**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); **// Display: 10**

document.write(a); // **Display: 8**

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

b = a; // ***b* have a new value** , **b=a=8**

document.write(b); // **Display: 8**

b = c; // ***b* have a new value , b=c=10**

var x = 5;

}

f(a, b, c);

document.write(b); // Display**: 9**

}

c(8, 9, 10);

document.write(b); // **Display:**  **10**

document.write(x); // **Display:**  **1**

}

**Answer: 10 8 8 9 10 1**

**2- What is the difference between a method and function?**

**Answer:**

* A JavaScript function is a block of code designed to perform a particular task.
* A JavaScript methods are actions that can be performed on objects.

**3- What does 'this' refer to when used in a Java method?**

**Answer: " this "** in java method refers to the current class method (implicitly).

**4- What does 'this' refer to when used in a JavaScript method?**

**Answer: " this "** in JavaScript method refers to the **owner** of the method.

**5- What does 'this' refer to when used in a JavaScript constructor function?**

**Answer:** In a constructor function **this** does not have a value. It is a substitute for the new object. The value of **this** will become the new object when a new object is created.

6- **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?**

**Answer:** The will use the name of his Owner.

**7- What is a free variable in JavaScript?**

**Answer:** A variable referred to by a function that is not one of its parameters or local variables.

**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.**

**Answer:**

var myObject = (function (n, m) {

var name = n;

var major = m;

return {

getResult: function (num1, num2) {

if (num1 > num2) {

return num2;

} else if (num1 < num2) {

return num1;

}

return num1 \* num2;

}

};

}) ("fred", "music");

**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?**

**Answer:**

function Employee (name, age, sex) {

this.name = name;

this.salary = salary;

this. position =position;

}

1. var joseph = new Employee ("DArimathe JOSEPH", 50000, "Manager");
2. var bob = new Employee ("Bob Jones", 40000, "Junior Developer ");
3. var tom= new Employee ("Tom John", 40000, "Junior Developer ");

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

**Answer:**

function product() {  
   var i;  
    var prod = 1;  
    for (i = 0; i < arguments.length; i++) {  
    prod \*= arguments[i];  
  }  
   return prod;  
 }

result = product(3,8,9,5);

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

**Answer:**

const maximumOfThreeValue=( a,b,c)=>{

if(a>b && a>c) {

return a;

}

else if(b>a && b>c)

{

return b;

}

return c;

};

result = maximumOfThreeValue(3,90,5);