



**RESPONSIVE WEB  
DEVELOPMENT**

Project Two

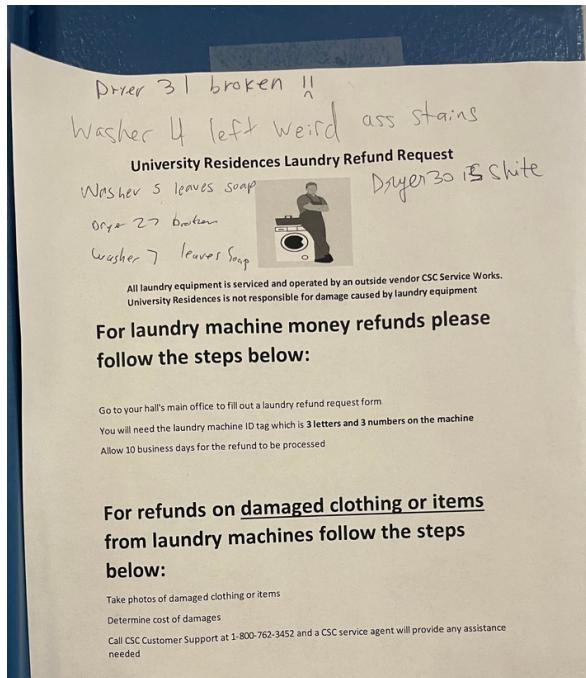
# **Soap & Solutions**

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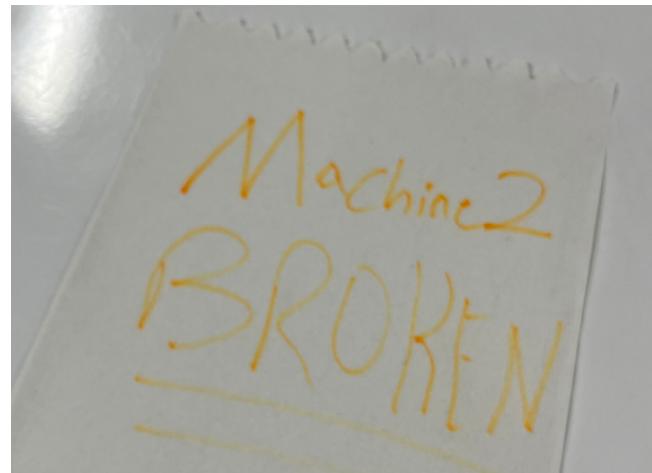
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# PROBLEM SPACE



Broken Machine	Date
Dryer 31	8/28
Dryer 30	9/11



Purdue's laundry system is riddled with issues, including those regarding machines as seen above. Machines are often out of order, or often all in use at choice times. However, the current method of communicating machine status is word of mouth or written notes. This is not only inefficient, but costly for users, in terms of time and money.

## MAIN QUESTION

How can we employ technology to provide students with an efficient laundry experience?

## GOAL

Address user pains of lost time and money by providing a laundry solution focused on machine availability and information sharing, offering improved refund and machine reporting abilities as well.

## STEPS

- Interview to understand user pain points
- Research & analyze other laundry systems
- Ideate & mockup
- Engage users in a co-design to discover project opportunities
- Code a responsive web experience that improves Purdue's laundry system

## USER GROUP

Potential stakeholders include the Laundry mechanics department, as well as the current IT team for the laundry system. We tried our best to get in contact with them, however, we weren't able to reach them. So we prioritized our focus on **Purdue students living in resident halls**. We set out to interview them and got feedback from 10 students who have experience with the laundry system.

## INTERVIEW

### [LINK TO THE INTERVIEW PROTOCOL](#)

The focus of our interviews was to gain a broad understanding of users' experiences with the current laundry system. We wanted to understand what processes/offerings currently work, and which caused unnecessary troubles. We also asked about potential new features such as a reservation system and a way to check machine availability. Finally, we gauged interviewee interest on a new laundry system and how much they'd use a website with our proposed features.

