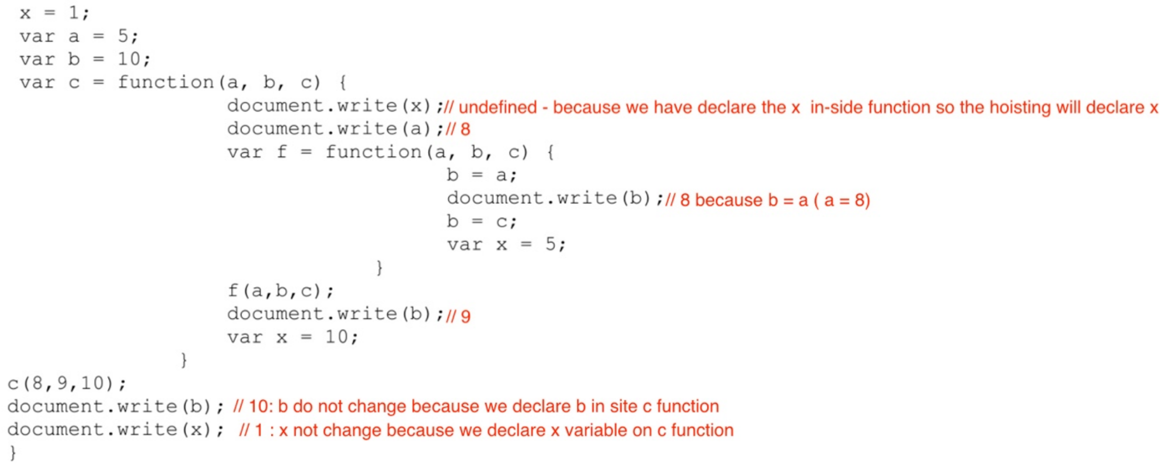
Web Applications Programming

Name: Chi Cuong Nguyen	Professor: Obinna Kalu
Student ID: 611111	Lab Name: **LAB 7 – WEEK 2 Day 1**

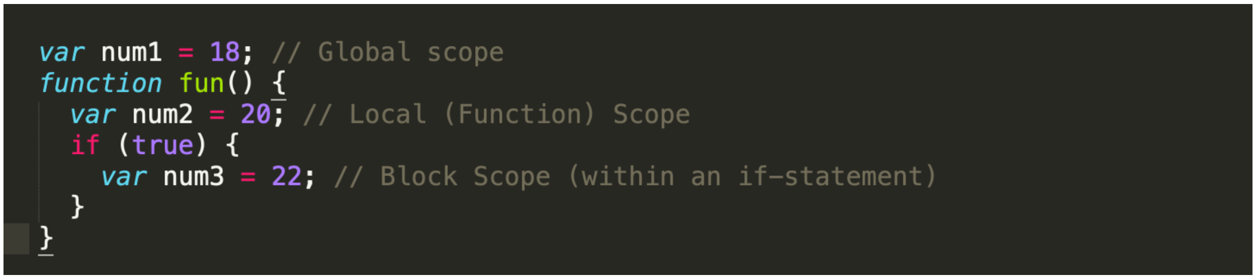
1. Determine the javascript code



```
 x = 1;
 var a = 5;
 var b = 10;
 var c = function(a, b, c) {
                  document.write(x);// undefined - because we have declare the x  in-side function so the hoisting will declare x
                  document.write(a);// 8
                  var f = function(a, b, c) {
                                    b = a;
                                    document.write(b);// 8 because b = a ( a = 8)
                                    b = c;
                                    var x = 5;
                              }
                  f(a,b,c);
                  document.write(b);// 9
                  var x = 10;
              }
c(8,9,10);
document.write(b); // 10: b do not change because we declare b in site c function
document.write(x);  // 1 : x not change because we declare x variable on c function
}
```

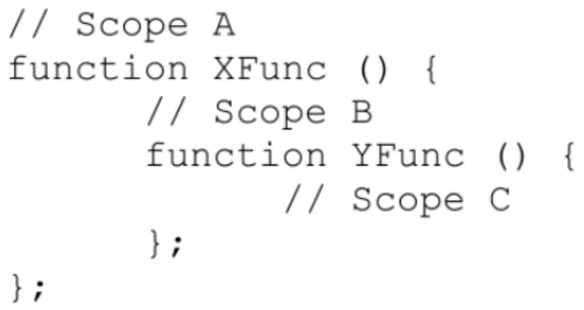
2. Define Global scope and Local scope in Javascript

