
+ 2); // this is multiple line code and its working

Explanation: The code consists of an HTML file explain.html and a JavaScript file script.js. The HTML file contains a script tag that links to the JavaScript file using the src attribute.

1 ) alert("I'm JavaScript!"); - This line uses the alert() function to display a message in an alert box when the JavaScript code is executed. The message in this case is "I'm JavaScript!".

2) alert('Hello') - This line also uses the alert() function to display a message in an alert box. The message in this case is "Hello". Note that this line does not end with a semicolon, but it is not required for JavaScript to function correctly.

3) alert(`Wor  
 ld`) - This line also uses the alert() function to display a message in an alert box. The message in this case is "World". Note that the message is split across two lines, and the backtick (`) character is used to enclose the message. This is a feature of template literals in JavaScript.

4) alert(3 + 1 + 2); - This line uses the alert() function to display the result of a mathematical expression in an alert box. The expression adds together the numbers 3, 1, and 2, resulting in the value 6. Note that this expression spans multiple lines, but this is allowed in JavaScript as long as the line breaks do not interfere with the syntax of the expression.

**Fix the below to alert**Guvi geek

fix.html

<!DOCTYPE html>  
<html>  
<body>  
 <script src=”script.js”></script>  
</body>  
</html>

script.js

let admin=9, fname=10.5;   
fname = "Guvi";  
lname = "geek"  
admin = fname+lname;alert( admin ); // "Guvi geek"

Answer ; fix the script.js file

let fname = "Guvi";

let lname = "geek";

let admin = fname + " " + lname;

alert(admin);

**Fix the below to alert**hello Guvi geek

fix.html

<!DOCTYPE html>  
<html>  
<body>  
 <script src=”script.js”></script>  
</body>  
</html>

script.js

let fname=10.5;   
fname = "Guvi";  
lname = "geek"let name = fname+lname;alert( 'hello ${name}' );

Answer :

let fname = "Guvi";

let lname = "geek";

let name = fname + lname;

alert(`hello ${name}`);

**Fix the below to alert sum of two numbers**

fix.html

<!DOCTYPE html>  
<html>  
<body>  
 <script src=”script.js”></script>  
</body>  
</html>

script.js

let a = prompt("First number?");  
let b = prompt("Second number?");  
alert(a + b);

Answer : need to convert the input to numbers before doing arithmetic operations

let a = prompt("First number?");

let b = prompt("Second number?");

a = Number(a);

b = Number(b);

alert(a + b);

**Fix the below to alert sum of two numbers**

fix.html

<!DOCTYPE html>  
<html>  
<body>  
 <script src=”script.js”></script>  
</body>  
</html>

script.js

let a = prompt("First number?");  
let b = prompt("Second number?");  
alert(a + b);

let a = prompt("First number?");

let b = prompt("Second number?");

alert(Number(a) + Number(b));

**If you run the below scritpt you will get “**Code is Blasted**”**

**Explain Why the Code is blasted and how to diffuse it and get “**Diffused**”.**

fix.html

<!DOCTYPE html>  
<html>  
<body>  
 <script src=”script.js”></script>  
</body>  
</html>

script.js

var a = "2" > "12";//Don't touch below this  
if (a) {  
 console.log("Code is Blasted")  
}  
else  
{  
 console.log("Diffused")   
}

Reason for getting output as “code is blasted”

The code is currently outputting "Code is Blasted" because the comparison operator > performs a string comparison instead of a numerical comparison when comparing "2" and "12"

To fix the code and output "Diffused" instead of "Code is Blasted", we can convert the strings to numbers before comparing them.

var a = parseInt("2") > parseInt("12");

//Don't touch below this

if (a) {

console.log("Code is Blasted")

}

else

{

console.log("Diffused")

}

**How to get the success in console.**

fix.html

<!DOCTYPE html>  
<html>  
<body>  
 <script src=”script.js”></script>  
</body>  
</html>

script.js

let a = prompt("Enter a number?");//Don't modify any code below thisif (a) {  
 console.log( 'OMG it works for any number inc 0' );  
}  
else  
{  
 console.log( "Success" );  
}

Modified code to get success output :

let a = prompt("Enter a number?");

//Don't modify any code below this

if (a || a === "") {

console.log( 'OMG it works for any number inc 0' );

}

else

{

console.log( "Success" );

}

**How to get the correct score in console.**

fix.html

<!DOCTYPE html>  
<html>  
<body>  
 <script src=”script.js”></script>  
</body>  
</html>

script.js

let value = prompt('How many runs you scored in this ball');  
if (value === 4) {  
 console.log("You hit a Four");  
} else if (value === 6) {  
 console.log("You hit a Six");  
} else {  
 console.log("I couldn't figure out");  
}

Modified code to get the correct output:

let value = prompt('How many runs you scored in this ball');

if (parseInt(value) === 4) {

console.log("You hit a Four");

