Ski Maps: Usability Test

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Executive Summary

The main goal was to test the usability of the Ski Maps website and how user-friendly the site is. We had six participants in our usability study and all six were able to complete the tasks provided. We first introduced ourselves to the participants and read a brief background description of our site along with the goal of the test. We then handed the participants the list of tasks to be completed and gave them full control of a laptop for them to test the website. The tasks consisted of asking them to navigate to the Waterville Valley demo, changing the dates in order to observe how the map changes, and lastly navigating to two other maps of their choosing. Each of our group members took turns writing down notes while the others carefully examined the participants and provided key details for the other members to take notes on. We carefully examined their body language, facial expressions, degree of success or failure, and also whether they needed our intervention. At the end of the test, the participants were asked to complete a Google Form consisting of questions and suggestions they had. With this data, we plan on further improving the usability of our website based directly on the participants' feedback. Included in this document is a copy of the instructions read to the participants, the list of tasks given, the evaluation forms, and lastly the answered participants' questionnaires.

Methodology

Who we tested

[Six] participants, having the following characteristics, evaluated [Ski Maps].
Table 1 shows the age breakdown of our participants' age gender, and whether they have prior skiing and snowboarding experiences.

Participants' Age

Table 1

20-	0
20-25	6
25+	0
TOTAL (participants)	**6**

Gender

Women	1
Men	5
TOTAL (participants)	**6**

Skied/Snowboarded

Yes	3
No	3
TOTAL (participants)	**6**

Instructions and Task List for Participants

Greetings, thank you for taking the time to test our website. Our site is Ski Maps which contains six maps from six different ski resorts. The purpose of Ski Maps is to make it more convenient for skiers and snowboarders to find out what the current conditions are at a given mountain and displayed on a single website. We would like to inform you that this is a test for our website and not a test of your performance. Throughout the test you will find yourself (1) navigating to the Ski Maps webpage at the following URL: http://downing.io/Ski-Maps/ and (2) following specific tasks listed below and essentially explore the site.

- Navigate to the Ski Maps homepage (http://downing.io/Ski-Maps/)
- Go to the Waterville Demo
- Change dates on the map
- Observe the changes to the map
- Navigate to another map of your choosing
- Change the dates on this map
- Observe changes
- Navigate to the homepage (NOTE)
- Navigate to another map of your choosing
- Explore the site / navigate between pages
- When finished, fill out the Google Forms page (On Navigation bar as "Google Form")

Evaluation Form for Evaluators

Can the user perform given tasks?	Yes	No	Notes
Navigate to the Ski Maps homepage			
Go to Waterville Demo			
Change the dates			
Observe the changes			
Navigate to another mountain			
Change the dates			
Observe changes			
Navigate to the homepage			
Navigate to another map of your choosing			
Explore the site / navigate between pages			

Questions for Participants:

These were the questions on our google form

1. On a scale from 1 to 5, how useable was the site?
2. On a scale from 1 to 5, how visually pleasing was the site?
3. Have you ever gone skiing or snowboarding before?
4. What changes would you like to see in a future version?

What participants did:

Participants were given a quick introduction to our website's purpose and functionality. They were then asked to navigate to our website with the URL provided. In addition, they were tasked to navigate to the Waterville Valley map and change the dates. We then had the participants take some time to observe how the map and the trails changed as they changed the dates. They were then asked to navigate to two additional maps of their choosing and repeat the previous tasks. Lastly, they had to navigate back to the homepage. After completing the test, the participants had the option of filling out a short questionnaire providing additional feedback.

What data we collected:

We kept track of which tasks were completed and if testers had more difficulty in particular places. Some people took longer to find the correct buttons and to realize what the different colors on the map represented. We mainly wanted to see if the participants were able to navigate between maps smoothly. In addition, we also wanted to know if the participants could navigate back to the home page without using the back button. This allowed us to determine whether or not our navigation bar was serving its purpose in making the page more user-friendly.

Major findings and recommendations:

Major issues:

- Lack of a trail color key or way to indicate which color represents open / closed
  - Caused confusion on what colors meant
- Lack of a website description
- Show maps still in progress or have some indication that a map/page is still under development.
  - Participants were confused on why some maps did not show any changes after dates were changed.
- Make sure the maps overlay at the right position

Identify solutions

- Make a color key displayed on each map (Red is closed and Green is open)
- Add a line or two on the homepage explaining the site
- Show an image on the map if it is not fully working or a header on the page indicating that the page/map is still under construction.
- Check the maps to make sure they are displayed on different window sizes

Detailed findings and recommendations

Introductory Questions & Tasks

Table 2 is indicating data we collected and observed during the usability test as the participants performed the given tasks. Yes means that the user successfully completed the task, and No means that the user had trouble and needed our intervention.
Table 3 is showing data of how the participants enjoyed and thought of the website and whether or not if they had any skiing or snowboarding experiences.

Table 2 User Tasks, whether the user successfully completed each task

Task	User 1	User 2	User 3	User 4	User 5	User 6
Navigate to Ski Maps	Yes, add purpose of site to homepage	Yes	Yes	Yes	Yes, zoom distorted trails	Yes
Go to Waterville Demo	Yes, Indicate Colors	Yes	Yes	Yes	Yes	Yes
Change the Dates	Yes	Yes, tell user what date is selected	No, asked about buttons	Yes	Yes	Yes
Observe the Changes	Yes	Yes, really liked idea and website	Yes	Yes	Yes	Yes, Make ski lifts different colors
Navigate to another mountain	Yes	Yes	Yes, say which maps have issues	Yes	Yes	Yes, Make a color key
Change the Dates	Yes	Yes	Yes	Yes, show maps still in progress	Yes	Yes
Observe Changes	Yes	Yes	Yes	Yes	Yes	Yes
Navigate to the homepage	Yes, used logo	Yes, used logo	Yes, used logo	Yes, used logo	Yes, used logo	Yes, used logo
Navigate to another map of your changes	Yes	Yes	Yes	Yes	Yes	Yes
Explore the site, navigate more	Yes	Yes	Yes	Yes	Yes	Yes
Other Comments						Show if mountain is open or closed

Table 3: Participants' opinions and thoughts on the site

Feature	User 1	User 2	User 3	User 4	User 5	User 6
Usability: 1 best	3	1	1	2	1	2
Pleasing: 5 best	5	5	3	4	5	5
Skied before?	Yes	Yes	No	No	Yes	No

Exit Questions/User Impressions

Table 4 shows the questions that we asked in the Google Forms and the responses along with an average and a summary.

