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

Once you are familiar with basic syntax you can reinforce your understanding by solving these simple snippets

**1.Find the culprit**

fix.html

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

ANSWER- on this line (alert( “I’m JavaScript!’);) after JavaScript word there should a double inverted comma(") instead of single inverted comma or we can use single inverted comma also only if the starting comma is also single inverted comma but in this case there is single inverted comma is present already in the sentence so we cannot use it here.

**2.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!”);

ANSWER- file name (scripts.js) is incorrect. It should be script.js as written in HTML file

We can resolve it like this:

fix.html

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

script.js

alert(“I’m invoked!”);

**3.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

ANSWER-

HTML EXPLAIN- In html file the inverted comma is incorrect instead of forward or backward double inverted comma(”) it should have straight double inverted comma(") then it will execute the js file.

Later on content inside the js file will execute first "I'm JavaScript!" line will invoked on the window. second 'Hello' will get invoked. third `Wor and ld will invoked together but o separate line as written in js file nad at last it will invoke the sum of values give in js file that is 6 will invoke.

**4.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- Only problem is that in between Guvi and geek there is no space

Correction- We can resolve it like this in javascript file by providing space after Guvi i.e "Guvi ";

script.js

let admin=9, fname=10.5;   
fname = "Guvi ";  
lname = "geek"  
admin = fname+lname;

alert( admin ); // "Guvi geek"

**5.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- here backtick(`) is required instead of single inverted comma on 5th line (alert(‘hello ${name})) because when we use ${name} it us required to use backtick.

Correction-

script.js

let fname=10.5;   
fname = "Guvi"  
lname = "geek"

let name = fname+lname;

alert(`hello ${name}`);

**6.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- here in js file use + (plus sign) before prompt .

Correction-

script.js

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

**7.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- here in js file use + (plus sign) before a and b in alert .

Correction-

script.js

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

**8.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")   
}

ANSWER- here in js file var a = "2" > "12"; 2 and 12 is considered as a string value not a number due to double inverted comma that is why condition was true. but when we remove the inverted comma the condition was not satisfied because it be considered as number and 2 is not greater than 12 it returns false value that is why else condition is executed.

CORRECTION- remove the double inverted comma present around 2 and 12.

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

**9.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" );  
}

ANSWER- just press cancel without entering any key.

**10.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");  
}

ANSWER- by adding console.log( `score is ${value}`) at last else statement.

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(`score is ${value});  
}

**11. 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);

**correction-**

script.js

let login = 'Employee';  
let message = (login == 'Employee')? 'Greetings' :'No login' ;

console.log(message);

**12. 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);

**correction-**

script.js

let message;  
let lock = null;

//Dont change any code below this

if (null || lock || undefined )  
{  
 message = "Go away";  
}  
else  
{  
 message = "welcome";  
}  
 console.log(message);

**13. 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 thisif (lock && " " || undefined )  
{  
 message = "Go away";  
}  
else  
{  
 message = "welcome";  
}  
console.log(message);

**correction-**

script.js

let message;  
let lock;

//Dont change any code below this

if (lock && " " || undefined )  
{  
 message = "Go away";  
}  
else  
{  
 message = "welcome";  
}  
console.log(message);

**14. 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 );  
}

**Correction-**

script.js

//You can change only 2 characters

let i = 3;while (i) {  
 console.log( i-- );  
}

**15. 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)

answer-

let num = 1

console.log(num,num,num,num)

num += 1

console.log(num,num,num,num)

num += 1

console.log(num,num,num,num)

num += 1

console.log(num,num,num,num)

num += 1

console.log(num,num,num,num)

num += 1

console.log(num,num,num,num)

num += 1

console.log(num,num,num,num)

num += 1

console.log(num,num,num,num)

num += 1

console.log(num,num,num,num)

num += 1

console.log(num,num,num,num)

16. **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)  
}

Answer-

script.js

//You are allowed to modify only one character

for (let num = 2; num <= 20; num += 2) {  
 console.log(num)  
}

17. **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!');  
}

answer-

script.js

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

18/.**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");  
 }  
}

answer-

script.js

let countdown = 100;

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

19. 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);

answer- no output since msg is declared as a empty string.

