Heuristic Evaluation of Project Perfect

(These names will be removed before the document is given to the project team. Use these letters below)

1. Problem
Project Perfect is an application that facilitates painless class projects by letting teachers easily create/assign projects and give students the information they need to complete and submit those projects remotely.

2. Violations Found

1. **[H2-2 Match Sys & World] [Severity 4] [Found by: A, B, C]**
   Within the teacher side, clicking on "Create a Project" takes you to the notification page rather than letting you create a project. The button should instead take users to the correct page.

2. **[H2-4 Consistency and Standards] [Severity 1] [Found by: A, C]**
   Clicking on the notification button in the navigation bar takes you back to the page you were on before. It would be more intuitive for nothing to happen if you click on the button that represents the page you're already on.

3. **[H2-3 User Control and Freedom] [Severity 3] [Found by: A, B, C]**
   I couldn't figure out how to go back to the base teacher page (where you have the "Manage Classes" and "Create a Project" buttons) from the page that shows current and past projects. There should be a button that leads there.

4. **[H2-2 Match Between System and Real World] [Severity 2] [Found by: A, B, C]**
    It's not intuitive that "Browse Existing" should be an option when you're in the "Create New Project" menu. Perhaps change "Create" to "Assign" so that it's clear that you can assign a project you've made in the past or make a brand new one.

5. **[H2-4 Consistency and Standards] [Severity 2] [Found by: A, B]**
   Sometimes the home button takes you back to the Manage Classes and Create Project page, but other times it takes you to the current and past projects page. It should always do the same thing.

6. **[H2-2 Match Between System and Real World] [Severity 2] [Found by: A, B, C]**
   On the New Page page when creating a new project, it's not clear what "Background" means. There should be a more self-explanatory title for that option.

7. **[H2-3 User Control and Freedom] [Severity 3] [Found by: A, C]**
   There's no option to finalize submission on the New Page page when creating a new project. Instead, you can only do that from within one of the options (Background,

Supplies, Submission, Tap here). It would make more sense for there to be a submit button on that main page as well.

8. **[H2-3 User Control and Freedom] [Severity 2] [Found by: A, C]**
From the Submission page (where you decide what the student has to submit), you can't add that information to the project without finalizing it. You should be able to click "Insert New Page" to save that information and go back to the menu like you could for the other options.

9. **[H2-3 User Control and Freedom] [Severity 2] [Found by: A, B, C]**
I don't know how to get back to the very beginning screen where you choose to enter the app as a teacher or a student. There should be some kind of button that leads back to that beginning screen so that users don't have to restart the app to switch modes.

10. **[H2-4 Consistency and Standards] [Severity 2] [Found by: A, B, C]**
When answering the Essential Question in Step 1 while doing the project as a student, it was not possible to click return to submit my answer, despite that being the expected mechanism based on the other pages of the app. Return should always let the user submit their answer / go back to the previous page.

11. **[H2-5 Error Prevention] [Severity 1] [Found by: A]**
The summary says to watch the video on the right to learn more about salt crystals, but there is no video to the right. That sentence should be deleted (or the video should be added).

12. **[H2-8 Aesthetic and Minimalist Design] [Severity 1] [Found by: A, B, C]**
On the Making Salt Crystals page, the color scheme of yellow headers and white smaller text isn't really followed, which can be confusing. The color scheme should be the same throughout.

13. **[H2-2 Match Between System and Real World] [Severity 3] [Found by: A, B, C]**
There's a list of steps on the Making Salt Crystals project page for students, but the steps aren't links, which was unexpected. Any time the name of a page or option is on the screen, it should link to the relevant page.

14. **[H2-3 User Control and Freedom] [Severity 2] [Found by: A, B, C]**
The home button doesn't work from the notification page. The home button should work from every page.

15. **[H2-3 User Control and Freedom] [Severity 1] [Found by: A]**
Users can only use the back and forward operators from some pages. Those operators should be available on every page (at least, the back button should be).

16. **[H2-10 Help and Documentation] [Severity 0] [Found by: A]**

There are a lot of typos in the README and the language is sometimes confusing. That document should be edited more carefully.

17. [H2-1 Visibility of System Status] [Severity 3] [Found by: A, C]
It's confusing that we get the Project Created! notification after just adding the title and description of the project. That made me feel like I was done or that the project had already been published when really the next step was to add all the content of the project. It might make more sense to eliminate that early system update message and instead have a progress bar on the bottom that shows how far you are in the process of creating a new project.

18. [H2-4 Consistency and Standards] [Severity 2] [Found by: A, C]
On the New Page menu, the fourth option is "Tap here to enter page title," which is not consistent with the language used in the other buttons. The button should be renamed something like "Update Page Title." It would also make more sense for that to be a text field at the top of the page that you can update without going to a new page.

