# GUVI: Zen Class — Variables Arrays & Objects

<!DOCTYPE html>  
 <html>  
 <head>  
 <title>JavaScript Beginners</title>  
 <script src="script.js"></script>  
 </head>  
 <body>  
 </body>  
 </html

script.js

console.log("hello world")

# ****Task 1: Simple Programs todo for variables****

1. Declare four variables without assigning values and print them in console

var a,b,c,d;

console.log(a,b,c,d);

##### Output:

undefined undefined undefined undefined

1. How to get value of the variable myvar as output

var myvar= 1;  
console.log("myvar"); //console.log(myvar);

1. Declare variables to store your first name, last name, marital status, country and age in multiple lines

var obj={

firstname:"xyz",

lastname:"pqr",

maritalstatus:"married",

country:"india",

age:25

}

console.log(obj)

1. Declare variables to store your first name, last name, marital status, country and age in a single line

var obj=[

"firstname",

"lastname",

"maritalstatus",

"country",

25

]

console.log(obj)

1. Declare variables and assign string, boolean, undefined and null data types

var a=true

var b=undefined

var c=null

console.log(a,b,c);

console.log(typeof(a),typeof(b),typeof(c))

##### Output:

true undefined null

boolean undefined object

1. Convert the string to integer

Var str=”1”

var num1=parseInt(str)

var num2=+str

var num3=Number(str)

console.log(num1,num2,num3);

* parseInt()
* Number()
* Plus sign(+)

7. Write 6 statement which provide truthy & falsey values.

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# Task 2: Simple Programs todo for Operators

1. Square of a number
2. Swapping 2 numbers
3. Addition of 3 numbers
4. Celsius to Fahrenheit conversion
5. Meter to miles
6. Pounds to kg
7. Calculate Batting Average
8. Calculate five test scores and print their average
9. Power of any number x ^ y.
10. Calculate Simple Interest
11. Calculate area of an equilateral triangle
12. Area Of Isosceles Triangle
13. Volume Of Sphere
14. Volume Of Prism
15. Find area of a triangle.
16. Give the Actual cost and Sold cost, Calculate Discount Of Product
17. Given their radius of a circle and find its diameter, circumference and area.
18. Given two numbers and perform all arithmetic operations.
19. Display the asterisk pattern as shown below(No loop needed):  
    \*\*\*\*\*  
    \*\*\*\*\*  
    \*\*\*\*\*  
    \*\*\*\*\*  
    \*\*\*\*\*
20. Calculate electricity bill?  
    For example, a consumer consumes 100 watts per hour daily for one month. Calculate the total energy bill of that consumer if per unit rate is 10?
21. Program To Calculate CGPA

# Task 3: Simple Programs todo for Condition , Looping and Arrays

1. Write a loop that makes seven calls to console.log to output the following triangle:

#  
##  
###  
####  
#####  
######  
#######

var str=””

for(var i=1;i<=7;i++)

{

for(var j=1;j<=i;j++)

str+=”#”

console.log(str)

}

2. Iterate through the string array and print it contents

var strArray= ["<option>Jazz</option>",  
 ,<option>Blues</option>",  
 ,<option>New Age</option>",  
 ,<option>Classical</option>",  
 ,<option>Opera</option>"]

for(var i=0;i<strArray.length;i++)

console.log(strArray[i])

##### Output:

Jazz

Blues

New Age

Classical

opera

**Arrays**:

var myarray=[11,22,33,44,55]

write a code to count the elements in the array . Don’t use length property

var i=0,count=0;

while(myarray[i]!=undefined)

{count+=1

i++;}

console.log(count)

Declare an empty array;  
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Create an array called foods holds the names of your top 20 favorite foods, starting with the best food.

let foods=[]

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Foods variable holds the names of your top 20 favorite foods, starting with the best food. How can you find your fifth favorite food?

let foods=[]

console.log(foods[4]);

Find the length of your foods array

console.log(foods.length);  
— — — — — — — — — — — — — — — -  
Starting from the existing friends variable below, change the element that is currently “Mari” to “Munnabai”.

let friends = [  
“Mari”,  
“MaryJane”,  
“CaptianAmerica”,  
“Munnabai”,  
“Jeff”,  
“AAK chandran”  
];

function dataHandling(input){  
for (var i = 0; i < input.length; i++) {  
if(input[i]==”Mari”)input[i]=”Munnabai”

}  
}

dataHandling(friends);

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Starting from the friends variable below, Loop and Print the names till you meet CaptianAmerica.

const friends = [  
“Mari”,  
“MaryJane”,  
“CaptianAmerica”,  
“Munnabai”,  
“Jeff”,  
“AAK chandran”  
];

function dataHandling(input){  
for (var i = 0; i < input.length; i++) {  
if(input[i]==” CaptianAmerica”){console.log(input[i]);break;}

console.log(input[i]);  
}  
}

dataHandling(friends);

