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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); //1st. 10
    document.write(a); //2nd. 8
    var f = function(a, b, c) {
        b = a;
        document.write(b); //3rd. 8
        b = c;
        var x = 5;
        }
    f(a,b,c);
    document.write(b); //4th.  9
}
c(8,9,10);
document.write(b); //5th. 10
document.write(x); //6th. 1

Answer:  10  8  8  9  10  1
```

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

Answer:

A Method is a property of an object that contains a function definition.
Methods are functions stored as object properties.
Whereas a function is a block of code written to perform some specific set of
tasks.
We can define a function using the function keyword, followed by Name and
optional parameters.
Body of function is enclosed in Curly braces.

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

Answer:

'this' is a reference variable that refers to the current object.

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

Answer:

'this' refers to the owner object.

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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.

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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:

'this' refers to the object x

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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

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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:

```javascript
var obj={
    "name": "fred",
    "major":"music",
    "f":function(x,y){
        if(x>y){
            return y;
        }else if(x<y){
            return x;
        }else{
            return (x*x)+(y*y);
        }
    }
};
```

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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:

```javascript
function Employee(name, salary, position) {
  this.name = name;
  this.salary = salary;
  this.position = position;
}
var frank = new Employee("Frank Lampard", 80000, "Director");
var ken = new Person("Ken Jones", 90000, "Manager");
var afe = new Person("Afework Fita", 180000, "Senior software engineer");
```
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10. Write a Javascript function that takes any number of input arguments and returns the product of the arguments.

Answer:

```javascript
function anyProduct(...n){
    let product;
    for(let i=0;i<n.length; i++){
        product *=n[i];
    }
    return product;
}
```
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11. Write an arrow function that returns the maximum of its three input arguments.

Answer:

```javascript
var maxOfThree=(num1,num2,num3)=>{
    let largest;
    if(num1 >= num2 && num1 >= num3) {
        largest = num1;
    }
    else if (num2 >= num1 && num2 >= num3) {
        largest = num2;
    }
    else {
        largest = num3;
    }

    return largest;
};
```