CP1295 Advanced Java Script

Test 02 05%

July 03 May 29, 2024

K205

10:30 am – 12:30 pm

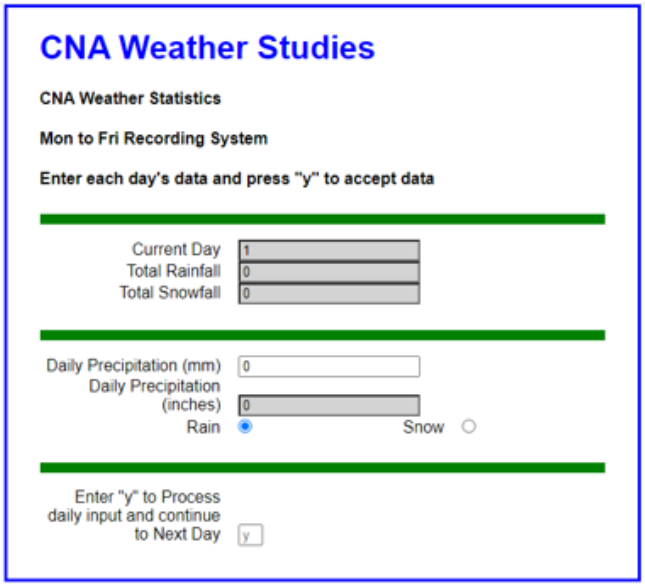
Test Time 90 Minutes

Table of Contents

Outline points

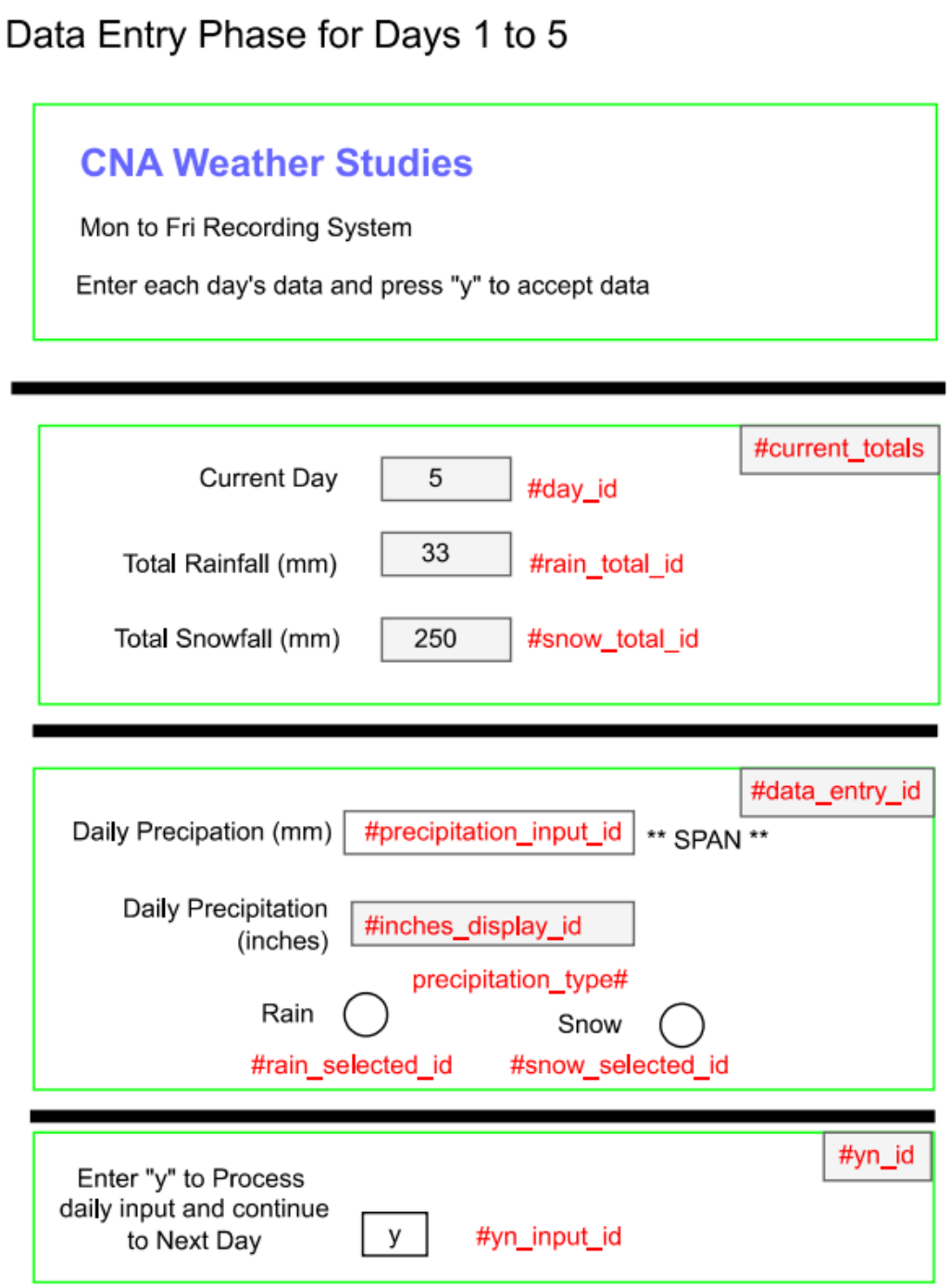
1.1 Windows and document objects
1.2.1 Textbox objects (with display of numbers up to 2 decimal places
1.2.2 Number Objects (with rounding to 2 decimal places)
1.2.4 String objects
1.3 Use of function expressions and function declarations
1.4 Attach function expression and function declaration to events
1.5.1 Register listeners that manipulate the DOM
1.5.2 Register event listeners that validate data
1.6 Show proficiency in working with arrays through the effective application of the map, reduce, and filter functions