- Global scope: The variable is available throughout the code
- Local scope: Available in only a certain area (like only within function)



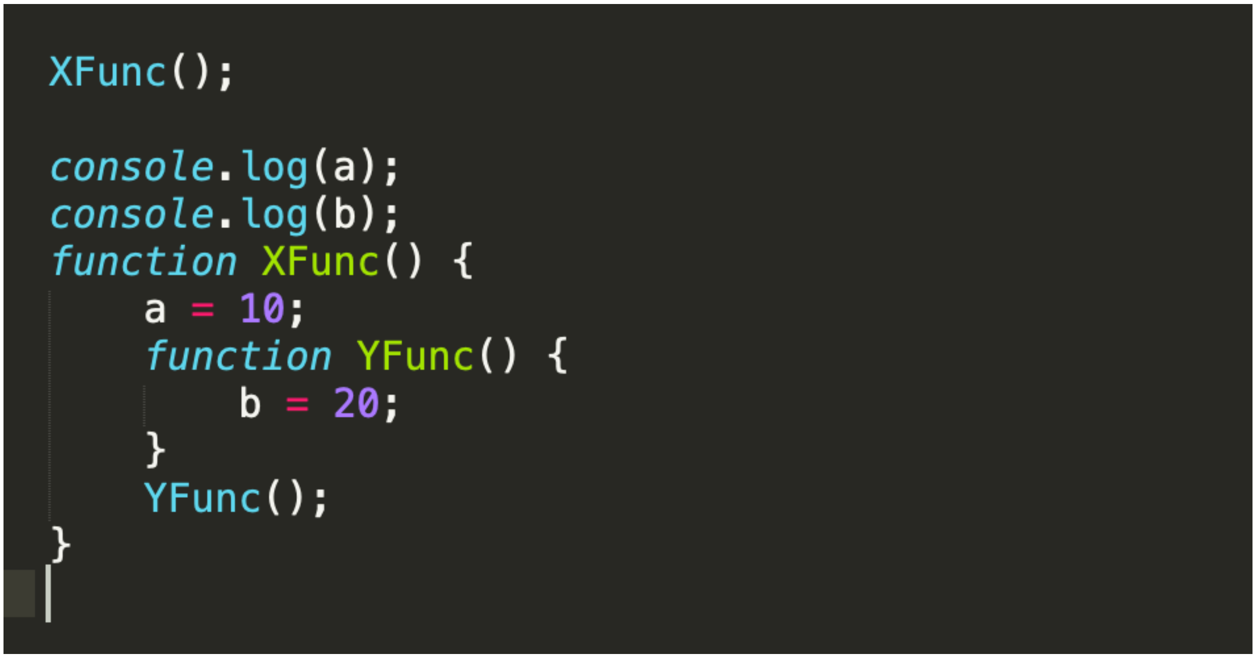
```
var num1 = 18; // Global scope
function fun() {
  var num2 = 20; // Local (Function) Scope
  if (true) {
    var num3 = 22; // Block Scope (within an if-statement)
  }
}
```

3. Do statement with following struct



```
// Scope A
function XFunc () {
      // Scope B
      function YFunc () {
            // Scope C
      };
};
```

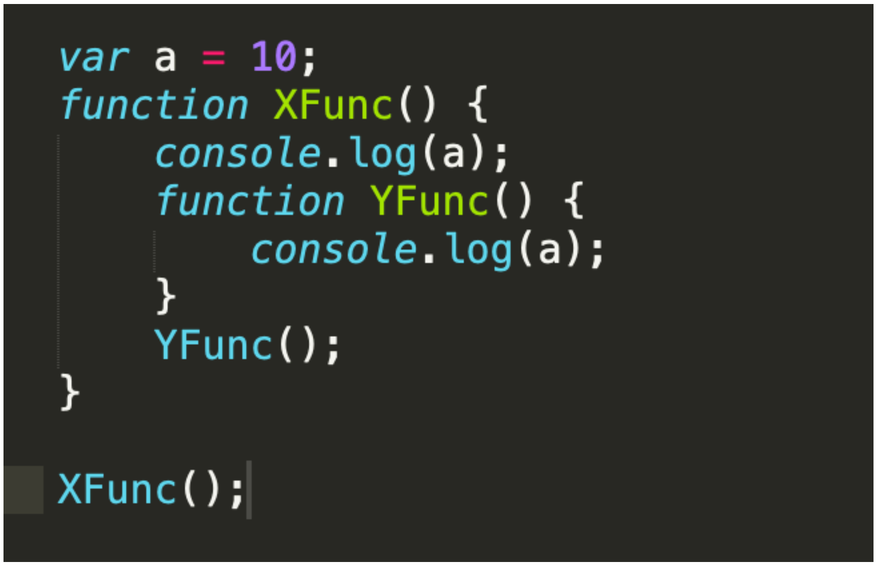
a. In scope A have access to variable defined in scope B and C



```
XFunc();

console.log(a);
console.log(b);
function XFunc() {
    a = 10;
    function YFunc() {
        b = 20;
    }
    YFunc();
}
```

