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

**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!”);

**Solution:**

Change of double quotation with tilt (`) symbol

alert(`I’m invoked!`);

**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

**Solution:**

Working as Expected without any issue

**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"

**Solution:**

**Working as Expected without any issue**

**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}' );

**Solution:**

**script.js**

SemiColon included and alert message changed by passing variable

let fname=10.5;   
fname = "Guvi";  
lname = "geek";(SemiColon Included)

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);

**Solution:**

**script.js**

After passing both values, addition is performed by first converting both values to number and added.

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")   
}

**Solution:**

Var a gives result of comparing string value of 2 and 12, since string value of 2 is greater than 12. Hence Code is Blasted will be displayed. If those string values are converted to Numbers for comparison, Diffused will be displayed.

**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" );  
}

**Solution:**

Since number prompt is declared using let variable, datatype is not defined for the value which we’re providing as input. Every time value of a will be passed as string and result will always be **OMG it works for any number inc 0** irrespective of input provided. In order to display expected result, typecasting will be provided for input as highlighted below

**script.js**

let a = prompt("Enter a number?");//Don't modify any code below this

if (Number(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");  
}

**Solution:**

Since number prompt is declared using let variable, datatype is not defined for the value which we’re providing as input. Every time value of a will be passed as string and result will always be **I couldn’t figure out** irrespective of input provided. In order to display expected result, typecasting will be provided for input as highlighted below

**script.js**

let value = prompt('How many runs you scored in this ball');  
if (Number(value) === 4) {  
 console.log("You hit a Four");  
} else if (Number(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);

**Solution:**

With below highlighted changes, result will be displayed as expected.

**script.js**

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

**Solution:**

With below highlighted changes, result will be displayed as expected.

**script.js**

// You cant change the value of the msg  
let message;

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

**Solution:**

With below highlighted changes, result will be displayed as expected.

**script.js**

let message;  
let lock = 0;

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

**Solution:**

With below highlighted changes, result will be displayed as expected.

**script.js**

let message;  
let lock = 0;//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 );  
}

**Solution:**

With below highlighted changes, result will be displayed as expected.

**script.js**

//You can change only 2 characters

let i = 3;

while (i >0) {  
 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)

**Solution:**

With below highlighted changes, result will be displayed as expected.

**script.js**

let num = 1

while (num<=10){

console.log(num);

num++;

}

**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)  
}

**Solution:**

With below highlighted changes, result will be displayed as expected.

**script.js**

//You are allowed to modify only one character

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!');  
}

**Solution:**

With below highlighted changes, result will be displayed as expected.

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

**Solution:**

With below highlighted changes, result will be displayed as expected.

**script.js**

let countdown = 100;

while (countdown > 1) {  
 countdown--;  
 if(countdown == 0)  
 {  
 console.log("bomb triggered");  
 }else{

console.log(“bomb diffused”);

}  
}

**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);

**Solution:**

Msg will be displayed as **hi** with respect to above code, since one input is passed as string and other input is passed as Number. Result of if conditional statement will always return true, if input is passed as string irrespective of value.

**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);

**Solution:**

Msg will be displayed as **hi** with respect to above code, since one input is passed as string and other input is passed as Number. Result of if conditional statement will always return true, if input is passed as string irrespective of value.