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

1. **Find the culprit**

fix.html

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

Correct syntax :

alert(“I’m Javascript!”)

1. **Find the culprit and invoke the alert**

fix.html

<!DOCTYPE html>

The file name is different.

Correct name : “scripts.js”

<html>

<body>

<script src=”script.js”></script>

</body>

</html>

scripts.js

alert(“I’m invoked!”);

1. **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`)

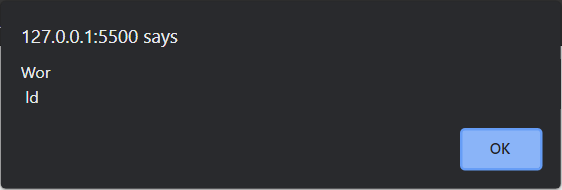
alert(3 +

1

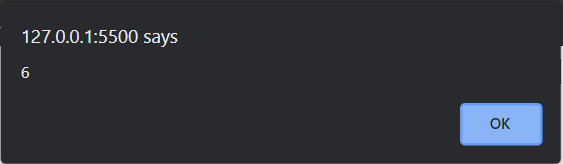
+ 2); // this is multiple line code and its working

As per the above code, the browser will alert the data one by one.

* For the first two alerts the alert function is complete. It will alert the values one by one “I,m Javascript!” and “Hello”.
* On the third alert there is no semi colon to indicate that the code is finished on that line. So it will move on to the next line and takes the data. So, It will alert as



* It’s the same with the fourth alert. There is no semi colon at the end of the first line, so it moves on to the next line. As there is no semi colon on the second line too, it will move on to the third line and takes the data in that line. This process will go on till it finds the next semi colon. The alert is



1. **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;

admin = fname + “ “ + lname;

// alerts Guvi geek.

fname = "Guvi";

lname = "geek"

admin = fname+lname;

alert( admin ); // "Guvi geek"

1. **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}' );

Correct code:

let fname = "Guvi";

let lname = "geek";

let name = fname + " " + lname;

alert(`hello ${(name)}`);

1. **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);

correct code:

let a = prompt("First number?");

let b = prompt("Second number?");

alert((+a) + (+b));

1. **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")

}

While comparing two strings “2” will be greater than “12”. Because alphabetically “2” is greater than “1”(first digit of the number “12”). So the var a will return “true”. And the condition will be met, and the console will print “Code is Blasted”;

Correct code to get “Diffused”:

// if we change the strings to numbers,it will print "Diffused"

var a = 2 > 12;

//Don't touch below this

if (a) {

  console.log("Code is Blasted")

} else{

  console.log("Diffused")

}

1. **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 this

if (a) {

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

}

else

{

console.log( "Success" );

}

correct code:

let a = prompt("Enter a number?");

/\*we can check if the entered value is number.

if its not, we change var a to false.

it will fail the condition and prints success\*/

if(isNaN(a)) {a = false};

//Don't modify any code below this

if (a) {

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

} else {

 console.log( "Success" );

}

1. **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");

}

correct code:

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(`You scored ${(value)} runs`);

}

1. **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);

correct code:

let login = 'Employee';

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

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

    (login == '') ? 'No login' : '';

console.log(message);

1. **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);

Correct code:

// You cant change the value of the msg

let message;

if (null || 2 || undefined )

{

 message = "welcome boss";

}

else

{

 message = "Go away";

}

  console.log(message);

1. **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);

correct code:

let message;

let lock;

//Dont change any code below this

if (null || lock || undefined )

{

  message = "Go away";

}

else

{

 message = "welcome";

}

  console.log(message);

1. **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 (lock && " " || undefined )

{

message = "Go away";

}

else

{

message = "welcome";

}

console.log(message);

Correct code:

let message;

let lock = null;

//Dont change any code below this

if (lock && " " || undefined )

{

  message = "Go away";

}

else

{

 message = "welcome";

}

console.log(message);

1. **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 characters

let i = 3;

while (i) {

console.log( --i );

}

correct code :

//You can change only 2 characters

let i = 3;

while (i) {

  console.log( i-- );

}

1. **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)

correct code in 4 lines:

let num = 1;

for(let i = 0; i < 10; i++){

    console.log(num++);

}

1. **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)

}

correct code :

//You are allowed to modify only one character

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

    console.log(num)

  }

1. **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!');

}

correct code :

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

for (let i = 0; i < 3; i++) {

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

}

1. **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");

}

}

Ans :

let countdown = 100;

while (countdown > 0) {

    if(countdown == 0){

        console.log("bomb triggered");

    }

    countdown--;

}

1. 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);

The above code will print “hi” in the console.

* On the first condition block, it will check if the data in the var lemein is true or false or 0 or 1(the numbers 1 and 0 will be read as true and false). If the data is none of those values, it will check if any data is available in the var. The variable has a string “0”, so the condition will be met and the string “hi” is added to var msg.
* On the second condition block , it will check the same as above. The value in the var lemeout is 0. So it will return false, and the code block will not run.
* And the final result will be msg = “hi”.