JAVASCRIPT: SCOPE

GLOBAL SCOPE

```javascript
var x = "hello!";

function someFunction () {
  console.log(x);
}


someFunction(); // prints "hello!"
console.log(x); // also prints "hello!"
```

LOCAL SCOPE

```javascript
function anotherFunction () {
  var y = "beep";
  console.log(y);
}


anotherFunction(); // prints "beep"
console.log(y); // throws "ReferenceError: y is not defined"
```

LOCAL SCOPE (CONTINUED)

```javascript
function sampleFunction (x) {
  console.log(x);
}


sampleFunction("apple"); // prints "apple"
console.log(x); // throws "ReferenceError: x is not defined"
```

EXERCISE 1

CREATE A SCRIPT THAT DOES THE FOLLOWING:

> DECLARES AND ASSIGNS A GLOBAL VARIABLE TO AN INTEGER

> DEFINES A FUNCTION THAT CONTAINS A LOCAL VARIABLE AND RETURNS THE VALUE OF THAT LOCAL VARIABLE + THE GLOBAL VARIABLE

> FINALLY, CALLS THE FUNCTION AND PRINTS OUT ITS RETURN VALUE

SCOPED FUNCTIONS

```javascript
function outsideFunction () {

  function insideFunction () {
    console.log("hi!");
  }


  insideFunction();
}

outsideFunction(); // calls insideFunction, which then prints "hi!";
insideFunction(); // ReferenceError: insideFunction is not defined
```

NESTED SCOPES

```javascript
var grapefruit = 1;

function outerFunction () {
  var apple = 2;

  function innerFunction () {
    var orange = 3;

    // here we have access to variables 'grapefruit', 'apple', and 'orange'
    console.log(grapefruit + " " + apple + " " + orange); // prints "1 2 3"
  }

  // here we have access to variables 'grapefruit' and 'apple', but not 'orange'
}

// here we have access only to variable 'grapefruit'
```