

Title: SnowSafe

Team: team3bestTeam

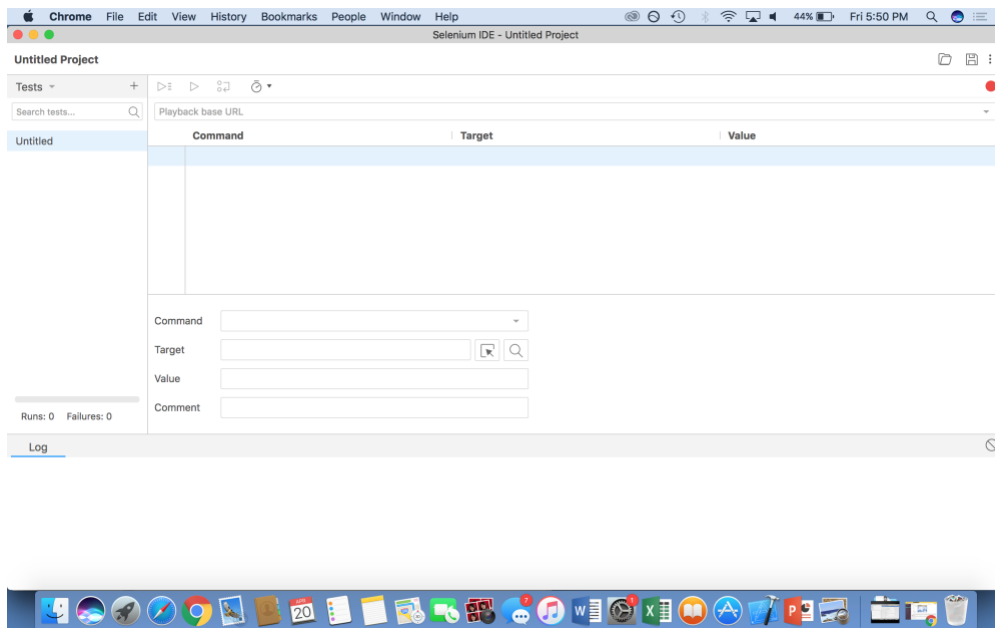
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Automated Test Cases

For our automated testing, we used a Chrome plug-in extension called Selenium IDE, by Selenium HQ. Here's their website: <https://www.seleniumhq.org/>
Once added to chrome, Selenium IDE functions as follows:

Set Up:

Upon opening the extension, you'll see a screen that looks like this.



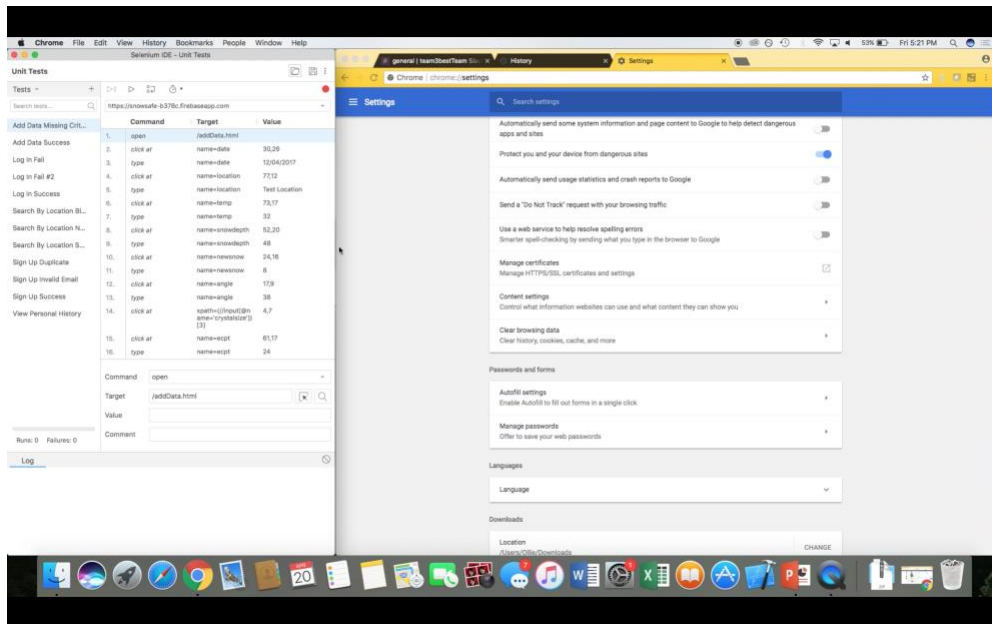
To begin creating a test script:

1. Create a new test.
2. Press red "record" button in upper-right corner of screen.
3. Navigate the web browser as you want the test to replicate.