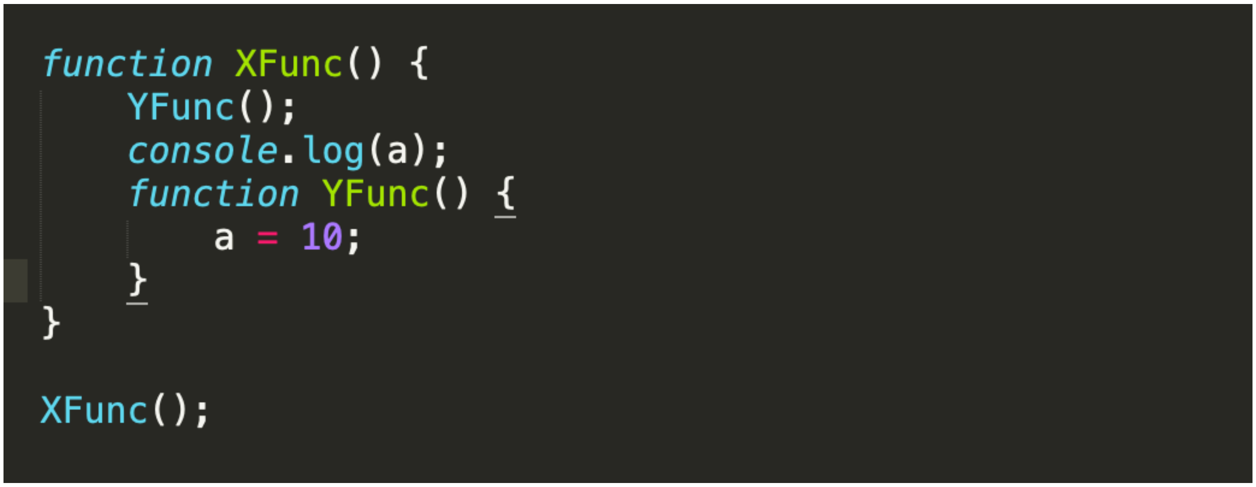
b. In scope B have access to variable defined in scope A



```
var a = 10;
function XFunc() {
    console.log(a);
    function YFunc() {
        console.log(a);
    }
    YFunc();
}

XFunc();
```

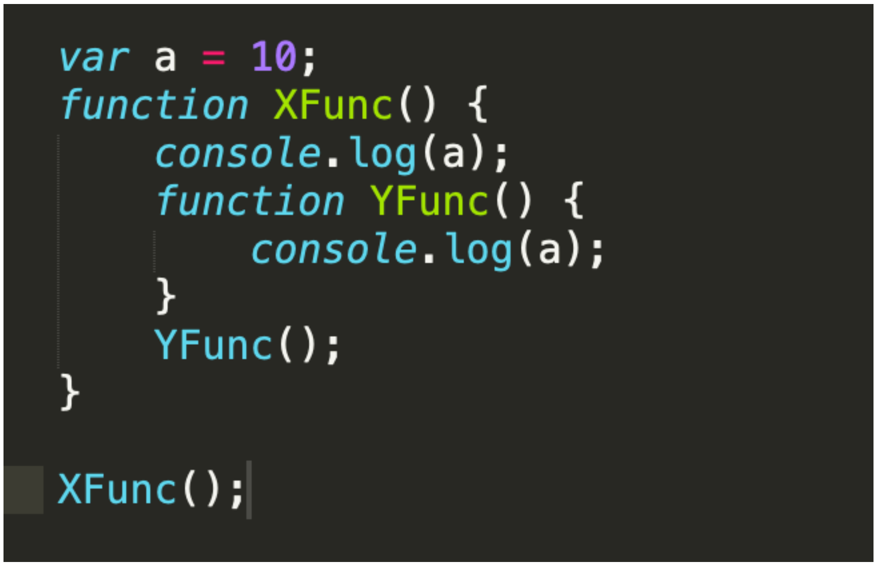
c. In scope B have access to variable defined in scope C



```
function XFunc() {
    YFunc();
    console.log(a);
    function YFunc() {
        a = 10;
    }
}

XFunc();
```