Table 4: Form questions and responses

Form Questions	Form Responses
How usable was the site from1-5, 1 being easiest.	Three 1's, two 2's and one 3.
	Average of 1.6
How pleasing was the site from 1-5, 5 being great.	Four 5's, one 4 and one 3.
	Average of 4.5
Have you gone Skiing or Snowboarding before?	3 Yes, 3 No.
What changes would you like to see in a future version?	Color Key. Remove the non-functioning buttons. Add more content and explanations.
	Resizing the page can cause the trails to be off the map.
	A clear vision of maps would be great.
	Add in current weather conditions like rain or snow near the mountain.
	Mobile application in the future.
	Scale images and trails to fit the screen.
	Add an option to allow users to see if a Ski Resort is open or closed in general.
	Make buttons more visible and text on each button more visible.

Analysis:

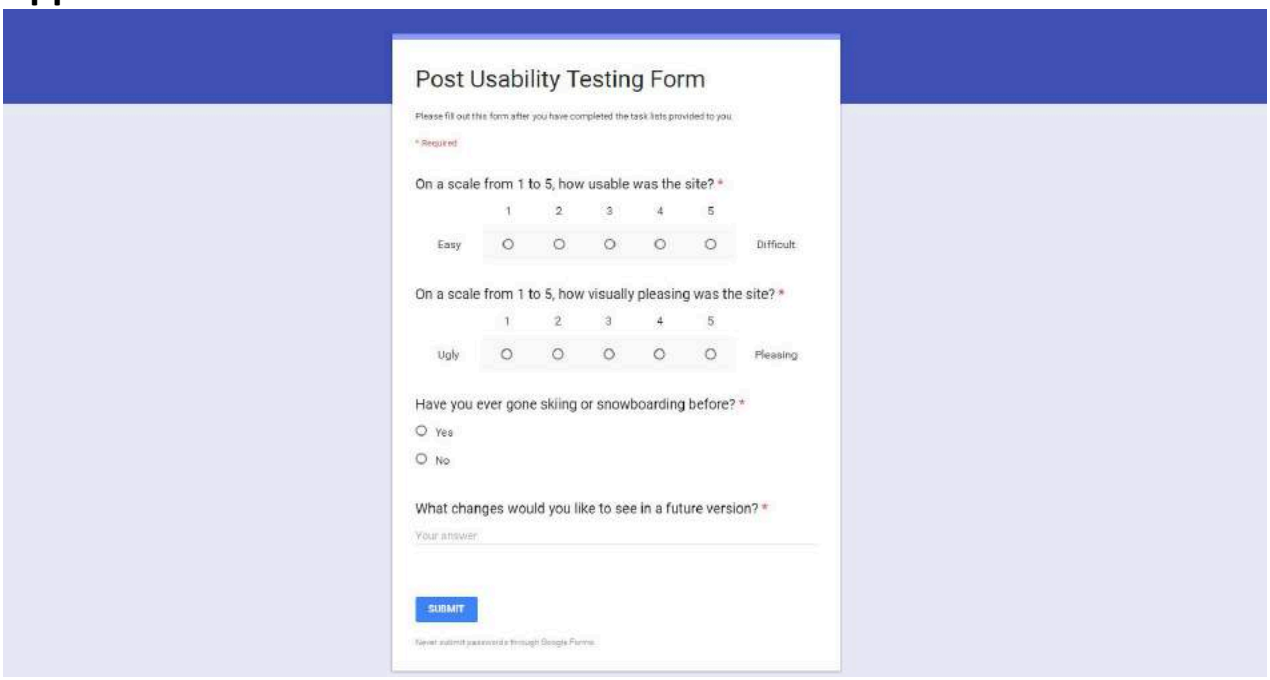
We believe that our user interface is clean, simple, and very user-friendly. Five of our six participants were able to complete the tasks we gave them without needing our assistance. They were able to complete what we expected them to complete. One area where we could improve on for future usability tests and for our website is indicating which pages are still under development. After they finished our fully completed Waterville map, most of our participants navigated to a different map that was not fully implemented. There should have been some type of indication to help notify them that those pages were still in development. Prior to the usability test, our home page lacked a brief description or purpose of the site. This lead to some of our participants not fully understanding what we were trying to accomplish with all of our maps. We now have a brief description of what Ski Map is about, and some directions for users to begin using our site.

Aesthetically, many of our participants gave us high marks, but we personally are aware that many of them may have just been generous in their grading. As a team, we still think our site's current look did not represent our theme or lacked that distinguishable trait. One of our members, Huy, offered an idea to put an image as a background and then made the image more opaque or darker. This offered some contrast so the text became more visible and also made our website more appealing and professional. Another issue brought up by our participants is our font and buttons were difficult to read and to locate on some of the maps. We have since made the buttons and fonts larger and we have also changed our font style to one that is much easier to read.

As for future implementations and changes, we are planning on adding a color key on each map to further clarify what each color means for the trails. One of our participants was confused with our color choices for open trails and closed trails even though to us it seemed obvious. Nevertheless, we plan on adding some sort of color clarification on our site. Another participant also brought up a problem we were unaware of which is that some of the trails have ski lifts over them and our color tracings does not clearly show if it indicated the ski lift or trail. For that issue, we plan on putting a disclaimer indicating that we are only tracking the status of trails due to the time constraint. Many of our participants offered a lot of interesting features and add-ons that we would really love to implement. Some of them consist of adding snow and weather conditions, a mobile application, and an option to see if the ski resort itself is open. We would love to add all of these features, but due to the remaining time we have left we will be unable to add these features. One feature that we might be able to add is the open/closed status of each ski resort and have it displayed on our home page.