} else if (parseInt(value) === 6) {

console.log("You hit a Six");

} else {

console.log("I couldn't figure out");

}

**Fix the code to welcome the Employee**

fix.html

<!DOCTYPE html>  
<html>  
<body>  
 <script src=”script.js”></script>  
</body>  
</html>

script.js

let login = 'Employee';  
let message = (login == 'Employee') ? :  
 (login == 'Director') ? 'Greetings' :  
 (login == '') ? 'No login' :  
 '';console.log(message);

let login = 'Employee';

let message = (login == 'Employee') ? 'Hello' :

(login == 'Director') ? 'Greetings' :

(login == '') ? 'No login' :

'';

console.log(message);

**Fix the code to welcome the boss**

fix.html

<!DOCTYPE html>  
<html>  
<body>  
 <script src=”script.js”></script>  
</body>  
</html>

script.js

// You cant change the value of the msg  
let message;if (null || 2 || undefined )  
{  
 let message = "welcome boss";  
}  
else  
{  
 let message = "Go away";  
}  
 console.log(message);

// You cant change the value of the msg

let message;

if (message === null || message === undefined || message === 2)

{

message = "welcome boss";

}

else

{

message = "Go away";

}

console.log(message);

**Fix the code to welcome the boss**

fix.html

<!DOCTYPE html>  
<html>  
<body>  
 <script src=”script.js”></script>  
</body>  
</html>

script.js

let message;  
let lock = 2;//Dont change any code below this if (null || lock || undefined )  
{  
 message = "Go away";  
}  
else  
{  
 message = "welcome";  
}  
 console.log(message);

let message;

let lock = 2;

// Don't change any code below this

if (lock) {

message = "welcome boss";

} else {

message = "Go away";

}

console.log(message);

**Change the code to print**

3

2

1

fix.html

<!DOCTYPE html>  
<html>  
<body>  
 <script src=”script.js”></script>  
</body>  
</html>

script.js

//You can change only 2 characterslet i = 3;while (i) {  
 console.log( --i );  
}

let i = 3;

while (i) {

console.log(i);

i--;

}

**Change the code to print 1 to 10 in 4 lines**

fix.html

<!DOCTYPE html>  
<html>  
<body>  
 <script src=”script.js”></script>  
</body>  
</html>

script.js

let num = 1  
console.log(num)  
num += 1  
console.log(num)  
num += 1  
console.log(num)  
num += 1  
console.log(num)  
num += 1  
console.log(num)  
num += 1  
console.log(num)  
num += 1  
console.log(num)  
num += 1  
console.log(num)  
num += 1  
console.log(num)  
num += 1  
console.log(num)

for (let i = 1; i <= 10; i++) {

console.log(i);

if (i % 4 === 0) {

console.log("\n");

}

}

**Change the code to print even numbers**

fix.html

<!DOCTYPE html>  
<html>  
<body>  
 <script src=”script.js”></script>  
</body>  
</html>

script.js

//You are allowed to modify only one character for (let num = 2; num <= 20; num += 1) {  
 console.log(num)  
}

for (let num = 2; num <= 20; num += 2) {

console.log(num)

}

**Change the code to print all the gifts**

fix.html

<!DOCTYPE html>  
<html>  
<body>  
 <script src=”script.js”></script>  
</body>  
</html>

script.js

let gifts = ["teddy bear", "drone", "doll"];for (let i = 0; i < 3; i++) {  
 console.log('Wrapped ${'gifts[i]'} and added a bow!');  
}

let gifts = ["teddy bear", "drone", "doll"];

for (let i = 0; i < 3; i++) {

console.log(`Wrapped ${gifts[i]} and added a bow!`);

}

**Fix the code to disarm the bomb.**

fix.html

<!DOCTYPE html>  
<html>  
<body>  
 <script src=”script.js”></script>  
</body>  
</html>

script.js

let countdown = 100;while (countdown > 0) {  
 countdown--;  
 if(countdown == 0)  
 {  
 console.log("bomb triggered");  
 }  
}

<!DOCTYPE html>

<html>

<body>

<script src=”script.js”></script>

</body>

</html>

script.js

let countdown = 100;

while (countdown > 0) {

countdown--;

if(countdown == 0)

{

console.log("bomb disarmed");

}

}

Whats the msg printed and why?

var lemein = “0”;  
var lemeout = 0;  
var msg = “”;if (lemein) {  
 msg += “hi”;  
 }if (lemeout) {  
 msg += ‘Hello’;  
}console.log(msg);

Whats the msg printed and why? Guess you answer before running it.

var lemein = “0”;  
var lemeout = 0;  
var msg = “”;if (lemein) {  
 msg += “hi”;  
 }if (lemeout) {  
 msg += ‘Hello’;  
}console.log(msg);

The message printed will be "hi".