Description



- Download the Starter Project as a ZIP from D2L and extract the test folder with three files (HTML file, CSS file, and JavaScript file).
- Run the code to ensure that it matches Screen Shot #1. (Before you start).
  - The code should run error-free and the current day should increase per 'next-day' selection.
- Follow Instructions for each screen shot and add the necessary JavaScript to ensure that it produces the correct results for each screen shot. The screen shots must be done in sequence.
  - Valid JavaScript Code requirements are on the last pages of this document.
- You are not allowed to modify the HTML or CSS code in any way. This action would void the test. (Exception: You may remove the jQuery script link, if you elect to Not use Query. jQuery is permitted. See restrictions as to its use in Valid Code requirements)
  - `<script src="https://code.jquery.com/jquery-3.4.1.slim.min.js"></script>`
- **Create a Word Document and include the following**:
  - **Your Name, Student Number**
  - Save document as **CP1295-Test-02**
  - There are only two required screen shots.
  - On Last Page(s) include copy of the JavaScript that you are submitting.
    - Copy and Paste as Text. DO not use a screen shot for the code.
    - The grading will be based solely on this code.
    - This code will be copied onto test computer to validate submitted JavaScript code.
- Check the grading rubric to verify that you have covered all listed points to maximize your grade.

Form Map


Data Entry Phase for Days 1 to 5
CNA Weather Studies
Mon to Fri Recording System
Enter each day's data and press "y" to accept data
#current_totals
Current Day
5
#day_id
Total Rainfall (mm)
33
#rain_total_id
Total Snowfall (mm)
250
#snow_total_id
#data_entry_id
Daily Precipation (mm)
#precipitation_input_id
** SPAN **
Daily Precipitation (inches)
#inches_display_id
precipitation_type#
Rain
Snow
#rain_selected_id
#snow_selected_id
#yn_id
Enter "y" to Process daily input and continue to Next Day
y
#yn_input_id

Day 6 Display Results Day

CNA Weather Statistics

Mon to Fri Recording System

Enter Each Day and press "Y" to enter next Day

#current_totals

Current Day	6	#day_id
Total Rainfall (mm)	73	#rain_total_id
Total Snowfall (mm)	260	#snow_total_id