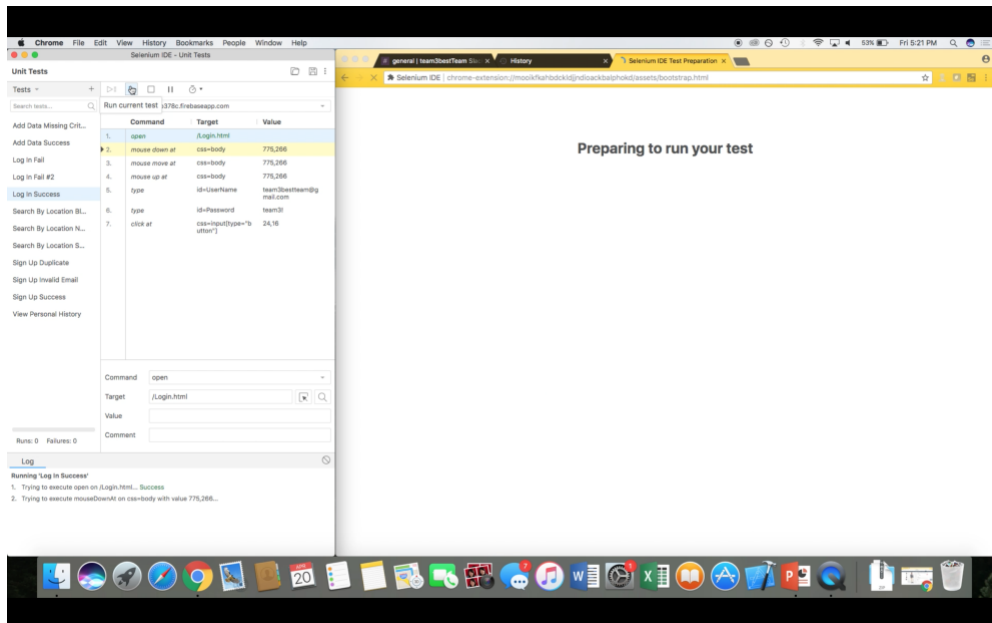
As you navigate the browser, Selenium continuously updates the test "Commands", "Targets", and "Values". You'll see these outputs further down in the document. These are all translated into executable scripts, which you can later run to test the site.

Running Tests:

To run a test, open the Selenium IDE extension and select the file containing all test cases previously recorded. The updated screen, alongside the browser, will look like this.

