**GUVI: Zen Class — 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

**Find the culprit**

fix.html

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

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**Find the culprit and invoke the alert**

fix.html

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

scripts.js

alert(“I’m invoked!”);

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**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

Ans: explanation of the above code:

Html has the reference javascript, we will get an alert box saying “I’m Javascript”. Then it will alert ‘Hello’, then alerts the ‘Wor \n ld’, then alerts ‘6’.

Even if the semicolon is missing JS will forgive, and template literal will handle the new lines.

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**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"

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**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}` );**

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**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(Number(a) + Number(b));**

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**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(Number(a) + Number(b));**

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**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")   
}

Ans: since 2 and 12 is in string format , condition will be true, so “code is blasted” is printed.

If we change to number, condition will be false and it prints “Diffused”

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**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" );  
}

Ans: give nothing in the prompt, null value will lead to print the “success”

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**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");  
}

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**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') ? ‘welcome’:(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 )  
{  
 **message = "welcome boss";**  
}  
else  
{  
 **message = "Go away";**  
}

console.log(message);

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**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 = null;** //Dont change any code below this

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

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

let i = 3;

while (i) {  
 **console.log( 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  
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num += 1  
console.log(num)  
num += 1  
console.log(num)  
num += 1  
console.log(num)  
num += 1  
console.log(num)

Ans:

Let num=1;

While(num<=10){

Console.log(num);

num++;}

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**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 += 2) {**  
 console.log(num)  
}

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**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!);**  
}

— — — — — — — — — — — — — — — — — — — — — — — — — — — — — — -

**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) {   
 if(countdown == 0)  
 {  
 console.log("bomb triggered");  
 }

countdown--;  
}

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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);

Ans:

o/p: hi

reason: ‘0’ is a string in first case so it is considered to be true.

In the second case, 0 is a number and the condition failed

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);

Ans:

o/p: hi

reason: ‘0’ is a string in first case so it is considered to be true.

In the second case, 0 is a number and the condition failed

# 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 = 0; i < 11; i++) {**  
 new\_string += numsArr[i]   
}

console.log(new\_string);

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 = 0; i < 10; i++) {**  
 new\_string += numsArr[i] + ,   
}

**new\_string += numsArr[numsArr.length-1];**

console.log(new\_string);

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 = 10; i > 0; i — - ) {** new\_string += numsArr[i] + “ “   
}

**new\_string += numsArr[0];**

console.log(new\_string);

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] = “even”;**  
 }  
}  
console.log(numsArr);

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(i %2 == 0 )**  
 {  
 numsArr[i] = even  
 }  
}  
console.log(numsArr);

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];

**var sum;**

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

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);

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=0;**

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

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])  
}

Write a code to print elements in the inner arrays  
**Output**: 1234567891011

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

**var str\_all=””;**

for (var i = 0; i < numsArr.length; i++) {  
 var inner\_array = numsArr[i];  
 for(var j = 0 ; j < inner\_array.length;i++ )  
 str\_all +=inner\_array[j]  
}  
console.log(str\_all);

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

Write a code to print elements in the inner arrays in reverse  
**Output**: 11 10 9 8 7 6 5 4 3 2 1

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

**for (var i = numsArr.length-1 ; i>=0; i--) {**  
 var inner\_array = numsArr[i];  
 **for(var j = inner\_array.length-1; j >= 0 ;j-- )**  
 str\_all +=inner\_array[j]  
}  
console.log(str\_all);

Write a code to add elements in the inner arrays based on odd or even values  
**Output**:   
36  
30

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

for (var i = 0; i < numsArr.length; i++) {  
 var inner\_array = numsArr[i];  
 for(var j = 0 ; j < inner\_array.length;j++ ){  
 if(numsArr[i]%2!=0)  
 {  
 **sum\_odd += numsArr[i][j];** }  
 else  
 {  
 **sum\_even += numsArr[i][j];**  
 }  
}  
}  
console.log(sum\_odd);  
console.log(sum\_even);

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

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

Code:

**let 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);

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**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 = 0;**  
**while(n!=0)**

**{**

**sum+=n%10;**

**n= Math.trunc(n/10);**

**}** return sum;  
}

— — — — — — — — — — — — — — — — — — — — — — — — —

**Fix the code to Sum of all numbers using IIFE function**

Code:

const arr = [9,8,5,6,4,3,2,1];

(function() {  
 let sum = 0;  
 **for (var i = 0; i < arr.length; i++){**  
 sum += arr[i];  
 }  
 console.log(sum);  
})(**arr**);

— — — — — — — — — — — — — — — — — — — — — — — — —

**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(**arr**);

— — — — — — — — — — — — — — — — — — — — — — — — —

**Fix the code to return the Prime numbers**

Code:

const newArray=[1,3,2,5,10];  
const myPrime=newArray.filter(num=>{  
 **for(let i=2;i<num;i++){**  
 **if(num==1 || num%i===0)**  
 {  
 **return false;**  
 }  
 }  
 **return num !=1;**  
});  
console.log(myPrime);

— — — — — — — — — — — — — — — — — — — — — — — — —

**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 = num.reduce((a,b)=>a+b,0)**  
console.log(sum);

— — — — — — — — — — — — — — — — — — — — — — — — —

**Fix the code to rotate an array by k times and return rotated array using IIFE function**

Code:

var arr = [1, 2, 3, 6, 8, 6, 1, 9, 10, 12, 13];  
var k = 3;  
k = arr.length % k;  
(function() {  
 **//arr = {};**  
 out = arr.slice(k + 1, arr.length);  
 var count = out.length;  
 for (var i = 0; i < k + 1; i++) {  
 out[count] = arr[i];  
 count += 1;  
 }  
 console.log(out);})();

— — — — — — — — — — — — — — — — — — — — — — — — —

**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));  
 }  
})();

— — — — — — — — — — — — — — — — — — — — — — — — —

**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]);  
 }}  
})();

— — — — — — — — — — — — — — — — — — — — — — — — —

**Fix the code to reverse.**

Code:

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

— — — — — — — — — — — — — — — — — — — — — — — — —

**Fix the code to remove duplicates.**

Code:

var res = function(arr){

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

— — — — — — — — — — — — — — — — — — — — — — — — —

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

Expected Output:

[  
{firstName: “Vasanth”, lastName: “Raja”, age: 24, role: “JSWizard”},  
{firstName: “Sri”, lastName: “Devi”, age: 28, role: “Coder”}  
]

Code:

var array =[[[“firstname”,”vasanth”],[“lastname”,”Raje”],[“age”,24],[“role”,”JSWizard”]],[[“firstname”,”Sri”],[“lastname”,”Devi”],[“age”,28],[“role”, “Coder”]]];  
var final=[]  
while(array.length!=0)  
{

**var new\_object ={};**  
 var outer\_remove = array.shift();  
   
 while(outer\_remove.length!=0)  
 {  
 var inner\_remove = outer\_remove.shift()  
 var key = inner\_remove[0]  
 var value =inner\_remove[1]  
 new\_object[key]=value  
 }  
 final.push(new\_object)}

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**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;},0);**  
console.log(s);

— — — — — — — — — — — — — — — — — — — — — — — — —

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

Swap the odd and even digits

Code:

aa = data=>{  
 var a=data;

**var l=’’;**  
**for(i=0;i<=a.length-1;i++){**  
   
 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”);