

🐮 S24-4pm-8 Release Notes: Happy Cows 🐄

UI 💕

1. HomePage UI

Before:

The screenshot shows the original Happy Cows homepage. At the top, there's a dark header bar with the title "Happy Cows" on the left, a "Welcome" message and "Log Out" button on the right. Below the header is a large banner with the text "Howdy Farmer Emily" in green and red. The main content area has two sections: "Visit A Commons" on the left and "Join A New Commons" on the right. Both sections have a table-like structure with columns for ID# and Common's Name, and a "Visit" or "Join" button. The background of the page features a scenic view of a field with trees and cows.

ID#	Common's Name	Action
1	testcommons	Visit

ID#	Common's Name	Action
2	my commons	Join
3	testcommons2	Join
4	mmmm	Join
5	mine	Join
6	S24-4pm	Join

HappyCows is a project of [Mattanah de Vries](#), Distinguished Professor of Chemistry at UC Santa Barbara. The open source code is [available on GitHub](#).

After:

The screenshot shows the updated Happy Cows homepage. The overall design is more rustic and playful. The "Howdy Farmer Emily" banner has been moved to a brown header bar. The main content area now features two brown cards: "Join A New Commons" on the left and "Visit A Commons" on the right. Each card has a table structure with columns for ID# and Common's Name, and a "Join" or "Visit" button. The background of the page features a scenic view of a field with trees and cows, similar to the original version but with a different aesthetic.

ID#	Common's Name	Action
2	another common	Join

ID#	Common's Name	Action
1	a common	Visit

HappyCows is a project of [Mattanah de Vries](#), Distinguished Professor of Chemistry at UC Santa Barbara. The open source code is [available on GitHub](#).

The main concern that we addressed here was the visual appeal of this web-app. Before, it was very rigid and not playful. Due to the nature of what this project was trying to convey, we felt having a fun font would help the user feel more immersed in their cow business. The addition of wooden panels as cards also helped to add to this rustic feel. As you add more commons, you build up your fence. To tie this look together we added a brown background and green button. This allowed for visibility and to be very apparent to users that this is how they could “Join” or “Visit” a common. Another notable change is that

we swapped the “Join A New Commons” and “Visit A Commons.” This was deliberate as it helped the overall flow of the page (i.e. reading left to right). You will also notice that we left the “Welcome, user@email” to be the generic font. This was to maintain readability in a spot where the text is significantly smaller. The font color was chosen to maintain a high contrast (and thus good readability) as well as add a golden touch that was warm and inviting. Also, if you hover over the buttons it will become slightly darker to show that it is clickable.

2. PlayPage UI

Before:

Happy Cows

Welcome_emailthai@ucsb.edu Log Out

Your land awaits farmer Emily!

Announcements

Today is day 21!
Total Players: 19

Leaderboard

Profit	Date	Health	Cows
\$2.00	2024-06-04	100.00%	2
\$2.00	2024-06-03	100.00%	2

Note: Buying cows buys at the current cow price, but selling cows sells at the current cow price times the average health of cows as a percentage!

Manage Cows

- Market Cow Price: \$100
- Number of Cows: 0
- Current Milk Price: \$1

Buy cows Sell cows

Your Farm Stats

- Total Wealth: \$10000.00
- Total Cows Bought: 0
- Total Cows Sold: 0
- Cow Health: 100%
- Cow Deaths: 0

Profits

You will earn profits from milking your cows everyday at 4am.

After:

Happy Cows Swagger Admin ▾

Welcome_emailthai@ucsb.edu Log Out

The cows await your care farmer Emily!

Announcements

Today is day 5!
Total Players: 1

Leaderboard

Previous	Next	Profit	Date	Health	Cows
		\$2.00	2024-06-04	100.00%	2
		\$2.00	2024-06-03	100.00%	2

Manage Cows

- Market Cow Price: \$100
- Number of Cows: 2
- Current Milk Price: \$1

Buy cows Sell cows

Your Farm Stats

- Total Wealth: \$9804.00
- Total Cows Bought: 2
- Total Cows Sold: 0
- Cow Health: 100%
- Cow Deaths: 0

Profits

You will earn profits from milking your cows everyday at 4am.

In this before and after, we have implemented the wooden board panels in the PlayPage as well, to really help this web-app feel like a game. We also carried over the same font and color scheme here to tie in with the HomePage and really help it feel cohesive. We made sure to use the yellow/gold color on the backgrounds instead of the darker brown so that the black text stood out and was easy to read. As

previously mentioned, we also didn't change the font of these smaller texts within the tables to maintain readability.