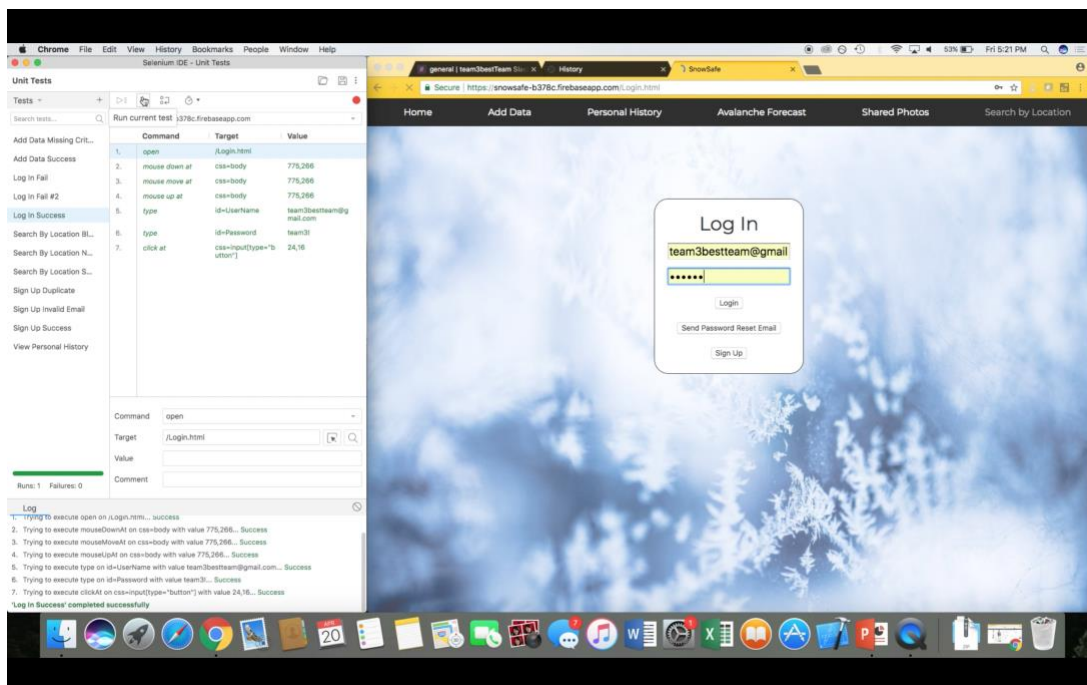
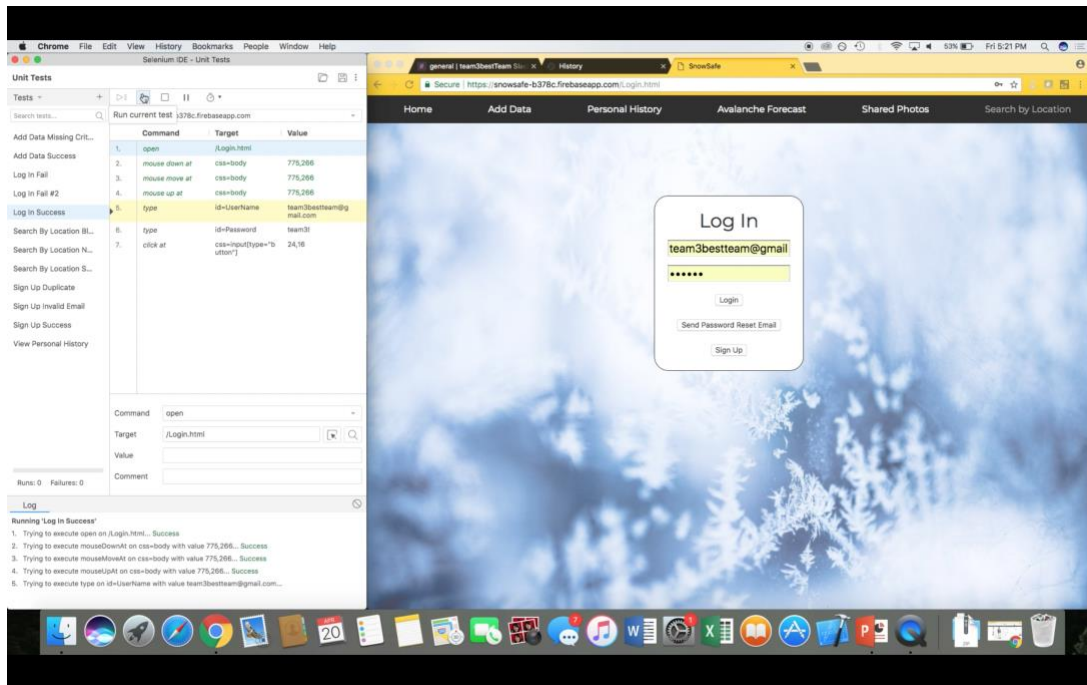


Find the test you wish to run on the left side of the screen, under “Tests.” You can see in the photo above that all the commands are to the right of the “Tests” bar. To run the test, press the “play” icon. Selenium will load the base URL and begin the test.



The following are screenshots of various tests in progress:

“Log In Success”



“Add Data Missing Criteria”

Unit Tests

Tests

Search tests...

https://snowsafe-b378c.firebaseio.com

Add Data Missing Crite...

Add Data Success

Log In Fail

Log In Fail #2

Log In Success

Search By Location BL...

Search By Location N...

Search By Location S...