Overall the usability tests offered quality feedback from those outside of the course. We were able to find and fix problems we never would have otherwise realized. We also learned what we could improve upon for future usability tests that we may do in our future jobs or classes. In addition, this usability test was a good chance for us as a team to come together and reassess what we can and cannot do with the remaining time. We decided to fake the data for the remaining maps due to the ski season being over (therefore real data would be useless and unexciting) and are now placing our sole focus on the GUI aspect of our site.

Appendix A: Raw Notes



Post Usability Testing Form

Please fill out this form after you have completed the task lists provided to you.

* Required

On a scale from 1 to 5, how usable was the site? *

	1	2	3	4	5	
Easy	○	○	○	○	○	Difficult

On a scale from 1 to 5, how visually pleasing was the site? *

	1	2	3	4	5	
Ugly	○	○	○	○	○	Pleasing

Have you ever gone skiing or snowboarding before? *

○ Yes

○ No

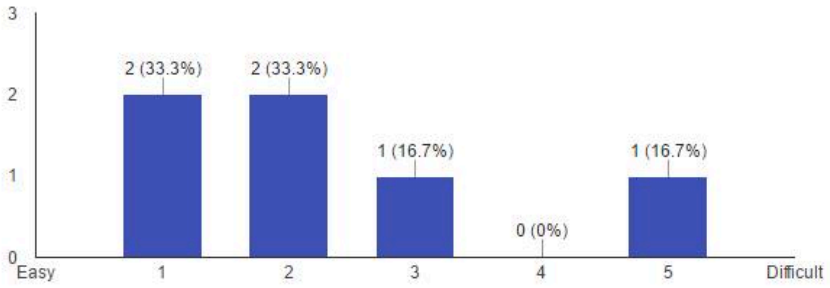
What changes would you like to see in a future version? *

Your answer

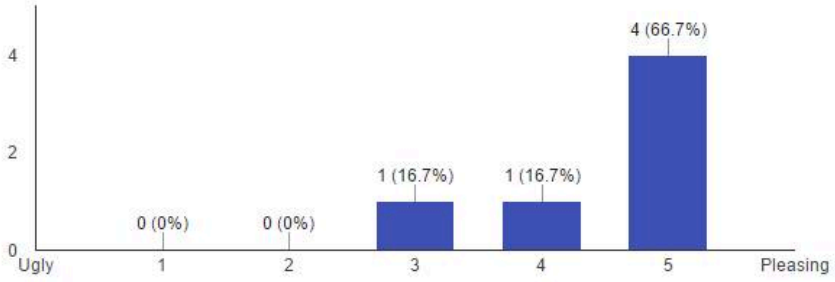
SUBMIT

Never submit passwords through Google Forms.

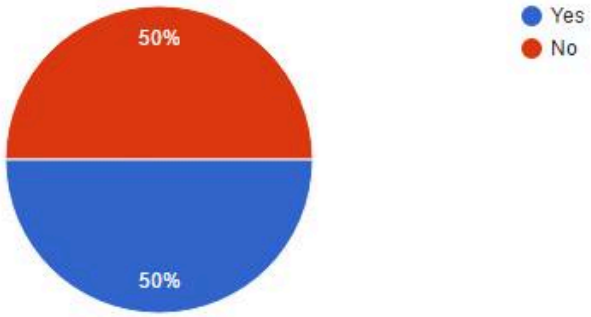
On a scale from 1 to 5, how usable was the site? (6 responses)



On a scale from 1 to 5, how visually pleasing was the site? (6 responses)



Have you ever gone skiing or snowboarding before? (6 responses)



What changes would you like to see in a future version? (6 responses)