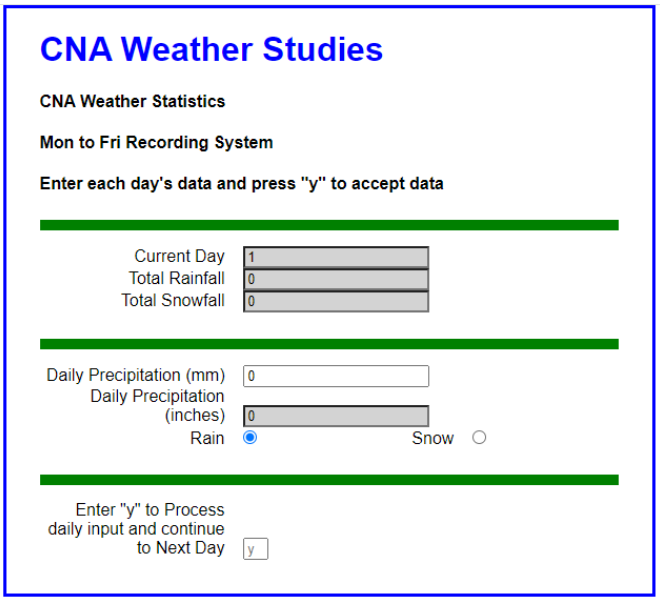
#results_id

Results

Day: 5 Rain: 40
Day 4: Snow: 200
Day: 3 Rain: 22
Day: 2 Snow: 60
Day: 1 Rain: 11

Test Sequence

Benchmark 01



Initial Screen.

The next day text field will accept a 'Y' and continue to the next day. This is in the last section.

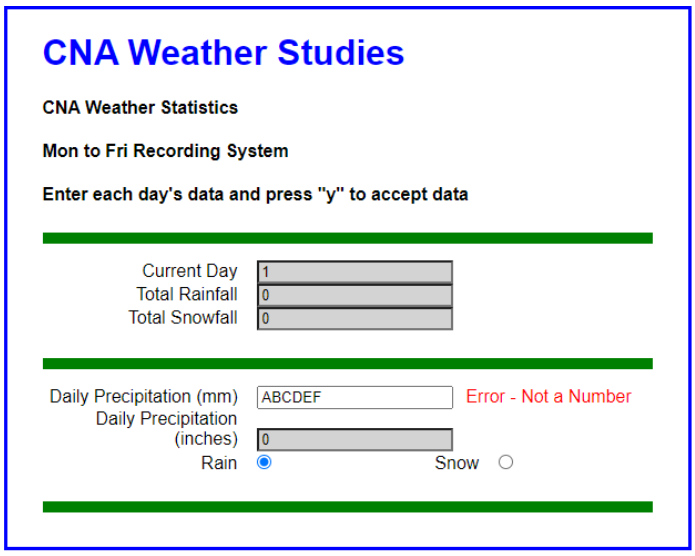
The Current Day counter will advance by 1.

This code is already operational.

Calculations are not operational.

No Screen Shots required until indicated.

Benchmark 02



Error Testing

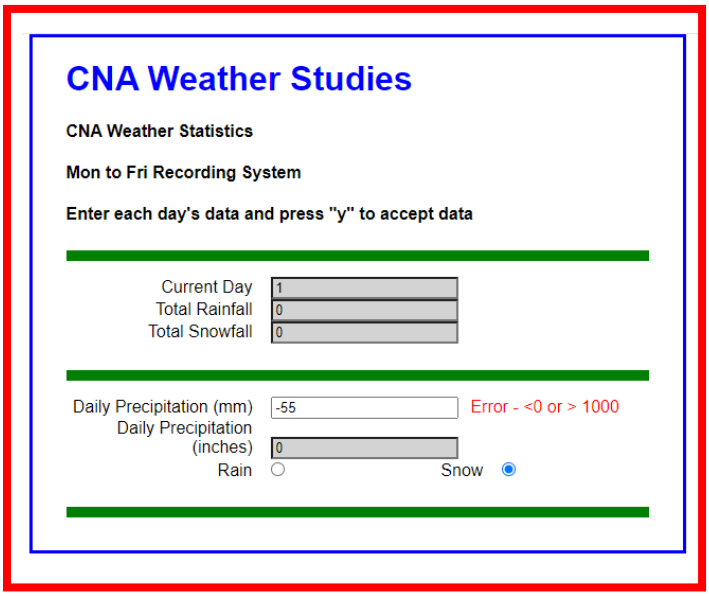
Daily Precipitation data entry.