# GUVI: Zen Class — Part 2 : Find the culprits and nail them — debugging javascript loops

Write a code to print the numbers in the array

**Output**: 1234567891011

var numsArr = [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11];

var new\_string = “”;  
   
for (var i = 1; i < 11; i--) {  
 new\_string += numsArr[i]   
}console.log(new\_string);

**ANSWER-**

var numsArr = [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11];

var new\_string = “”;  
   
for (var i = 0; i < 11; i++) {  
 new\_string += numsArr[i]   
}console.log(new\_string);

**2.** Write a code to print the numbers in the array

**Output**: 1,2,3,4,5,6,7,8,9,10,11

var numsArr = [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11];

var new\_string = “”;  
   
for (var i = 1; i < 11; i++) {  
 new\_string += numsArr[i] + ,   
}console.log(new\_string);

**answer-**

var numsArr = [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11];

var new\_string = “”;  
   
for (var i = 0; i < 11; i++) {  
 new\_string += numsArr[i] + “,”   
}console.log(new\_string);

**3.** Write a code to print from last to first with spaces (Make sure there is no space after the last element 1)

**Output**: 11 10 9 8 7 6 5 4 3 2 1

var new\_string = “”;  
   
for (var i = 11; i > 0; i — ) {  
 new\_string += numsArr[i] + “ “   
}  
console.log(new\_string);

**answer=**

var new\_string = “”;  
   
for (var i = 11; i > 0; i — ) {  
 new\_string += numsArr[i] + “ “   
}  
console.log(new\_string);

**4.** Write a code to replace the array value — If the number is even, replace it with ‘even’.

**Output**:[ 1, “even”, 3, “even”, 5, “even”, 7, “even”, 9, “even”, … ]

var numsArr = [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11];for (var i = 0; i <=10; i++) {  
 if(numsArr[i] %2 == 0 )  
 {  
 numsArr[i] = odd  
 }  
}  
console.log(numsArr);

**answer:**

var numsArr = [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11];for (var i = 0; i <=10; i++) {  
 if(numsArr[i] %2 == 0 )  
 {  
 numsArr[i] = “even”  
 }  
}  
console.log(numsArr);

**5.** Write a code to replace the array value — If the index is even, replace it with ‘even’.

**Output**: [ “even”, 2, “even”, 4, “even”, 6, “even”, 8, “even”, 10, … ]

var numsArr = [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11];

for (var i = 0; i <=10; i++) {  
 if(numsArr[i] %2 == 0 )  
 {  
 numsArr[i] = even  
 }  
}  
console.log(numsArr);

**answer:**

var numsArr = [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11];

for (var i = 0; i <=10; i++) {  
 if(numsArr[i] %2 == 0 )  
 {  
 numsArr[i] = “even”  
 }  
}  
console.log(numsArr);

**6.** Write a code to add all the numbers in the array

Output: 66

var numsArr = [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11];

for (var i = 0; i <=10; i++) {  
 var sum;  
 sum += numsArr[i]  
}  
console.log(sum);

**answer:**

var numsArr = [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11];

var sum=0;

for (var i = 0; i <=10; i++) {  
  
 sum += numsArr[i];  
}  
console.log(sum);

**7.** Write a code to add the even numbers only  
**Output**: 30

var numsArr = [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11];  
var sum=0;for (var i = 0; i <10; i++) {  
 if(numsArr[i]%2==0);  
 sum += numsArr[i]  
}  
console.log(sum);

**anwer-**

var numsArr = [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11];  
var sum=0;for (var i = 0; i <10; i++) {  
 if(numsArr[i]%2==0){  
 sum += numsArr[i]

}  
}  
console.log(sum);