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Find the person is ur friend or not.

const friends = [  
“Mari”,  
“MaryJane”,  
“CaptianAmerica”,  
“Munnabai”,  
“Jeff”,  
“AAK chandran”  
];

function dataHandling(input, name){  
for (var i = 0; i < input.length; i++) {  
if(input[i]==name)return “friend”

}return “not friend”  
  
}

let found = dataHandling(friends,”Jeff”);

console.log(found);

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We have two lists of friends below. Use array methods to combine them into one alphabetically-sorted list.

var friends1 = [  
“Mari”,  
“MaryJane”,  
“CaptianAmerica”,  
“Munnabai”,  
“Jeff”,  
“AAK chandran”  
];

var friends2 = [  
“Gabbar”,  
“Rajinikanth”,  
“Mass”,  
“Spiderman”,  
“Jeff”,  
“ET”  
];

var friends=friends1.concat(friends2)

function dataHandling(input){  
//Your code goes here

input.sort();  
}

dataHandling(friends);

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1. Get the first item, the middle item and the last item of the array

Array[0],array[-1],array[array.length/2]

1. Add your name to the end of the friends array, and add another name to beginning.

Friends.push(“myname”);

Friends.unshift(“another name”);

1. Add Mr or Ms to the names in the friends array.

friends=friends.map(item=>return “mr or miss”+item)

1. Concat all the names the friends array and return as comma “,” seperated string.

friends=friends.join("")

friends=friends.split("")

console.log(friends.toString())

1. Find the friends names who has letter ‘a’ and return the list.

friends.forEach(item=>{

var arr=item.split("")

for(var i=0;i<arr.length;i++)

if(arr[i]=='a')console.log(item)

})

1. Find the avg length of all the friends names. Get the individual length of the names and do the avg.

var res=friends.map(item=>{return item.length})

var sum=0;

for(var i=0;i<res.length;i++)

sum+=res[i]

console.log(sum/res.length)

1. Find the names and return the list starting with letter M.

var res=friends.map(item=>{if(item[0]=='m')return item})

console.log(res)

1. Find the name with max characters and return the name.

var res=friends.map(item=>{return item.length})

var max=res[0]

for(var i=1;i<res.length;i++)

{if(res[i]>max)

max=res[i]}

console.log(friends[res.indexOf(max)])

1. Find the name with min characters and return the name.

var res=friends.map(item=>{return item.length})

var min=res[0]

for(var i=1;i<res.length;i++)

{if(res[i]<min)

min=res[i]}

console.log(friends[res.indexOf(min)])

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Find the average in the array below.  
Make sure you add only the numbers and do avg.

const friendsInfo = [6, 12, ‘Mari’, 1, true, ‘Munnabai’, ‘200’, ‘CaptianAmerica’,2,10]

var sum=0,count=0;

friendsInfo.forEach(item=>{

if(typeof(item)==='number')

{sum+=item

count++}})

console.log(sum/count)

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Print the contents of the input variable

var input = [  
[“0001”, “Roman Alamsyah”, “Bandar Lampung”, “21/05/1989”, “Membaca”],  
[“0002”, “Dika Sembiring”, “Medan”, “10/10/1992”, “Bermain Gitar”],  
[“0003”, “Winona”, “Ambon”, “25/12/1965”, “Memasak”],  
[“0004”, “Bintang Senjaya”, “Martapura”, “6/4/1970”, “Berkebun”]  
]

function dataHandling(input){  
for (var i = 0; i < input.length; i++) {  
console.log(input[i])

}  
}

dataHandling(input);

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**Objects:**

What the output

myobject = {1:one,”11":1,”name”:”arun”}console.log(myobject.11);   
console.log(myobject.name);

ERROR

Add a new key value pair to myobject  
key : ten  
value : ten

myobject = {1:one,”11":1,”name”:”arun”}//your code goes hereconsole.log(myobject);{"1":"one","11":1,"name":"arun","ten":"ten"} // Quotes might not get displayed that fine.

##### Output:

{ '1': 'one', '11': 1, name: 'arun', ten: 'ten' }

##### Execution Time:

0.068s

Write out an object literal to represent the data below.

Guvi, Geek, 6, IIT-M RP,Chennai.

var obj={

firstname:'Guvi',

lastname:'Geek',

address:'IIT-M RP,Chennai'}

— — — — — — — — — — — — — — — -

How would you represent the following data using a combination of object literals and arrays? (You can describe a strategy without typing or writing out the whole thing.)

Guvi, Geek, 6, IIT-M RP,Chennai.  
Amazon, Inc, 31, SP Infocity, Chennai.  
Google, Alphabet, 34 Amphitheater Parkway, MountainView.  
Tesla, Inc , 32, 333 Santana Row,San Jose.

var arr=[]

var obj1={

a:'2',b:'3'

}

var obj2={

c:'4',d:'5'

}

arr.push(obj1);

arr.push(obj2);