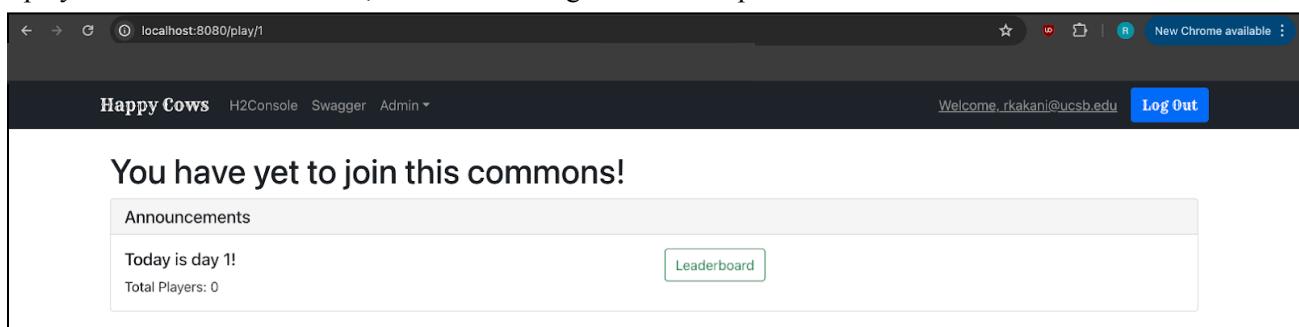
Frontend

1. We changed the default start date when creating a commons to be today's date. The starting date for a commons is always today's date unless otherwise specified.

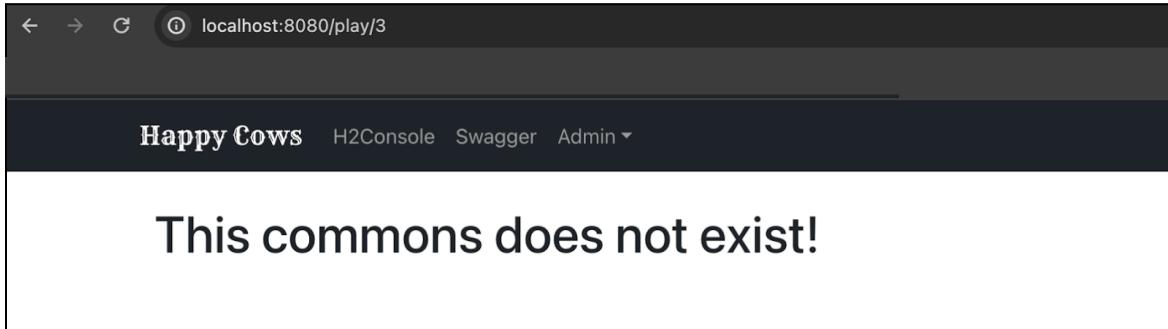
The screenshot shows the 'Create Commons' form. It includes fields for Commons Name (10000), Starting Balance (10000), Cow Price (100), Milk Price (1), Degradation Rate (0.001), Carrying Capacity (100), Capacity Per User (50), Starting Date (05/29/2024), Last Date (06/29/2024), and Health update formula dropdowns (Linear for both above and below capacity). There are also checkboxes for Show Leaderboard? and Show Chat?. A blue 'Create' button is at the bottom.

Notes for future devs:

- The date picker defaults to UTC. Because of this, “today’s date” would switch the current date to the next day’s at 5:00 PM PST (12:00 AM UTC). Changing the default timezone to local time fixed this issue.
 - I chose Canadian time because it uses the format YYYY-MM-DD. This is consistent with the formatting of dates used in the rest of the codebase. US time uses the format MM/DD/YYYY, so it was not appropriate to use.
2. We disallowed the ability to navigate to any commons not joined yet. We display the message “You have yet to join this commons!” when users try to access commons that they have not joined yet through the URL bar. For example, if the user has not joined commons 2 yet and adds “/play/2” to the end of their url, this error message will show up.



- We disallowed the ability to navigate to any commons not created yet. We display the message “This commons does not exist!” when users try to access commons that have not been created yet through the URL bar. For example, if commons 2 has not been created yet and the user adds “/play/2” to the end of their url, this error message will show up.



- Changed the Profits Table so users can use “Previous” and “Next” buttons to move through the table. The Profits table originally had pages on the bottom of the table but the new feature has the “Previous” and “Next” buttons. It is easy for the user to navigate through their profits and the user interface looks clean. You can see how the frontend looks regarding the Profits table in the photo on the right hand side under “Profits.” This involved creating a new PagedProfitsTable file and a fixture, but also changes to the main ProfitsTable.

