

Lab 6

1. What will be printed by the following code snippets (answer without running it)?
2. Draw the lexical environment diagram for each code snippet.

```
x = 1;
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);
}
```

Error

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

3. The following code creates an array of shooters. Every function is meant to output its number. But something is wrong...

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Homework

- Draw a lexical environment diagram for the right code and show:
 - global lexical environment (LE)
 - LE for makeArmy()
 - LE for LE of the while loop
 - LE for army[0]
 - What will army[0] alert?
 - Can you fix the code?
 - How will the diagram change?

```

function makeArmy() {
    let shooters = [];
    let i = 0;
    while (i < 2) {
        let shooter = function() {
            alert(i);
        };
        shooters.push(shooter);
        i++;
    }
    return shooters;
}
let army = makeArmy();
army[0];

```

Why do all of the shooters show the same value? Fix the code so that they work as intended.