There are two different error messages that may be displayed.

Only 1 Text field requires error checking.

(B01) Not a number test and display

(B02) Daily Precipitation field Range test 0 to 1000(incl) and display



(B03) Detection or error will trigger the "next day text field" (div section) to be hidden

(B04) Once correct data is entered, the "next day text field" (div section) will be visible again.

SCREEN SHOT 01

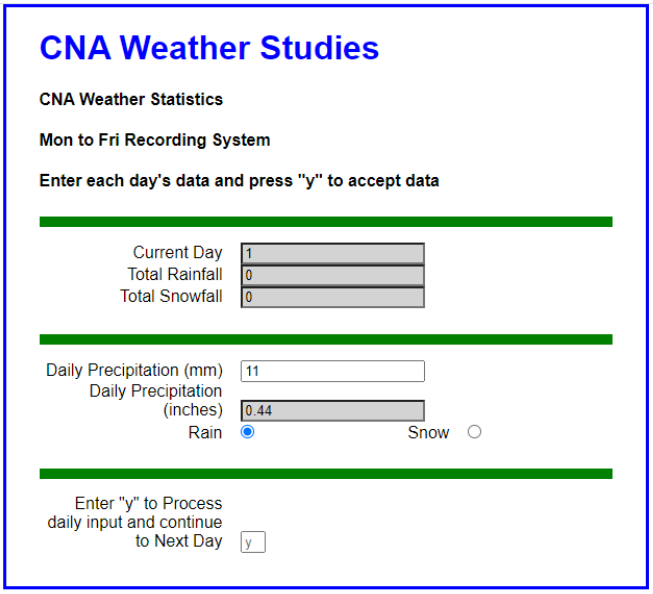
Enter -55 and take your screen shot showing the error indicated.

Benchmark 03

DAY 01

		Rain	Snow
	Day 1	11	
	Day 2		60
	Day 3	22	
	Day 4		200
	Day 5	40	
		73	260

This is day 1. Enter 11mm of Rain and Select the RAIN button.



First set of data is now entered and the Button for Rain has been selected.

The “next day text field” is visible again.

The Y/N Next day selection has NOT been entered at this point.

(E01) Calculations for Daily Precipitation have been completed and posted for inches. The value of 0.44 is shown in the form.

(E02) Formatting is 2 decimal places. Accuracy should be within 0.02 of the screen shots.

Formula is: Inches = millimeters * 0.039701;

.436711 = 11 * 0.039701

Rounds to 0.44

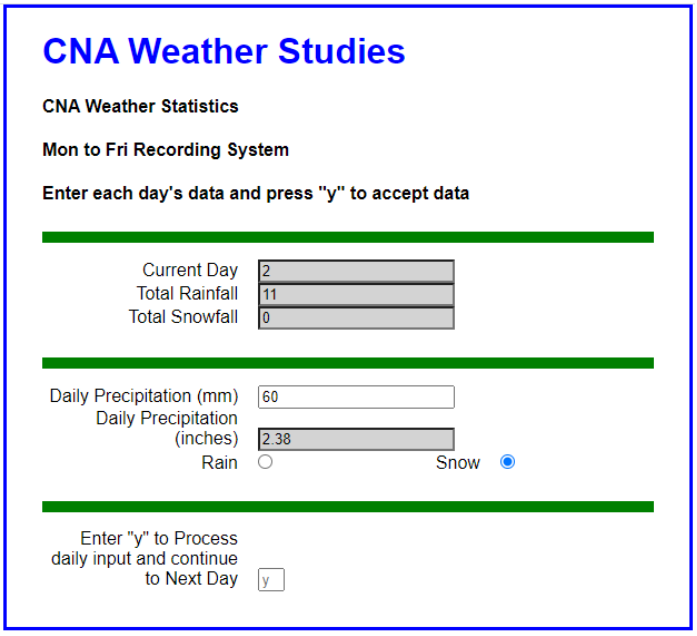
11mm is the same as 0.44 inches.