**8.** Write a code to add the even numbers and subract the odd numbers  
**Output**: 94

var numsArr = [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11];  
var sum=100;for (var i = 0; i <=10; i++) {  
 if(numsArr[i]%2!=0);  
 {  
 sum += numsArr[i]  
 }  
 else  
 {  
 sum -= numsArr[i]  
 }  
}  
console.log(sum);

**answer-**

var numsArr = [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11];  
var sum=100;for (var i = 0; i <=10; i++) {  
 if(numsArr[i]%2==0)  
 {  
 sum += numsArr[i]  
 }  
 else  
 {  
 sum -= numsArr[i]  
 }  
}  
console.log(sum);

**9.** Write a code to print inner arrays  
**Output**:

Array(5) [ 1, 2, 3, 4, 5 ]  
Array(6) [ 6, 7, 8, 9, 10, 11 ]

var numsArr = [[1, 2, 3, 4, 5][ 6, 7, 8, 9, 10, 11]];  
for (var i = 0; i < numsArr.length; i++); {  
 console.log( numsArr[i])  
}

**answer-**

var numsArr = [[1, 2, 3, 4, 5][ 6, 7, 8, 9, 10, 11]];

function looper(){

for(let i = 0; i < numsArr.length; i++){

console.log(numsArr[i])

}

}

console.log(looper())

**10.** Write a code to replace the array value — If the index is even, replace it with ‘even’.

**Output**: [ [“even”, 2, “even”, 4, “even”], [6, “even”, 8, “even”, 10, …] ]

var numsArr = [[1, 2, 3, 4, 5],[ 6, 7, 8, 9, 10, 11]];  
var str\_all=0;for (var i = 0; i < numsArr.length; i++) {  
 var inner\_array = numsArr[i];  
 for(var j = 0 ; j < inner\_array.length;i++ )  
 if(numsArr[i] %2 == 0 )  
 {  
 numsArr[i] = even  
 }  
}  
console.log(numsArr);

**answer-**

var numsArr = [[1, 2, 3, 4, 5],[ 6, 7, 8, 9, 10, 11]];  
var str\_all=0;

for (var i = 0; i < numsArr.length; j++) {  
 var inner\_array = numsArr[i];  
 for(var j = 0 ; j < inner\_array.length;j++ )  
 if(numsArr[i] %2 == 0 )  
 {  
 numsArr[i] = even  
 }  
}  
console.log(numsArr);

# GUVI: Zen Class — Part 3: Find the culprits and nail them — debugging javascript

**1. Fix the code to get the largest of three.**

Code:

aa = (f,s,t) => {  
 let f,s,t;  
 console.log(f,s,t);  
 if(f>s &&f>t){  
 console.log(f)}  
 else if(s>f && s>t){  
 console.log(s)}  
 else{  
 console.log(t)}  
}aa(1,2,3);

**answer-**

let f,s,t;

aa = (f,s,t) => {  
 if(f>s &&f>t){  
 console.log("largest is f value is"+f)}  
 else if(s>f && s>t){  
 console.log("largest is s value is"+s)}  
 else{  
 console.log("largest is t value is"+t)}  
}aa(1,2,3);

**2. Fix the code to Sum of the digits present in the number**

Code:

let n = 123;

console.log(add(n));function add(n)  
{  
let sum = 10;  
for(var i=0;i<n.length;i++){  
 sum+=n[i]  
 }  
 return sum;  
}

**answer-**

let n = [1,2,3];

console.log(add(n));function add(n)  
{  
let sum = 10;  
for(var i=0;i<n.length;i++){  
 sum+=n[i]  
 }  
 return sum;  
}

**4. Fix the code to gen Title caps.**

Code:

var arr = [“guvi”, “geek”, “zen”, “fullstack”];

var ano = function(arro) {  
 for (var i = 0; i <= arro.length; i++) {  
 console.log(arro[i][0].toUpperCase() + arro[i].substr(1));  
 }  
}  
ano();

**answer-**

var arr = ["guvi", "geek","zen", "fullstack"]

var ano = function(arr) {  
 for (var i = 0; i <= arr.length; i++) {  
 console.log(arr[i][0].toUpperCase() + arr[i].substr(1));  
 }  
}  
ano();