Manage Cows	Your Farm Stats	Profits																								
Market Cow Price: \$100 Buy cows Sell cows <small>Note: Buying cows buys at the current cow price, but selling cows sells at the current cow price times the average health of cows as a percentage!</small>	Total Wealth: \$8580.00 Total Cows Bought: 20 Total Cows Sold: 0 Cow Health: 100% Cow Deaths: 0	You will earn profits from milking your cows everyday at 4am. Page: 1 Previous Next <table border="1"> <thead> <tr> <th>Profit</th> <th>Date</th> <th>Health</th> <th>Cows</th> </tr> </thead> <tbody> <tr> <td>\$20.00</td> <td>2024-05-28</td> <td>100.00%</td> <td>20</td> </tr> </tbody> </table>	Profit	Date	Health	Cows	\$20.00	2024-05-28	100.00%	20	\$20.00	2024-05-28	100.00%	20	\$20.00	2024-05-28	100.00%	20	\$20.00	2024-05-28	100.00%	20	\$20.00	2024-05-28	100.00%	20
Profit	Date	Health	Cows																							
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- Added an Announcements Page for each commons. To view the Announcements Page for a specific common, navigate to Admin → List Commons and the last column has Announcement buttons for each commons created. Clicking on it will take the admin to the Announcements Page that displays the name of the commons for which the announcements are for.

Commons															Download All Stats
Start Bal	Starting Date	Last Date	Degrad Rate	Show LrdrBrd?	Show Chat?	Tot Cows	Cap / User	Carry Cap	Eff Cap	Edit	Delete	Leaderboard	Stats CSV	Announcements	
10000	2024-05-28	2024-06-27	0.001	false	false	0	50	100	100	Edit	Delete	Leaderboard	Stats CSV	Announcements	
10000	2024-05-27	2024-06-27	0.001	false	false	0	50	100	100	Edit	Delete	Leaderboard	Stats CSV	Announcements	

Added a button on the Announcements page to create an announcement for a specific commons that appears on the commons respective Announcements page.

Happy Cows Admin ▾

Welcome, vsarora@ucsb.edu [Log Out](#)

Announcements for Commons: Sample Commons

[Create Announcement](#)

Happy Cows Admin ▾

Welcome, vsarora@ucsb.edu [Log Out](#)

Create Announcement

Not implemented yet; coming soon!

Notes for future devs:

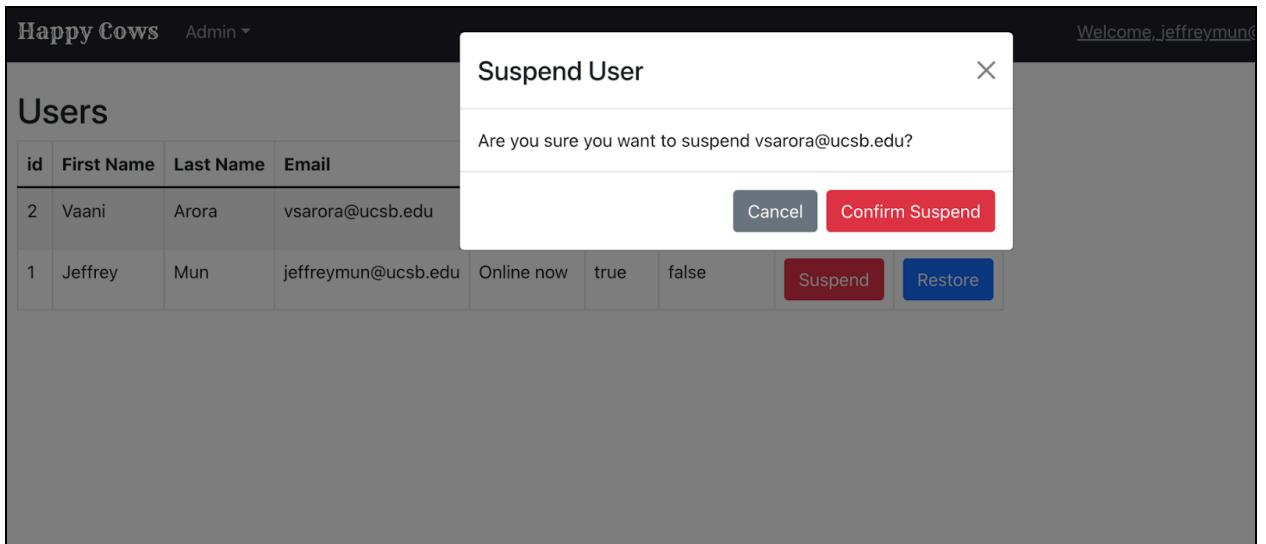
- The implementation of the create announcement page and showing the announcements on the commons homepage has yet to be completed.
6. Suspend/Restore Buttons & Modal for Users of Happy Cows (only accessible for ADMIN users). This is a new feature that adds buttons to suspend and restore a user. We implemented the buttons. As well as the confirmation button in the second photo.