Enter Y into the “next day text field” and press enter.

It is a requirement (outline checkpoint 1.6) that arrays are used to hold the data until they are required at the end. Collect and store in an array. You may compose a string from the collected data that can be placed in a string array or use multiple arrays of your choice. One entry for each day. Do not make any attempt to generate output or any initialization of output at this point.

Benchmark 04

DAY 02



Current Day should change to 2.

(C01) the Total rain fall should show 11.

The total accumulation is performed during the advance to next day process.

Total snowfall should show 0.

The radio button is used to determine which of the two totals will be updated from the form Daily Precipitation (mm) text field.

Data for each day's entry.

		Rain	Snow
	Day 1	11	
	Day 2		60
	Day 3	22	
	Day 4		200
	Day 5	40	
		73	260

Enter Day 2 Data. 60mm of snow (shown entered on the form)

Enter 60mm in mm text box.

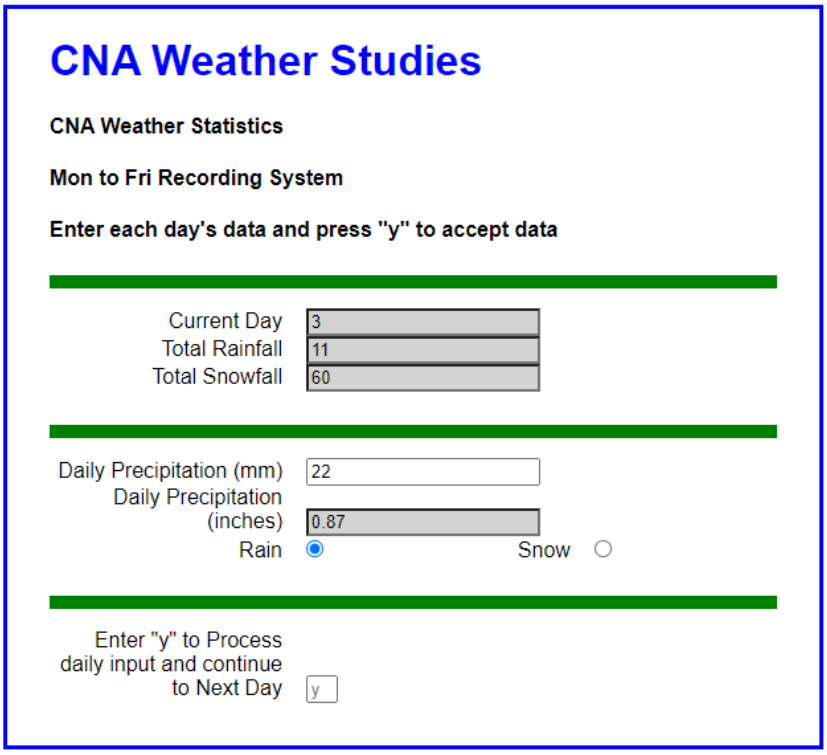
(E03) 2.38 should immediately be calculated and placed in inches text box.

Select Snow radio button.

Ready to Advance to the next day. (advance)

Benchmark 04

DAY 03



The total rain fall has not changed from the previous day and remains at 11 mm.

(D1) The snow fall has changed from 0 and is now showing 60 mm from last day's snowfall.

		Rain	Snow
	Day 1	11	
	Day 2		60
	Day 3	22	
	Day 4		200
	Day 5	40	
		73	260

Enter Day 3 data.

