

Lab 4

1. What will be printed by the following code snippets in strict mode (answer without running it)?
2. Draw the lexical environment diagram for each code snippet. Or you may list it instead of drawing. For example:

1. Global EC creation:

Outer: null, LE: [{}], TDZ{...}

2.Global EC execution:

Outer: null, LE: [{}], TDZ{...}

3.C FEC creation:

Outer: ..., LE: [{}], TDZ{...}

4.C FEC execution:

Outer: ... , LE: [{ }], TDZ{...}

...

```
let x;  
var a = 5;  
var b = 10;  
var c = function(a, b, c) {  
    document.write(x);  
    document.write(a);  
    var f = function(a, b, c) {  
        b = a;  
        document.write(b);  
        b = c;  
        var x = 5;  
    }  
    f(a,b,c);  
    document.write(b);  
    var x = 10;  
}  
c(8,9,10);  
document.write(b);  
document.write(x);
```

Code 1

```
var x = 9;
function myFunction() {
    return x * x;
}
document.write(myFunction());
x = 5;
document.write(myFunction());
```

Code 2

```
var foo = 1;
function bar() {
    if (!foo) {
        var foo = 10;
    }
    alert(foo);
}
bar();
```

Code 3

1(a) Output : undefined 8 8 9 10 undefined

(b) Output : 8 1 2 5

(c) Output 10

2.

FEC : creation \rightarrow execution
outer : C this : - - -

LE : $\left[\begin{array}{l} \text{args: } 8 \\ \{ x: \text{undefined}, \text{arguments: obj } \{ a: 8, b: 9, c: 10 \} \} \end{array} \right]$

C EC : creation \rightarrow execution
outer : global this : - - -

LE : $\left[\begin{array}{l} \text{args: } a=8, b=9, c=10 \text{ fn} \\ \{ \text{arguments: obj, fn: undefined, var: undefined} \} \end{array} \right]$

GEC GEC : creation \rightarrow execution
outer : null this : window

LE : $\left[\begin{array}{l} \text{args: } 8 \\ \{ a: \text{undefined}, b: \text{undefined}, c: \text{undefined} \} \end{array} \right]$ EdZ
X

output : undefined 8 8 9 10 undefined.

2.

myfunctionEC : creation → exaction
outer : global
LE: [{ arguments: {} }
myfunctionEC : creation → exaction
outer : global.
LE: [{ arguments: { 3 } }
GiEC : creation → exaction
outer : null
LE: [{ ⁹⁵ x: undefined , myfunction: fn }

output : 8125

~~411~~

3.

bar EC : creation → execution
outer : global this : ...

LE [{ foo : undefined, arguments : { 3 }

GLEC : creation → execution
outer : null this : window

LE : [{ foo : ¹⁰undefined, bar : fn

Output : 10