Sign Up Duplicate

Sign Up Invalid Email

Sign Up Success

View Personal History

Command	Target	Value
1. open	jaddData.html	
2. click at	name-date	30,26
3. type	name-date	12/04/2017
4. click at	name-location	77,12
5. type	name-location	Test Location
6. click at	name-temp	73,17
7. type	name-temp	32
8. click at	name-snowdepth	52,20
9. type	name-snowdepth	48
10. click at	name-newsnow	24,16
11. type	name-newsnow	8
12. click at	name-angle	17,9
13. type	name-angle	38
14. click at	xpath=(//input[@name='crystalSize'])	4,7
15. click at	name-ecpt	61,17
16. type	name-ecpt	24

Command: open

Target: jaddData.html

Value:

Comment:

Run: 0 Failures: 0

Log

7. Trying to execute clickAt on name-date with value 30,26... Success

3. Trying to execute type on name-date with value 12/04/2017... Success

4. Trying to execute clickAt on name-location with value 77,12... Success

5. Trying to execute type on name-location with value Test Location... Success

6. Trying to execute clickAt on name-temp with value 73,17... Success

7. Trying to execute type on name-temp with value 32... Success

8. Trying to execute clickAt on name-snowdepth with value 52,20... Success

9. Trying to execute type on name-snowdepth with value 48...

Unit Tests

Tests

Search tests...

https://snowsafe-b378c.firebaseio.com

Add Data Missing Crite...

Add Data Success

Log In Fail

Log In Fail #2

Log In Success

Search By Location BL...

Search By Location N...

Search By Location S...

Sign Up Duplicate

Sign Up Invalid Email

Sign Up Success

View Personal History

Command	Target	Value
7. type	name-temp	32
8. click at	name-snowdepth	52,20
9. type	name-snowdepth	48
10. click at	name-newsnow	24,16
11. type	name-newsnow	8
12. click at	name-angle	17,9
13. type	name-angle	38
14. click at	xpath=(//input[@name='crystalSize'])	4,7
15. click at	name-ecpt	61,17
16. type	name-ecpt	24
17. click at	name-layer	26,13
18. type	name-layer	12
19. click at	css=input[type="button"]	27,5
20. assertAlert	Please fill in facet	

Command: open

Target: jaddData.html

Value:

Comment:

Run: 1 Failures: 0

Log

7. Trying to execute clickAt on xpath=(//input[@name='crystalSize']) with value 4,7... Success

15. Trying to execute clickAt on name-ecpt with value 61,17... Success

16. Trying to execute type on name-ecpt with value 24... Success

17. Trying to execute clickAt on name-layer with value 26,13... Success

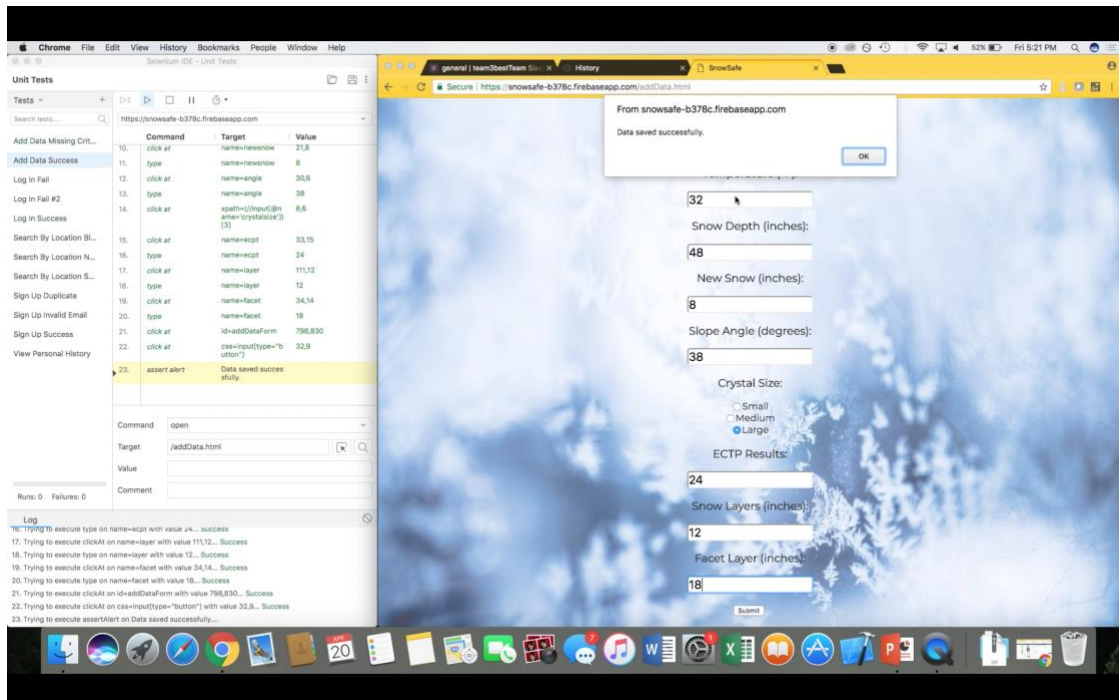
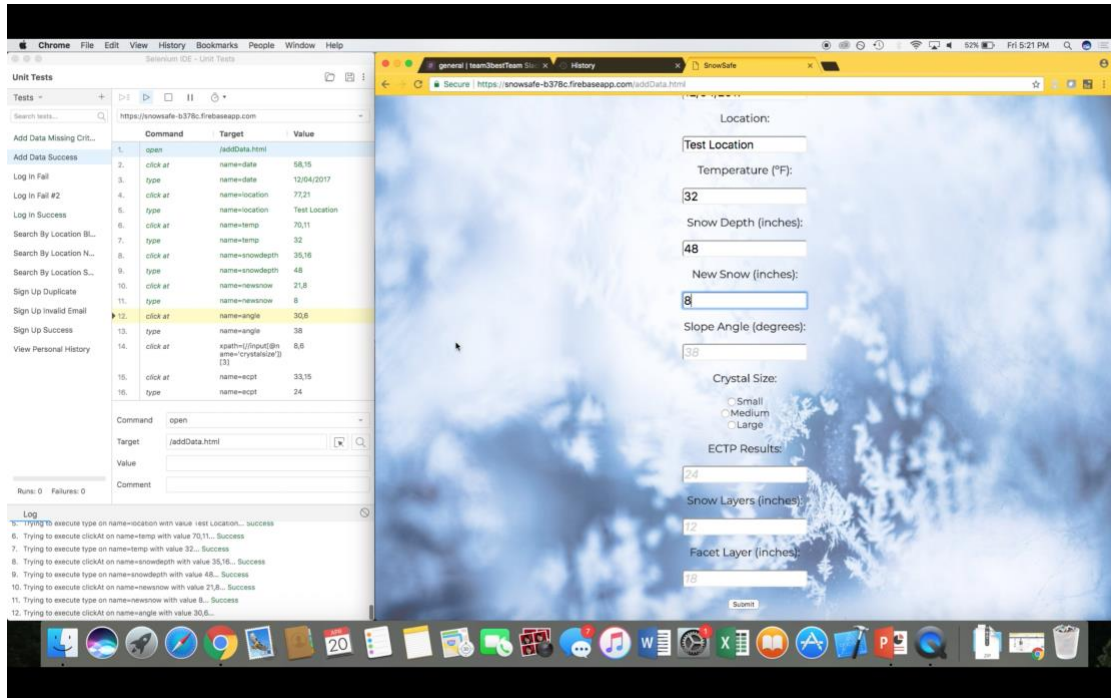
18. Trying to execute type on name-layer with value 12... Success

19. Trying to execute clickAt on css=input[type="button"] with value 27,5... Success

20. Trying to execute assertAlert on Please fill in facet... Success

Add Data Missing Criteria" completed successfully

“Add Data Success”



"Search By Location Blank"

The screenshot shows a Selenium IDE window on the left and a web application on the right. The Selenium IDE window displays a test suite with the following commands:

Command	Target	Value
open	/search.html	
click at	css=input[type="button"]	18,6
assert alert	No data for that location was found. Displaying all data...	
click at	id=addToForm	148,107

The log shows the test suite completed successfully. The web application on the right has a navigation bar with links: Home, Add Data, Personal History, Avalanche Forecast, Shared Photos, and Search by Location. The main content area is titled "Search by location (leave blank to see all data):" and contains a search input field with the placeholder text "location". Below the input field is a "Submit" button. The table below the input field displays search results for various locations.