22mm of Rain. (shown in form)

Select Rain Radio button. (shown in form)

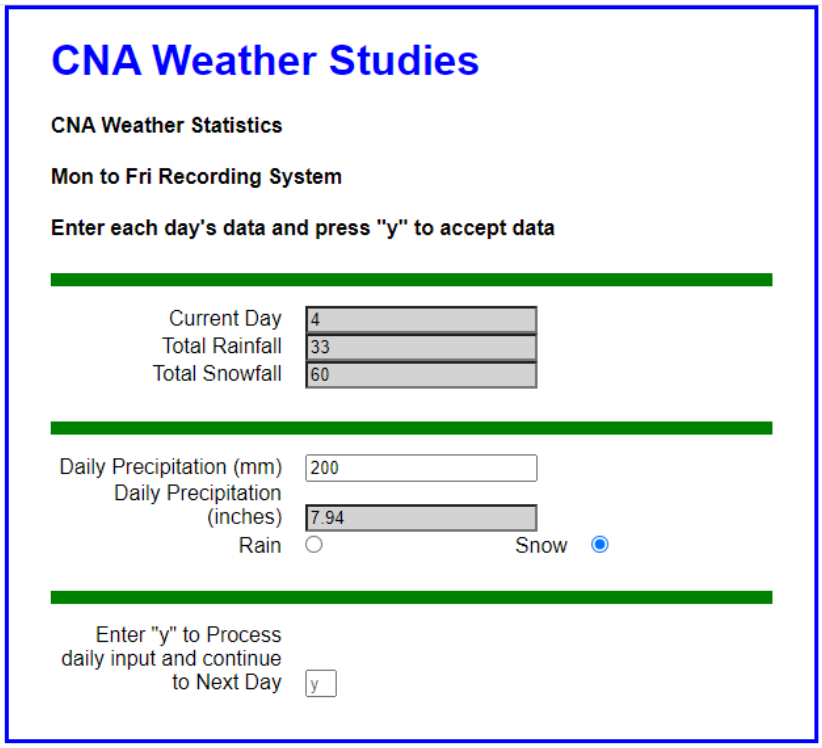
(E04) The inches text box should show 0.87. (shown in form)

This calculation is done before an advance to the next day.

Advance to the next day by entering 'y' in the "to Next Day" text box and press enter.

Benchmark 05

DAY 04



(C2) The total rainfall has been updated from 11 to 33 due to last days 22mm rain fall.

The snow fall has remained the same as last day.

		Rain	Snow
	Day 1	11	
	Day 2		60
	Day 3	22	
	Day 4		200
	Day 5	40	
		73	260

Enter Day 4 data.

200 mm of Snow. (shown in form)

Select Snow button. (shown in form)

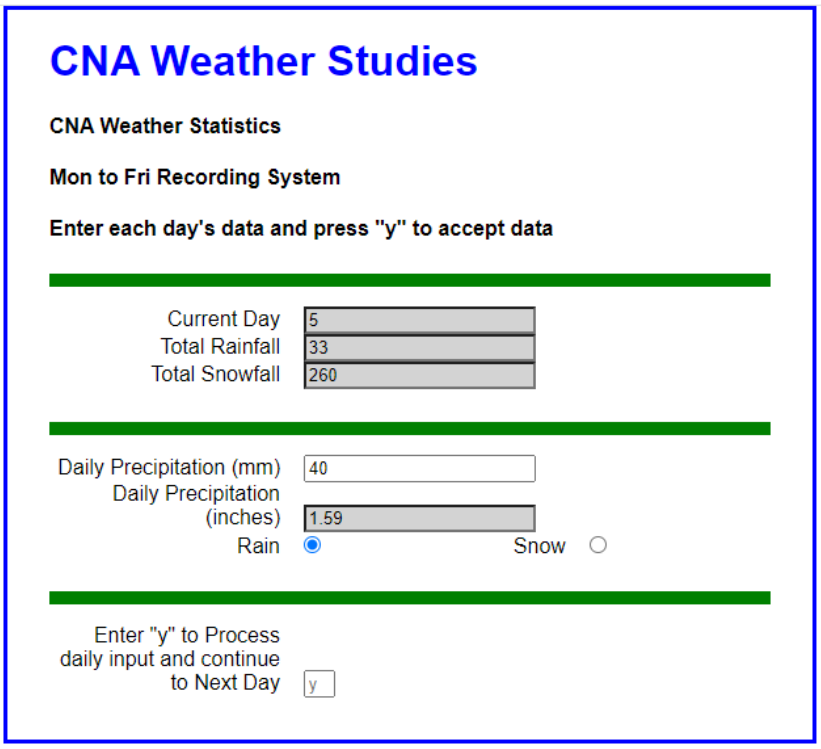
(E05) The inches text box should show 7.94. (shown in form)

