Lab 9

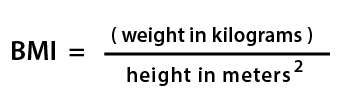
**Date Assigned: 11/02/2015**

**Lab Report Due: Midnight 11/09/2015 on iLearn**

* **You may want to bring your textbook to labs to look up syntax and examples.**
* **Have a question? Ask your instructor for help, or look at the book or past lecture slides.**
* **We encourage you to talk to your classmates; it's okay to discuss ideas (but NOT copy code) during lab.**
* **You probably won't finish all of the exercises. Do as much as you can in the allotted time. You NEED to finish the rest after you leave the lab.**
* **Before you leave, SHOW your work to your instructor to get credit for your work in lab.**
* **Complete all sections and turn in a report to iLearn before the deadline. See turn-in check list (at the end of this document) for more details.**
* **For each lab, lab attendance and your work during lab 40%, lab report 60%.**

# Section 1: Computing BMI

1. Create a folder **lab9** on the desktop. Create a page **section1.html** and save it in **lab9**.
2. Create a JS file **section1.js**, and reference it in **section1.html**.
3. In **section1.html**, add a HTML form. In the form, add the following contents:
   1. An input field that allows user to enter his/her height in kilograms with id “height”
   2. An input field that allows user to enter his/her weight in meters with id “weight”
   3. A button that allows user to click. Attach the button to an event handler (JS function) which will read user input of height and weight, calculate BMI based on the formula given below, and display an alert message with user’s BMI



<!-- Here is what you should have in HTML page -->

<form>

<!--

Complete the form by

adding 2 input fields for height and weight, 1 button (with an attribute **onclick = "computerBMI();"**, where **computerBMI()** is a JS function, and will be defined in the external JS file )

-->

</form>

// Here is what you should have in JS file

function computeBMI(){

// Add statements to read height and weight (what user has typed in is stored in the property of **value**)

// Add statements to computer BMI

// Add an alert function to display BMI

}

# Show the instructor your work before you start working on the next section.

# Section 2: If-else

By default, statements in a JS program are executed sequentially, in order as they appear.

1. Create a page **section2.html** and save it in **lab9**.
2. In **section2.html**, add a HTML form. In the form, add a button that allows user to click, and attach it to an event handler (JS function, name it **sequential()**) which we will define in an external JS file.
3. Create a JS file **section2.js**, and reference it in **section2.html**.
4. Add the following code into **section2.js:**

function sequential(){

// Statements are executed sequentially

alert(**"**This is alert 1**"**);

alert(**"**This is alert 2**"**);

alert(**"**This is alert 3**"**);

alert(**"**This is alert 4**"**);

alert(**"**This is alert 5**"**);

alert(**"**This is alert 6**"**);

}

1. Launch **section2.html** in Chrome. Click on the button, and observe what will be displayed by alert functions. Pay attention to their order.
2. In a JS program, statements that appear first will be executed first, and those that appear last will be executed last. Many programming tasks, however, require **conditional control**, that is, the ability to react differently based upon some condition. In this lab, you will be introduced to the **if-else**statement, which performs conditional execution. Based upon some condition, an **if-else** statement can choose among alternative sequences of code to execute, or even choose to execute no code at all.
3. In **section2.html**, add another button in the HTML form created at step 5, that allows user to click, and attach it to an event handler (JS function, name it **conditional()**) which we will define in an external JS file.
4. In **section2.js**, add the following function:

function conditional(){

// Conditional Control

var cash = parseFloat(prompt(**"**How much cash do you have? **"**));

if(cash > 5)

{

alert("Let’s have subway!");

}

else

{

alert("Let’s have pizza");

}

}

1. Launch **section2.html** in Chrome. Enter 3 the 1st time, and refresh the page, then enter 10 the 2nd time. Click on the button created at step 10, and observe what will be displayed by alert functions.

In an **if-else**statement, **exactly one of the two actions will be executed**.

In general, an if statement looks like this:

if (condition)

{

STATEMENTS\_IF\_Condition\_is\_TRUE

// This is called the "if block"

}

else

{

STATEMENTS\_IF\_Condition\_is\_FALSE

// This is called the "else block "

}

The else part is optional.

1. In **section2.html**, add a third button in the HTML form created at step 5, that allows user to click, and attach it to an event handler (JS function, name it **conditional2()**) which we will define in an external JS file.
2. In **section2.js**, add and complete the following function:

function conditonal2()

{

var num = parseFloat(prompt("Enter any num"));

if (num > 0)

{

// display an alert message about num when condition is true

alert("The number is positive");

}

else

{

// add a statement to display an alert message about num when condition is false

}

}

1. Launch **section2.html** in Chrome. Click on the button created at step 13, and observe what will be displayed by alert functions.
2. In **section2.html**, add one more button in the HTML form created at step 5, that allows user to click, and attached to an event handler (JS function, name it **conditional3()**) which we will define in an external JS file.
3. In **section2.js**, add and complete the following function:

function conditonal3()

{

// Complete the code

// Ask user for the hour of the day, using a 24-hour clock (0--23). Save what user has typed in a variable called hour

// Use if-else to check variable hour, and greet user:

// hour < 12, display “Good Morning!”, otherwise, “Good Afternoon”

}

}

1. Launch **section2.html** in Chrome. Enter 3 the 1st time, then refresh the page, and enter 16 the 2nd time. Click on the button created at step 13, and observe what will be displayed by alert functions.
2. **If you finish Lab 9 in class, show the instructor your work, and then start working on Project1 (available on iLearn, under “Assignments”, due on next Monday (11/09/2015)).**

**TURN-IN CHECKLIST:**

1. **Source Code (.html/.css/.js files) created in this assignment. Remember to include your name, the date, and the lab number in comments near the beginning of your code.**

**Create a folder and name it 'FirstName\_LastName\_lab\_9'. In the newly created folder copy and paste your source code (.html/.css/.js files). Then compress the folder, and upload it to iLearn.**