User	Date	Location	Temperature (°F)	Snow Depth (inches)	New Snow (inches)	Slope Angle (degrees)	Crystal Size	ECTP Results	Snow Layers (inches)	Facet Layer
Tristan	12/04/2018	Vail	32	14	28	38	large	24	12	18
Vy Le	04/19/2018	Cunison	25	40	3	20	medium	23	12	18
Vy Le	04/19/2018	Cunison	25	40	3	20	medium	23	12	18
Oliver Larsson	11/22/2017	East Vail	25	40	5	44	small	20	6	12
Oliver Larsson	11/22/2017	East Vail	25	40	5	44	small	20	6	12
Oliver Larsson	3/01/2018	Berthoud Pass	35	47	13	28	medium	14	3	10
Tristan	12/04/2018	Breck	32	48	8	38	large	24	12	18
Tristan	12/04/2018	Breck	32	48	8	38	large	24	12	18
Tristan	4/22/2018	Beaver Creek	-10	60	18	30	small	20	14	22
Vy Le	04/20/2018	Aspen	20	20	4	20	medium	28	13	18
Test User	12/04/2017	Test Location	32	48	8	38	large	24	12	18
Test User	12/04/2017	Test Location	32	48	8	38	large	24	12	18
Test User	12/04/2017	Test Location	32	48	8	38	large	24	12	18
Test User	12/04/2017	Test Location	32	48	8	38	large	24	12	18
Test User	12/04/2017	Test Location	32	48	8	38	large	24	12	18
Test User	12/04/2017	Test Location	32	48	8	38	large	24	12	18

"Search By Location Success"

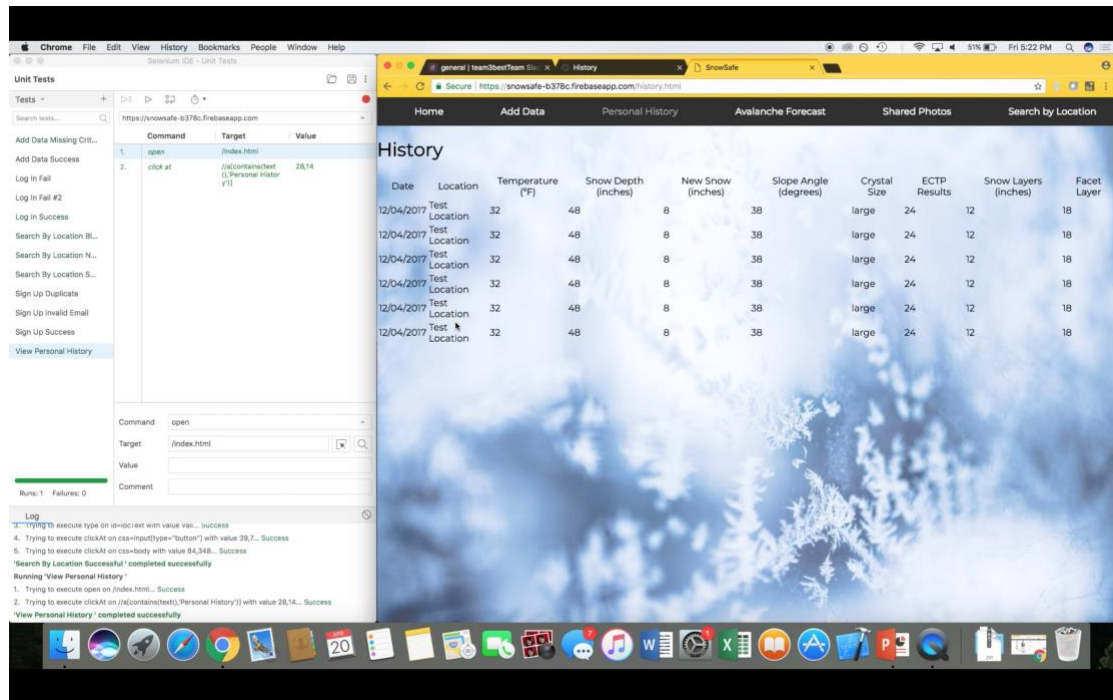
The screenshot shows a Selenium IDE window on the left and a web application on the right. The Selenium IDE window displays a test suite with the following commands:

Command	Target	Value
open	/search.html	
click at	id=locText	25,21
type	id=locText	Vail
click at	css=input[type="button"]	39,7
click at	css=body	84,348

The log shows the test suite completed successfully. The web application on the right has a navigation bar with links: Home, Add Data, Personal History, Avalanche Forecast, Shared Photos, and Search by Location. The main content area is titled "Search by location (leave blank to see all data):" and contains a search input field with the placeholder text "location". Below the input field is a "Submit" button. The table below the input field displays search results for Vail.