This calculation is done before an advance to the next day.

Advance to the next day by entering ‘y’ in the “to Next Day” text box and press enter.

Benchmark 06

DAY 05



The total rainfall has remained unchanged from the previous day.

(D2) The snow fall has increased from 60 mm to 260mm. 200mm fell on the previous day.

		Rain	Snow
	Day 1	11	
	Day 2		60
	Day 3	22	
	Day 4		200
	Day 5	40	
		73	260

Enter Day 5 data.

200 mm of Rain. (shown in form)

Select Rain button. (shown in form)

(E06) The inches text box should show 1.59. (shown in form)

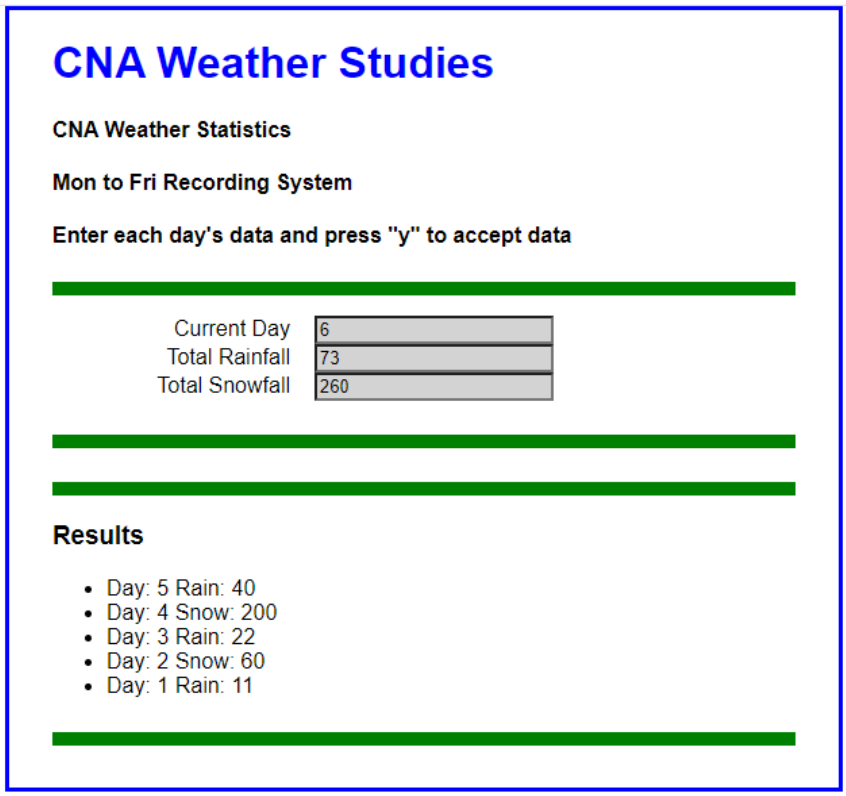
This calculation is done before an advance to day 6.

Advance to the next day (The Final Day) by entering ‘y’ in the “to Next Day” text box and press enter.

Benchmark 07

DAY 06

SCREEN SHOT 02



Final Data Check.

(C3) The total rainfall has increased from 33 to 73.

40 mm rain fell previous day.