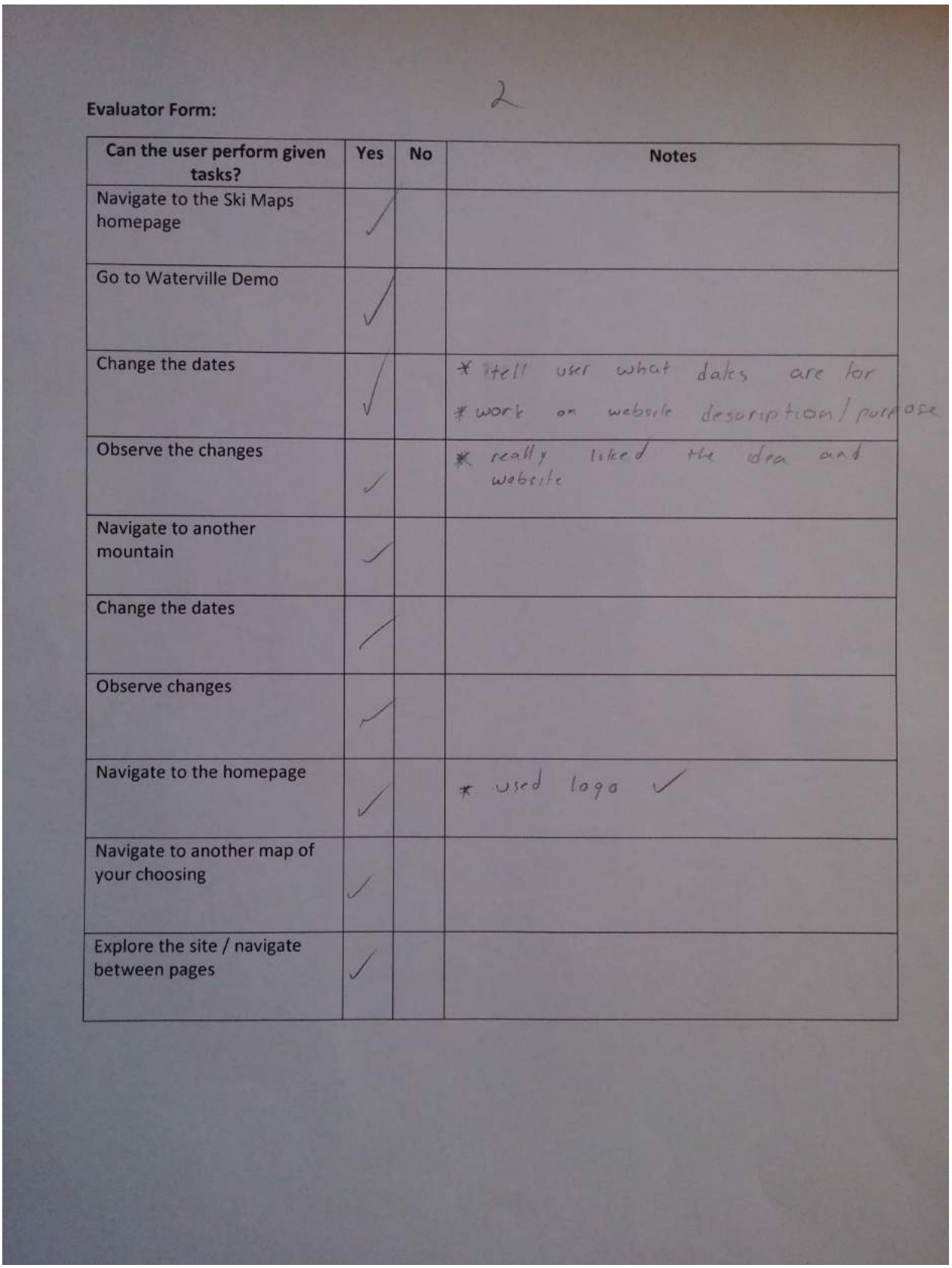
Key. Removal of the extraneous and/or non-functional buttons. Perhaps more content, addtl. explanations of what the site has to offer...
Resizing the page caused the trail overlay to be off and that should be fixed.
a clear vision of maps would be great.
Adding in current weather conditions, such as if its raining or snowing in the particular mountain area
Mobile Application in future..
Scaling images and trails to fit the screen. maybe a feature on the front that states if a resort is open or closed at all.

Girl

user 1

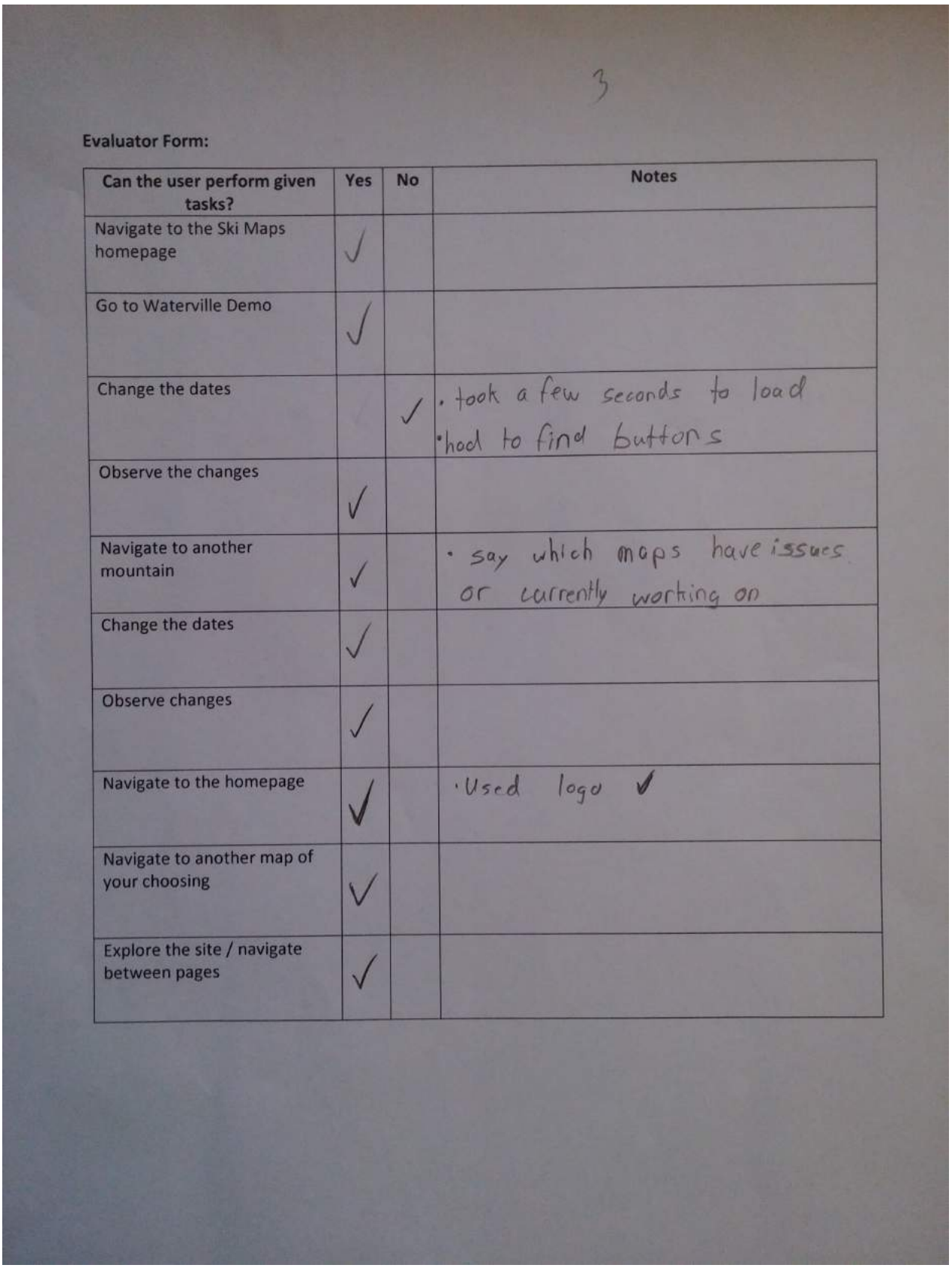
Evaluator Form:

Can the user perform given tasks?	Yes	No	Notes
Navigate to the Ski Maps homepage	✓		* Indicate what colors mean * Let user know what the color mean
Go to Waterville Demo	✓		* add the purpose of site maybe on homepage so user know what to expect
Change the dates	✓		
Observe the changes	✓		
Navigate to another mountain	✓		
Change the dates	✓		
Observe changes	✓		
Navigate to the homepage	✓		, used homepage /homebutton
Navigate to another map of your choosing	✓		
Explore the site / navigate between pages	✓		



Evaluator Form: 2

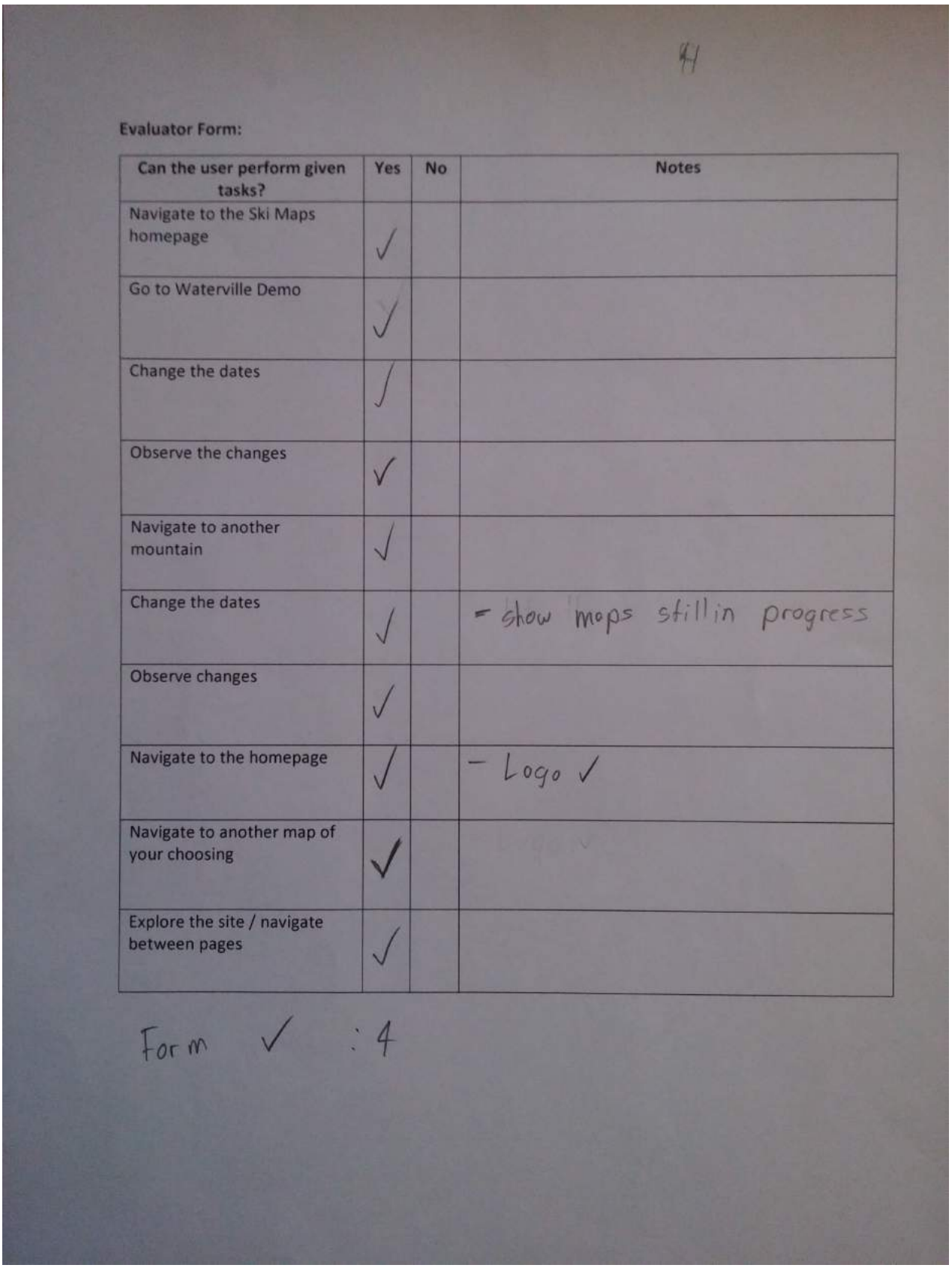
Can the user perform given tasks?	Yes	No	Notes
Navigate to the Ski Maps homepage	✓		
Go to Waterville Demo	✓		
Change the dates	✓		* tell user what dates are for * work on website description/purpose
Observe the changes	✓		* really liked the idea and website
Navigate to another mountain	✓		
Change the dates	✓		
Observe changes	✓		
Navigate to the homepage	✓		* used logo ✓
Navigate to another map of your choosing	✓		
Explore the site / navigate between pages	✓		



3

Evaluator Form:

Can the user perform given tasks?	Yes	No	Notes
Navigate to the Ski Maps homepage	✓		
Go to Waterville Demo	✓		
Change the dates		✓	• took a few seconds to load • had to find buttons
Observe the changes	✓		
Navigate to another mountain	✓		• say which maps have issues or currently working on
Change the dates	✓		
Observe changes	✓		
Navigate to the homepage	✓		• Used logo ✓
Navigate to another map of your choosing	✓		
Explore the site / navigate between pages	✓		