Happy Cows Admin ▾

Welcome, jeffreymun@ucsb.edu [Log Out](#)

Users

id	First Name	Last Name	Email	Last Online	Admin	Suspended	Suspend	Restore
2	Vaani	Arora	vsarora@ucsb.edu	2 hours ago	true	false	Suspend	Restore
1	Jeffrey	Mun	jeffreymun@ucsb.edu	Online now	true	false	Suspend	Restore



- Latest git commit on build tracking (only accessible for ADMIN users)

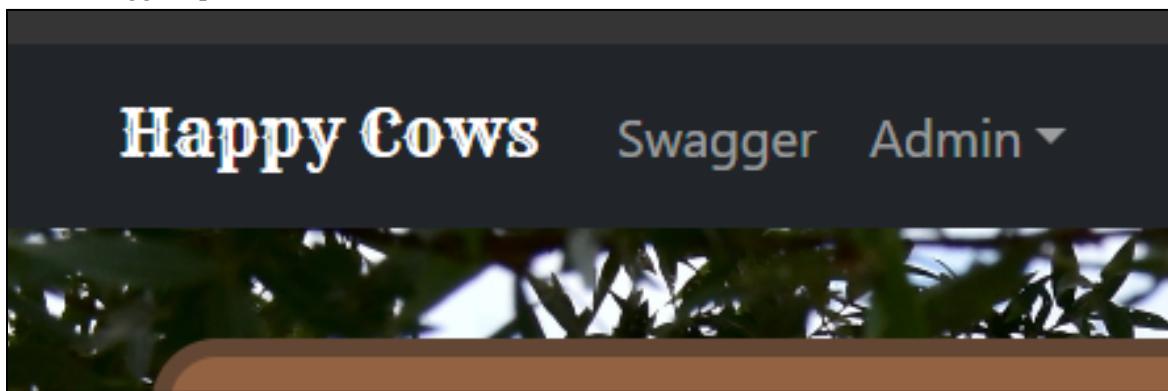
Notes for future devs:

- Future developers of this application now have access to viewing the most recent commit on the deployment. This is incredibly useful in making sure that the changes within the deployed build and the local build are synonymous – if one is ever curious on the most recent commit, they just have to navigate to /api/systemInfo and it'll show a view like:

```

1 {
2   "springH2ConsoleEnabled": false,
3   "showSwaggerUILink": false,
4   "startQtrYYYYQ": "20221",
5   "endQtrYYYYQ": "20243",
6   "sourceRepo": "https://github.com/ucsb-cs156/proj-happycows",
7   "commitMessage": "jm - added role user interceptor and tests",
8   "commitId": "66ff787",
9   "githubUrl": "https://github.com/ucsb-cs156/proj-happycows/commit/66ff787",
10  "oauthLogin": "/oauth2/authorization/google"
11 }
```

- Show Swagger option on Navbar



Notes for future devs:

- This allows for the developers on the project to easily test the backend as needed. Furthermore, in the code, they can just set one value to false and it would remove the Swagger option from the Navbar for when it is not needed.

Backend ☀

1. Suspend/Restore Users API endpoints
 - a. There are 2 new endpoints on the backend that developers now have access to. They are:
 - i. /api/admin/users/suspend/{user_id}
 - ii. /api/admin/users/restore/{user_id}
 - b. These API endpoints take a user ID and update the 'suspended' field in the database depending on what's called (suspend => true, restore => false)
2. Individual pi-test support
 - a. Previously, developers could not run individualized pitest mutation testing on their application and had to run the full suite of tests to determine mutation coverage. Now, developers have access to the DtargtClasses option which can be used like:
 - i. Specific file: mvn pitest:mutationCoverage
-DtargtClasses=edu.ucsb.cs156.happiercows.controllers.UserInfoController
 - ii. Full class: mvn pitest:mutationCoverage
-DtargtClasses=edu.ucsb.cs156.happiercows.controllers.*