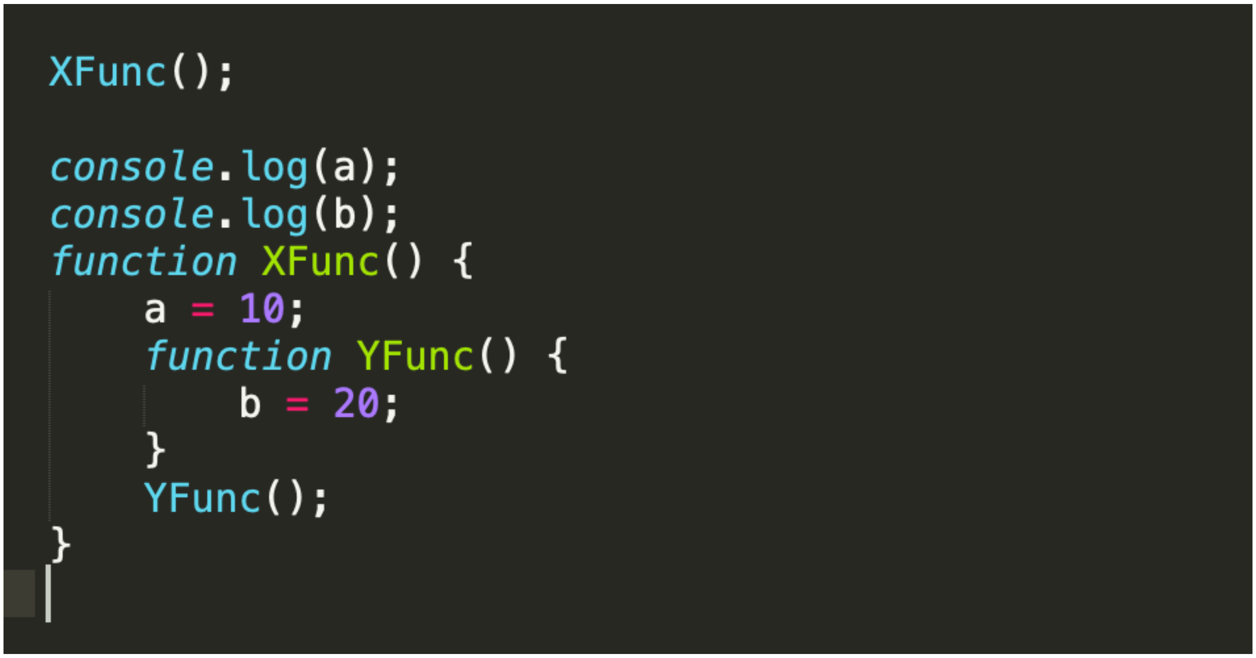
d. In scope C have access to variable defined in scope A



```
var a = 10;
function XFunc() {
    console.log(a);
    function YFunc() {
        console.log(a);
    }
    YFunc();
}

XFunc();
```

e. In scope C have access to variable defined in scope A



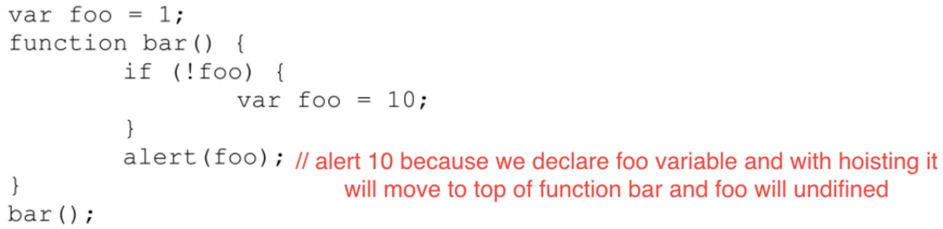
```
XFunc();

console.log(a);
console.log(b);
function XFunc() {
    a = 10;
    function YFunc() {
        b = 20;
    }
    YFunc();
}
```

4. Print the results with the code

```
var x = 9;
function myFunction() {
    return x * x;
}
document.write(myFunction()); // 81 myFunction will get x from var x = 9
x = 5;
document.write(myFunction());// 25 myFunction will get global scope x with x change from 9 to 5
```

5.



```
var foo = 1;
function bar() {
        if (!foo) {
                var foo = 10;
        }
        alert(foo); // alert 10 because we declare foo variable and with hoisting it
}                       will move to top of function bar and foo will undifined
bar();
```