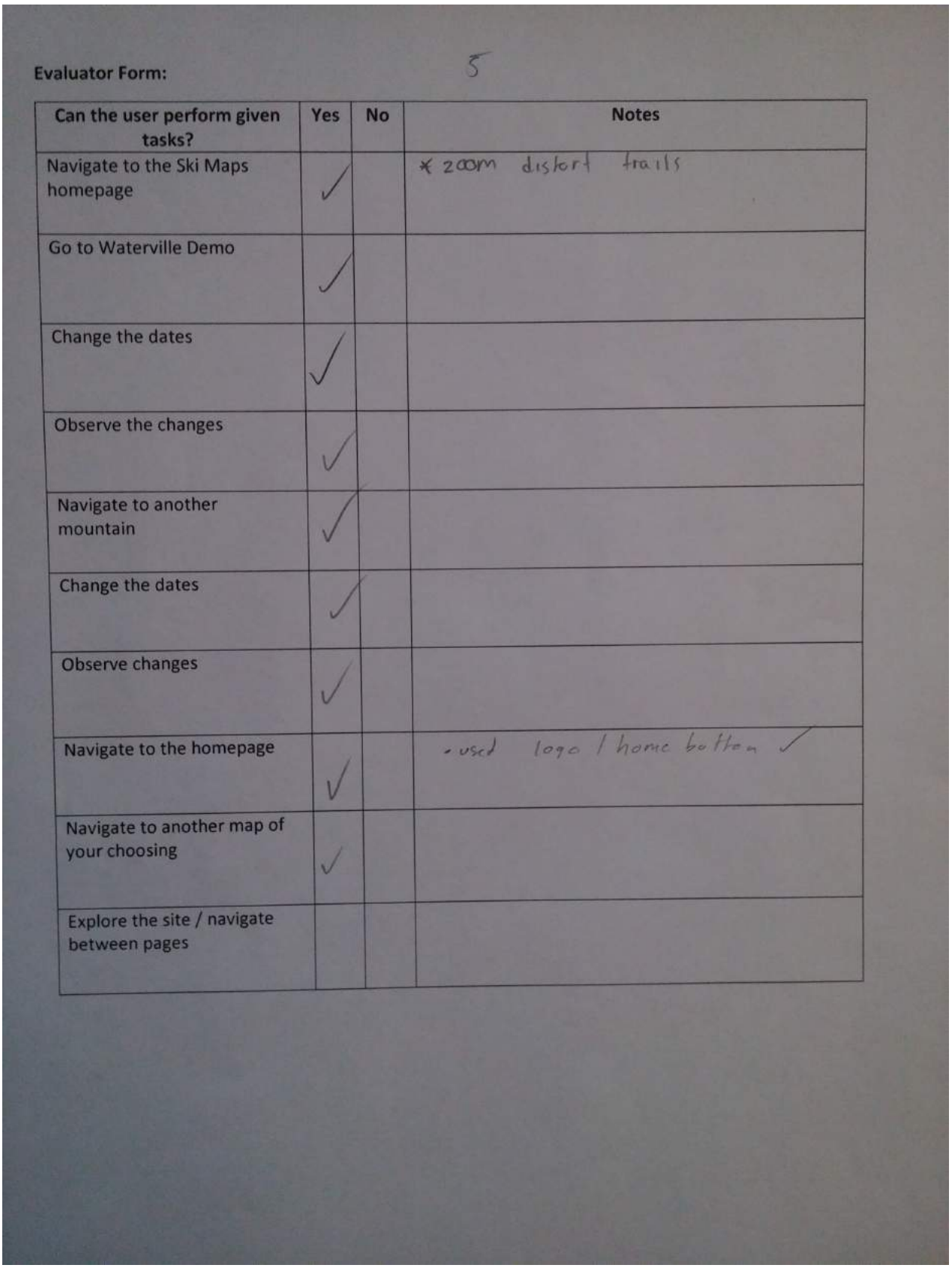


4

Evaluator Form:

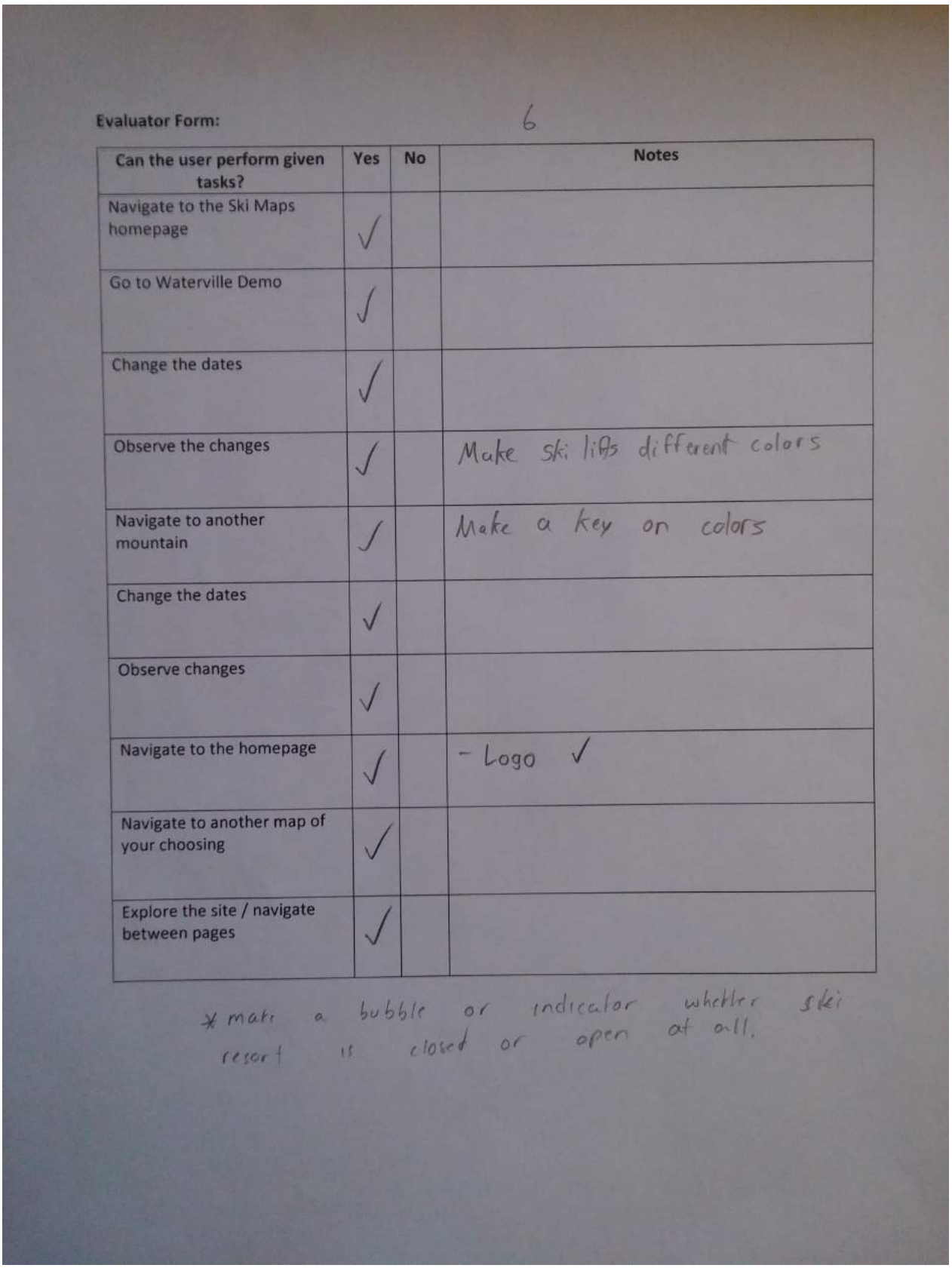
Can the user perform given tasks?	Yes	No	Notes
Navigate to the Ski Maps homepage	✓		
Go to Waterville Demo	✓		
Change the dates	✓		
Observe the changes	✓		
Navigate to another mountain	✓		
Change the dates	✓		- show maps still in progress
Observe changes	✓		
Navigate to the homepage	✓		- Logo ✓
Navigate to another map of your choosing	✓		
Explore the site / navigate between pages	✓		

Form ✓ : 4



Evaluator Form: 5

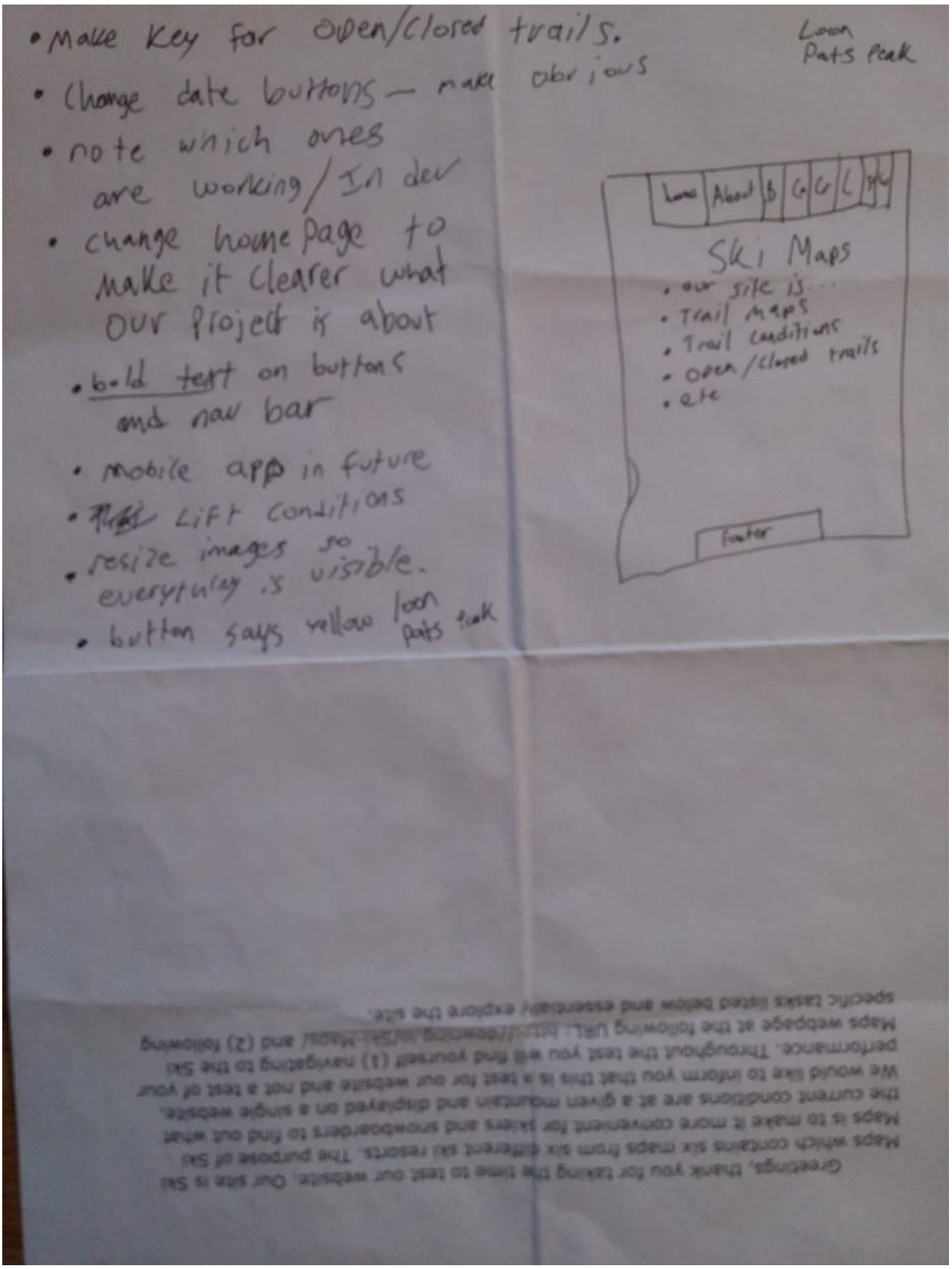
Can the user perform given tasks?	Yes	No	Notes
Navigate to the Ski Maps homepage	✓		* zoom distort trails
Go to Waterville Demo	✓		
Change the dates	✓		
Observe the changes	✓		
Navigate to another mountain	✓		
Change the dates	✓		
Observe changes	✓		
Navigate to the homepage	✓		- used logo / home button ✓
Navigate to another map of your choosing	✓		
Explore the site / navigate between pages			