19. [H2-4 Consistency and Standards] [Severity 1] [Found by: A]
After I updated the page title from the New Page menu, I was redirected to a page called Step 2 where I was supposed to add media of some sort. Users should instead be redirected back to the New Page menu or given the option to finalize the project.

20. [H2-5: Error Prevention] [Severity 1] [Found by: B, C]
If buttons have no use for certain screens, they should only conditionally appear. For example, when in project creation mode, the navigation button should disappear.

21. [H2-4: Consistency & Standards] [Severity 2] [Found by: B, C]
The nav button was a little confusing to me. It seems like there is enough screen real estate to give the user an idea of where they are in terms of steps while at the same time giving them the option to navigate wherever they want.

22. [H2-1: Visibility of System Status] [Severity 2] [Found by: B]
When the student clicks on the video, it doesn't ask if they want to open it a new browser but redirects them automatically. Open a video either on the app or let the user know that a new browser will open and they will be exiting the app.

23. [H2-6: Recognition Rather than Recall] [Severity 2] [Found by: B]
Users do not know on what stage/part they are on because they had to remember all the steps at the beginning screen. Have a progress bar of some sort at the bottom to show them how many steps they have done so far.

24. [H2-1: Visibility of System Status] [Severity 2] [Found by: B]
When the user is uploading a picture of the progress, there is a violation of H2-1 (visibility of system status) because you take a picture but I am unsure as to if the picture was taken/stored and also where it went. Perhaps a note when the user uses it for the

first time telling them "Your picture has been successfully saved to the drive" or something like that.

25. **[H2-4: Consistency & Standards] [Severity 2] [Found by: C]**
I was confused by the notifications button. It doesn't seem needed. If the student, receives a message or answer to a question, that could be indicated on the Q&A button.

26. **[H2-7: Flexibility & Efficiency of Use] [Severity 3] [Found by: C]**
Another reason why I think the create project should be one page is say the teacher makes an error on step one, but is now on step eight. He/she would have to go back through everything in order to change that.

27. **[H2-6: Recognition Rather than Recall] [Severity 2] [Found by: B]**
When you, 1) go to a current project and go to the third step and then…2) go back to home and then…3) go back to the current project, you are expected to remember what step you were on when you left it. It's fine for a small project but if the project had multiple steps it might be frustrating to have to click through 15 steps before finally getting to where you left off.If there is some way to have each project remember where the user left off or have them be able to bookmark a page, that would help the user not have to recall where they left off!

28. **[H2-5: Error Prevention] [Severity 2] [Found by: C]**
 If buttons have no use for certain screens, they should only conditionally appear. For example, when in project creation mode, the navigation button should disappear.

29. **[H2-1: Visibility of Status] [Severity 2] [Found by: C]**
When navigating through the steps of a project, the overall name of the project isn't visible.

30. **[H2-8: Aesthetic & Minimalist Design] [Severity 1] [Found by: B, C]**
the idea behind the chalkboard feel is nice, but yellow text is a bit difficult to read. Text editors are usually black on white. It might make it easier on the the teacher when he/she is inputting data.

3. Summary of Violations

Category	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
[H2-1: Visibility of Status]			3	1		
[H2-2: Match Sys & World]			2	1	1	
[H2-3: User Control]		1	2	2		
[H2-4: Consistency]		2	6			
[H2-5: Error Prevention]		2	1			
[H2-6: Recognition not Recall]			2			
[H2-7: Efficiency of Use]				1		
[H2-8: Minimalist Design]	1	1				
[H2-9: Help Users with Errors]						
[H2-10: Documentation]	1					
Total Violations by Severity	**2**	**6**	**16**	**5**	**1**	**30**
Note: check your answer for the green box by making sure the sum of the last column is equal to the sum of the last row (not including the green box)						

4. Evaluation Statistics

Severity / Evaluator	Evaluator A	Evaluator B	Evaluator C	Evaluator D	Evaluator E
sev. 0	1	0			
sev. 1	5	3	4		
sev. 2	8	11	11		
sev. 3	4	2	5		
sev. 4	1	1	1		
total (sev. 3 & 4)	5	3	6		
total (all severity levels)	19	17	21		

5. Summary Recommendations

The overall flow of the app was pretty solid compared to the low-fi prototype. The menu changes were very good, however the menu could be refined further. For example, certain buttons that don't function for certain pages should only conditionally appear when they are options to push (notification button in project creation mode as well as navigation button from welcome menu)

Project creation was pretty confusing for all testers. It would be helpful to have a progress bar somewhere on the screen to show how far into the project creation the teacher is (this would eliminate the need for a navigation button as well as reduce number of clicks). This idea could be applied to the student project view as well. More self-explanatory language for the options on the Project Creation page would be useful too - the teacher should know exactly what parameters they can add to the project from looking at the menu.

Though the chalkboard feel is understood and reminiscent of a classroom, generally, text editors are black on white with colored menus (microsoft word, google docs, etc). It might make things easier for the teacher to have this style for inputting data.