Scope And Functions (04/04/2022)

Task1: Calculating With functions

Code:

function zero() { return arguments.length === 1 ? arguments[0](0) : 0; }

function one() { return arguments.length === 1 ? arguments[0](1) : 1; }

function two() { return arguments.length === 1 ? arguments[0](2) : 2; }

function three() { return arguments.length === 1 ? arguments[0](3) : 3; }

function four() { return arguments.length === 1 ? arguments[0](4) : 4; }

function five() { return arguments.length === 1 ? arguments[0](5) : 5; }

function six() { return arguments.length === 1 ? arguments[0](6) : 6; }

function seven() { return arguments.length === 1 ? arguments[0](7) : 7; }

function eight() { return arguments.length === 1 ? arguments[0](8) : 8; }

function nine() { return arguments.length === 1 ? arguments[0](9) : 9; }

function plus() {var val = arguments[0]; return function(left) { return left + val; }}

function minus() {var val = arguments[0]; return function(left) { return left - val; }}

function times() {var val = arguments[0]; return function(left) { return left \* val; }}

function dividedBy() {var val = arguments[0]; return function(left) { return left / val; }}

Output:

Graphical user interface, text

Description automatically generated

Task2: Get the Middle Character

Code:

function getMiddle(s)

{

if (s.length < 3) {

return s

}

if (s.length > 2) {

if (s.length % 2 === 0) {

var middleIndex1 = (s.length/2)-1

var middleIndex2 = s.length/2

return s[middleIndex1] + s[middleIndex2]

} else {

var middleIndex = Math.floor(s.length/2)

return s[middleIndex]

}

}

}

Output:

A screenshot of a computer

Description automatically generated with medium confidence

Task3: Partition On

Code: // partition the items array so that all values for which pred returns true are

// at the end, returning the index of the first true value

function partitionOn(pred, items) {

var f = items.filter( function(e) { return !pred(e); } );

var t = items.filter(pred);

items.length = 0;

for(var i = 0; i < f.length; i++)

{

items.push(f[i]);

}

for(var i = 0; i < t.length; i++)

{

items.push(t[i]);

}

return f.length;

}

Output:

A screenshot of a computer

Description automatically generated with medium confidence

Task4: Transportation on Vacation

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