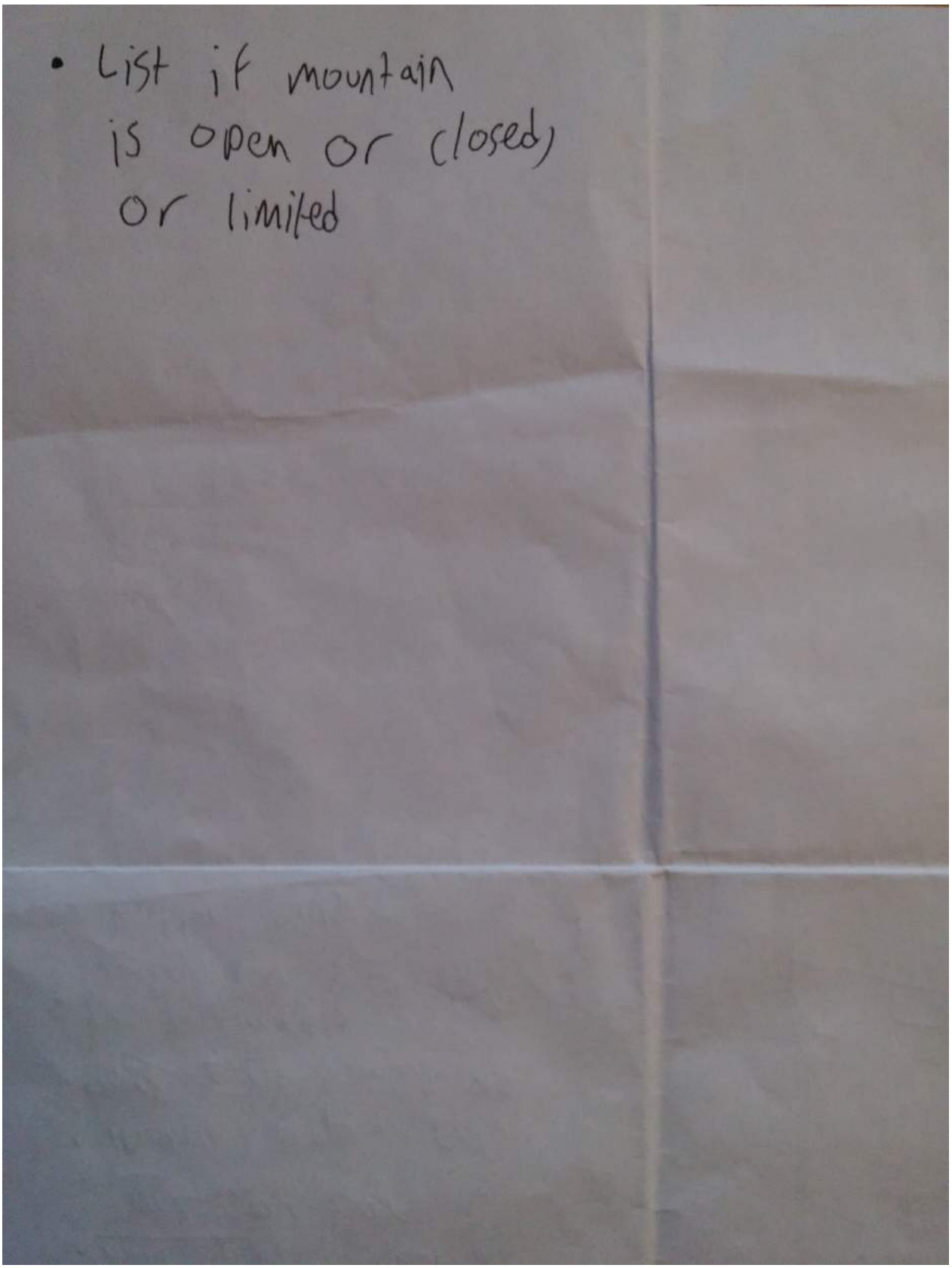


Evaluator Form: 6

Can the user perform given tasks?	Yes	No	Notes
Navigate to the Ski Maps homepage	✓		
Go to Waterville Demo	✓		
Change the dates	✓		
Observe the changes	✓		Make ski lifts different colors
Navigate to another mountain	✓		Make a key on colors
Change the dates	✓		
Observe changes	✓		
Navigate to the homepage	✓		- Logo ✓
Navigate to another map of your choosing	✓		
Explore the site / navigate between pages	✓		

* make a bubble or indicator whether ski resort is closed or open at all.


• Make Key for open/closed trails.
• Change date buttons — make obvious
• note which ones are working / In dev
• change home page to make it clearer what our project is about
• bold text on buttons and nav bar
• mobile app in future
• Lift conditions
• resize images so everything is visible.
• button says yellow loon pats peak
Loon Pats Peak
Ski Maps
• our site is...
• Trail maps
• Trail conditions
• open/closed trails
• etc
Footer


• List if mountain
is open or closed
or limited