(D3) The snow fall has remained the same at 260.

(F1) Data Entry division is no longer visible.

(F2) The next day advance division is no longer visible.

(F3) Results Division is Displayed.

(F4) The UL/LI result rows are displayed.

(F5) The result rows are displayed in reverse order.

Special Note: It is a requirement that array(s) are used to store the input data and again to display the data.

Output generation will start on Day 6. All UL and LI elements will be created on this day and not before.

Use the arrays and generate the required List for display. To achieve full credit use Arrays with Loop Control.

(F6) Use of Arrays for Collection during Days 1 to 5

(F7) Use of Arrays in generating <li> text components.

(F8) Use of Arrays in reverse order to order the display as seen.

Clue Up reminder

(1) Be sure that you have all screen shots collected and copied into your word document with the Screen Shot Number.

(2) Visit the Rubric to ensure that you have maximized all your potential marks.

(2) Be sure that you have copied your JavaScript code (as TEXT) into the word document. Do Not use Screen shots for this step. The grading instructor will copy (as TEXT) your java script code and run it on a test computer as part of the grading. IF the text of the JavaScript cannot be extracted because it is graphics, the test may be void.

(3) Upload your completed Word Document back to D2L

Grading Rubric

CP1295 Grading Rubric Test 02

				100
A	Documentation			
	A01	Name, Number, Course, Test#	2	
	A02	Screen Shot 01	5	
	A03	Screen Shot 02	5	
	A04	JavaScript Code as TEXT. (Not Screenshot)	5	
				17
B	Error Checking			
	B01	Not a number test and display	5	
	B02	Range Testing 0 to 1000 (incl) and display	5	
	B03	On Error hide 'next day div'	5	
	B04	On no-error show 'next day div'	5	
				20
C	Form Ongoing Totals for Rainfall			
	C01	Day 02 Rainfall 11	2	
	C02	Day 04 Rainfall 33	2	
	C03	Day 05 Rainfall 73	2	
				6
D	Form Ongoing Totals for Snowfall			
	D01	Day 03 Snowfall 60	2	
	D02	Day 05 Snowfall 260	2	
	D03	Day 05 Snowfall held 260	2	
				6
E		Daily Form - Inches Calculations		
	E01	Calculations for Inches posted	2	
	E02	Formatting to 2 Decimal Places	2	
	E03	Inch Calculations on Day 2	2	
	E04	Inch Calculations on Day 3	2	
	E05	Inch Calculations on Day 4	2	
	E06	Inch Calculations on Day 5	2	
				12
F		DAY 6 Events		
	F1	Data Entry div hidden	4	
	F2	next day div hidden	5	
	F3	Results div displayed	5	
	F4	UL/LI rows are displayed	5	
	F5	Result Rows in Reverse Order	5	

F6	Correct Use of Arrays for Data Collection	5	
F7	Correct Use of Arrays for Generating UL/LI	5	
F8	Loops control use for Rev Array Listing	5	
			39
		100	100

End of Rubric

Test 01- Scope Rules

Inclusions

(1) Code must be based on code demonstrated in this course or its pre-requisite course(s)

Course Text Book

Course Notes

Course Handouts

(2) DOM element selection techniques:

i. document.querySelector(sel)

ii. document.querySelectorAll(sel)

iii. for jQuery $( )

(3) jQuery can be used to add existing elements created by document.createElement

i. but cannot be used to create elements such as “li” and “ul”

(4) All elements have to be created using document.createElement()

Exclusions

(1) Code must follow the following exclusion rule(s)

a. Note: getElementByTag, innerHTML, outerHTML are not permitted in this test.

b. Use of jQuery for element processing is restricted

i. jQuery cannot be used to create elements (directly or indirectly)

Submission Rules

(1) Word Document that contains the following

a. Your name and student number.

b. Two screen shots as indicated in the instructions.

c. JavaScript must be copied and pasted into Word Document as TEXT. DO NOT USE Screen shots of your java code. This will void the test as the test cannot be graded from screen shots of JavaScript code.

End of Test