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**Assignment: cosc 209**

1. Write about higher order functions.

Higher order functions are functions that take one or more functions as arguments, or return a function as their result. Map function, found in many functional programming languages, is one example of a higher-order function.

1. Write on in JavaScript and give code expressions.

Closures are functions that refer to independent (free) variables. In other words, the function defined in the closure ‘remembers’ the environment in which it was created.

Function sayHello() {

Var say = function() { console.log(hello); }

// Local variable that ends up within the closure

Var hello = ‘Hello, world!’;

Return say;

}

Var sayHelloClosure = sayHello();

sayHelloClosure(); // ‘Hello, world!’

Regarding the code above, the variable hello is defined after the anonymous function , but can still access the hello variable. This is because the hello variable has already been defined in the function “scope” at the time of creation, making it available when the anonymous function is finally executed.