**5. Fix the code to sum the number in that array**

Code:

const num = [10, 20, 30, 40,50,60,70,80,90,100]   
const sum = (a, b) =>  
 a + b  
const sum = num.reduce(sum)  
console.log(sum);

**answer-**

const num = [10, 20, 30, 40,50,60,70,80,90,100]   
const sum = (a, b) =>  
 a + b  
const add = num.reduce(sum)  
console.log(add);

**6. Fix the code to gen Title caps.**

Code:

var arr = [“guvi”, “geek”, “zen”, “fullstack”];(function() {  
 for (var i = 0; i <= arr.length; i++) {  
 console.log(arr[0][i].toUpperCase() + arr[i].substr(1));  
 }  
})();

**answer-**

var arr = ["guvi", "geek","zen", "fullstack"];

(function() {  
 for (var i = 0; i <= arr.length; i++) {  
 console.log(arr[i][0].toUpperCase() + arr[i].substr(1));  
 }  
})();

**7. print all odd numbers in an array using IIFE function**

Code:

var arr = [1, 2, 3, 5, 7, 79, 7, 2, 6, 9, 4];(function() {  
 for (var i = 0; i < arr.length; i++) {  
 if (arr[i] % 2 === 0) {  
 console.log(arr[i]);  
 }}  
})();

**answer-**

var arr = [1, 2, 3, 5, 7, 79, 7, 2, 6, 9, 4];(function() {  
 for (var i = 0; i < arr.length; i++) {  
 if (arr[i] % 2 !== 0) {  
 console.log(arr[i]);  
 }}  
})();

**8. Fix the code to reverse.**

Code:

(function(str){  
 str1 = str.split(“ “).reverse().join(“”);  
 console.log(str1);   
})(“abcd”)

**Answer-**

(function(str){  
 const str1 = str.split(“”).reverse().join(“”);  
 console.log(str1);   
})(“abcd”)

**9. Fix the code to remove duplicates.**

Code:

var res = function(arr){  
 for(var i=0; i < arr.length; i++){  
 newArr = [];  
 if(newArr.indexOf(arr[i]) == -1) {  
 newArr.push(arr[i]);  
 } }  
 console.log(newArr)  
}res([“guvi”,”geek”,”guvi”,”duplicate”,”geeK”])

**ANSWER-**

var res = function(arr){  
 for(var i=0; i < arr.length; i++){  
 newArr = [];  
 if(newArr.indexOf(arr[i]) == -1) {  
 newArr.push(arr[i]);  
 } }  
 console.log(newArr)  
}

res(['guvi','geek','guvi','duplicate','geeK']);

**10. Fix the code to give the below output:**

Sum of odd numbers in an array

Code:

var as=[12,34,5,6,2,56,6,2,1];  
var s=as.reduce(function(a,c){  
 if(c%2!=0)  
 {  
 return a+c;  
 }  
 return a;});  
console.log(s);

**answer-**

var as=[12,34,5,6,2,56,6,2,1];  
var s = as.reduce((a, c)=> {

if (c % 2 > 0) {

return a+c;

}

return a;

});

console.log(s);

**11. Fix the code to give the below output:**

Swap the odd and even digits

Code:

aa = data=>{  
 var a=data;  
for(i=0;i<a.length-1;i++){  
 var l=’’;  
 var s=a[i+1]  
 var b=a[i]  
 l+=s  
 l+=b  
 i=i+1  
}  
if((a.length%2)!=0){  
 l+=a[a.length-1]  
}  
console.log(l);  
}aa(“1234”);

**answer-**

aa = data=>{

var a=data;

for(i=0;i<a.length-1;i++){

var l="";

var s=a[i+1]

var b=a[i]

l+=s

l+=b

i=i+1

}

if((a.length%2)!=0){

l+=a[a.length-1]

}

console.log(l);

}

aa(“1234”);