Announcements

* Project 3 is due today. Since Lab 4 wasn’t listed as a project 3 deliverable, it will be included in the project 4 deliverables.
* The midterm will be given Monday, 2/8.
  + A practice midterm quiz and preparation guide are available on Canvas now.
  + Bring your UO ID with you on Monday. Important: No ID, no Exam!
  + Bring two #2 pencils
  + Bring one page of notes
  + Closed book, closed computer, closed phone, open mind!

More on Debugging

* Watches (add a global variable to the code for validPrime)
* Call stack (nested functions: checkPrime and isPrime)

Midterm Review

* JavaScript statements
  + Can span multiple lines, end with a semicolon (optional, but best practice)
  + Must contain: a declaration, function call, or assignment
* Operators
  + Assignment: =
  + Math: +, -, \*, /, %, ++, -- (combined with assignment: +=, -=, \*=, /=, %=)
  + Relational: <, >, >=, <=, ==, !=
  + Logical: &&, ||, !
* Selection
  + if, else if, else
  + switch
* Arrays
  + Have multiple elements that each store a value and have an index.
  + var cheeses = [“havarti”, “blue”, “swiss”, “brie”, “cheddar”];  
    var favoriteCheese = cheeses[3];  
    alert(favoriteCheese); // why is it brie and not swiss?
* Loops
  + for(var i = 1; i <= 10; i++) { alert(“count: “ + i); }
  + Used with arrays:  
    for(var i = 0; i < cheeses.length; i++) { alert(cheeses[i] + “\n”; }
  + var entry = “”;  
    while(entry != “done”) { entry = prompt(“Enter something”); }
* Functions
  + Definition syntax (one style):
    - function sum(num1, num2) { return num1 + num2; }
    - function showInfo(info1, info2) { alert(“first: “ + info1 + “, second: “ + info2; }
    - function myMain() {   
       var firstNum = prompt(“Enter a number: ”);  
       var secondNum = prompt(Enter another number: “);  
       var result = sum(firstNum, secondNum);  
       alert (“answer: “ + result);  
      }
  + Function definitions have parameters (optional) and a return statement (optional)
  + Function calls:
    - var total = sum(5, 9);
    - showInfo(“10 cats”, “3 dogs”);
    - myMain();
  + Functions can call other functions (see myMain above)
  + Parameters, in addition to being the inputs to the function, are local variables (local scope) in the function.
  + Functions must be defined before (above) the code that uses them
* HTML Forms and JavaScript working with HTML elements
  + In JavaScript, get a reference to an HTML element: var inputTextBox = document.getElementById(“theId”);
  + In JavaScript, get a value from a reference to an HTML element:   
    var someText = inputTextBox.value;
  + In JavaScript, assign text to an HTML element (using a reference to it):   
    someDiv.innerHTML = “Hello there!”;
  + In JavaScript, assign an event hander to an HTML button (using a reference to it):   
    someButton.addEventListener(“click”, someFunction);
  + In HTML, add an event to a button:  
    <input type=”button” onclick=”someFunction()”>
  + In HTML, add an event to the body of a page:  
    <body onload=”someFunction()”>