User	Date	Location	Temperature (°F)	Snow Depth (inches)	New Snow (inches)	Slope Angle (degrees)	Crystal Size	ECTP Results	Snow Layers (inches)	Facet Layer
Tristan	12/04/2018	Vail	32	14	28	38	large	24	12	18

“View Personal History”



User Acceptance Test Plans

Feature 1: Add Data

Users will be able to log data into our database using a form. However, every section in the form must be filled out before they can submit.

The test case “Add Data Missing Criteria” tests if there is an alert prompting the user to finish filling out the form if they’ve left something empty but tried to submit the data. There are tests for every individual section on the form to make sure users can’t leave anything empty. This is tested by filling out every section on the form except one, and also by leaving multiple sections empty. In either case, there should be an alert.

The test case “Add Data Success” tests if there is an alert when the data is submitted successfully. This means that every section of the form was filled out and the data was sent to our database successfully. This is tested by filling out every section in the form and pressing submit.

Feature 2: View Personal History

Users will be able to view all of the data that they’ve personally submitted.

The case “View Personal History” tests if our Personal History page displays the data that the user has submitted by using asserts to see if the table is displayed. This is tested by clicking the “Personal History” tab.

Feature 3: Search by Location

Users will be able to search the database for a specific location and see all of the data submitted for that location. If no location is specified, it will display all the data.

The test case “Search By Location Blank” tests if there’s an alert saying that no location was specified. Then it asserts that there should be a table displayed afterwards. This is tested by leaving the location field empty on the “Search by Location” page and just pressing submit.

The case “Search By Location Success” tests if the table displays the data for the specified location. It tests this by using an “assert element present” and checks if the location(s) displayed in the table match the input. This is tested by inputting a valid location on the “Search by Location” page.

Another test case tests what happens if the user enters a location but there’s no data in the table for it. It tests for an alert which says “No data for that location was found. Displaying all data points instead.” It also asserts that there should be a table displayed afterwards. This is tested by inputting an invalid location on the “Search by Location” page.

Output showing the results of the automated test cases running:

Selenium IDE - Untitled Project

SnowSafe

Test suites

Search tests...

Add Data: Facet La...

Add Data: Missing ...

Add Data: Missing ...

Add Data: Missing ...

Add Data: Missing ...

Add Data: Missing ...

Add Data: Missing ...

Add Data: Missing ...

Add Data: Missing ...

Add Data: Missing ...

Add Data: Missing ...

Search By Location...

Search By Location...

Search Location: N...

View Personal Hist...

Runs: 14 Failures: 0

https://snowsafe-b378c.firebaseio.com

	Command	Target	Value
3.	assert element present	css=th	43,31
4.	assert element present	//table[@id='dataPointsTable']/thead/tr/th[2]	30,31
5.	assert element present	//table[@id='dataPointsTable']/thead/tr/th[3]	48,20
6.	assert element present	//table[@id='dataPointsTable']/thead/tr/th[4]	83,22
7.	assert element present	//table[@id='dataPointsTable']/thead/tr/th[5]	60,21
8.	assert element present	//table[@id='dataPointsTable']/thead/tr/th[6]	69,19
9.	assert element present	//table[@id='dataPointsTable']/thead/tr/th[7]	35,26
10.	assert element present	//table[@id='dataPointsTable']/thead/tr/th[8]	42,23
11.	assert element present	//table[@id='dataPointsTable']/thead/tr/th[9]	39,22
12.	assert element present	//table[@id='dataPointsTable']/thead/tr/th[10]	24,36

Command

open

Target

/index.html

Value

Comment

Log

12. Trying to execute type on name=angle with value 20... Success

13. Trying to execute clickAt on id=addDataForm with value 429,589...

12. Success

14. Trying to execute clickAt on name=crystalsize with value 2,5... Success

15. Trying to execute clickAt on name=ecpt with value 53,16...

14. Success

16. Trying to execute type on name=ecpt with value 17... Success

17. Trying to execute clickAt on name=layer with value 77,18...