Javascript Scope Exercises

1. Determine what this Javascript code will print out (without running it):

x = 1; var a = 5;

var b = 10;

var c = function(a, b, c) {

var x = 10;

document.write(x); //output 10

document.write(a); // output 8

var f = function(a, b, c) {

b = a;

document.write(b); // output 5

b = c;

var x = 5;

}

f(a,b,c);

document.write(b); // output 10

}

c(8,9,10);

document.write(b); // output 10

document.write(x); // output 1

}

1. What is the difference between a method and function?

Ans

A **function** is a piece of code that is called by name. It can be passed data to operate on (i.e. the parameters) and can optionally return data (the return value). All data that is passed to a function is explicitly passed.

A **method** is a piece of code that is called by a name that is associated with an object. In most respects it is identical to a function except for two key differences:

1. A method is implicitly passed the object on which it was called.
2. A method is able to operate on data that is contained within the class (remembering that an object is an instance of a class - the class is the definition, the object is an instance of that data).
3. What does 'this' refer to when used in a Java method?

Ans

“this “ refers the current object instantiated by class

1. What does 'this' refer to when used in a JavaScript method?

Ans

‘this’ normally refers to the object which ‘owns’ the method, and it depends on how a function is called.

If there’s no current object, ‘this’ refers to the global object. • In a web browser, that’s ‘window’

.

1. What does 'this' refer to when used in a JavaScript constructor function?

Ans

‘this’ refers to the new object when the constructor is used to create the object.

1. Assume object x is the prototype for object y in Javascript. Object x has a method f( ) containing keyword 'this'. When f is called by x.f( ), what does 'this' refer to?

Ans

Function X(){

This,

Mrthod:f();}

Var y=new X();

x.f();//output x object;

7. What is a free variable in JavaScript?

Ans

Free variable is a variable used in a function that are not local variables nor parameters of that function.

8.Create an object that has properties with name = "fred" and major="music" and a property that is a function that takes 2 numbers and returns the smallest of the two, or the square of the two if they are equal.

Ans

var obj={name:”fred”,major:”music”,propertyMethod:function(n1,n2){

if(n1===n2){

return n1\*n2;}

return (n1<n2)?n1:n2;

9. Write Javascript code for creating three Employee objects using the "new" keyword and a constructor function. Employee objects have the following fields: name, salary, position.

Ans

function Employee(name, salary, position){

this.name=name;

this. salary = salary;

this. position = position;

}

Const employee1=new Employee(“habtom”,15000,”developer”);

Const employee2=new Employee(“tomi”,10000,”developer”);

Const employee3=new Employee(“sami”,11000,”developer”);

10. Write a Javascript function that takes any number of input arguments and returns the product of the arguments.

Ans

function add(num1,num2){

return num1+num2;

}

add(9,8);

11. Write an arrow function that returns the maximum of its three input arguments.

Ans

function add(num1,num2){

return num1+num2;

}

add(9,8);

var add = (num1, num2) => num1 \* num2;

var output = add (5, 5);