# INTERVIEW FINDINGS

Out of 10 participants, we developed the following findings:

- **Experience with Purdue Laundry:** Interviewees unanimously described poor experiences, with key complaints being busy laundry rooms, soaked clothes due to broken washing machines & an inability to dry clothes in broken dryers; Overall, the process is seen as costly for time and money, with users having to repeat loads; 5/10 participants have had their clothes removed from the machine by another person
- **Repeat Issues:** Machines are almost always either broken or taken, and these aren't well communicated; Lack of enough machines; Laundry process is overpriced for poor quality
- **Pros of System:** Overall, interviewees noted that the laundry system is easy to use and is well located. The payment system is easy to use as well.
- **Cons & Complaints of System:** Some interviewees thought prices to be higher than necessary, and the poor refund system adds to the problem
- **Reservation System:** Users had mixed views on the idea of reserving machines ahead of time; while 4/10 were neutral on the issue, 4/10 didn't approve and thought issues of poor timing and no-show reservers could arise. They thought it could make the availability issue worse. Only 2/10 actively supported the idea.
- **Machine Availability:** 10/10 users agreed that seeing the machines available
- **Website/App Use:** All 10 interviewees approved of and stated they would use an online system to improve the laundry system
- **Favorite Ideas:** 8/10 interviewees agreed that seeing machine availability ahead of time would be the most helpful site feature; 2/10 championed a cheaper system with improved refund abilities

# INDUSTRY RESEARCH

## COMPETITOR SCHOOLS

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The laundry industry is an industry that affects every single person who machine washes and dries their clothes. While there are so many people that do laundry, we are focusing on how universities and laundromats conduct their laundry systems.

Every university has to provide laundry services for students. For industry research, we will look into the laundry systems of other universities as well as the laundry systems of laundromats.

Our solution will potentially give students a better laundry experience at Purdue University.

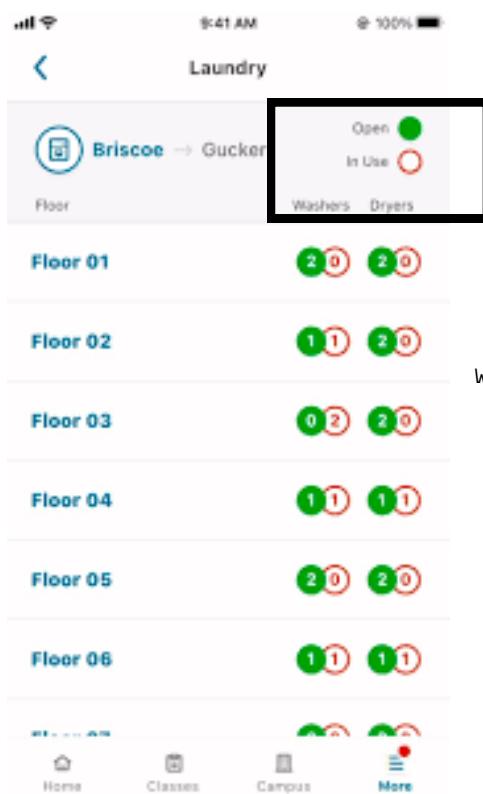
## IU'S LAUNDRY SYSTEM

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IU is Purdue's biggest rival school, and they happen to do many things better when it comes to laundry...

Strength	Weakness	Opportunities	Threats
<ul style="list-style-type: none"><li>• Tracks machines that are open</li><li>• Allows students to see when laundry rooms are busy</li><li>• Provides students/school with data on when people do their laundry</li></ul>	<ul style="list-style-type: none"><li>• Doesn't allow students to reserve machines</li><li>• Doesn't allow students to report broken machines</li><li>• Doesn't allow students to appeal for a refund on their laundry machine</li></ul>	<ul style="list-style-type: none"><li>• Could allow students to track progress of their machines</li><li>• Could allow students to lock their machines during washing/drying</li><li>• Could allow students to add time to dryers in progress</li></ul>	<ul style="list-style-type: none"><li>• Students remove laundry that has been sitting in machine for a long time</li><li>• Students can still steal clothes from machines</li><li>• No way to monitor laundry time</li></ul>

# INDUSTRY RESEARCH MEDIA



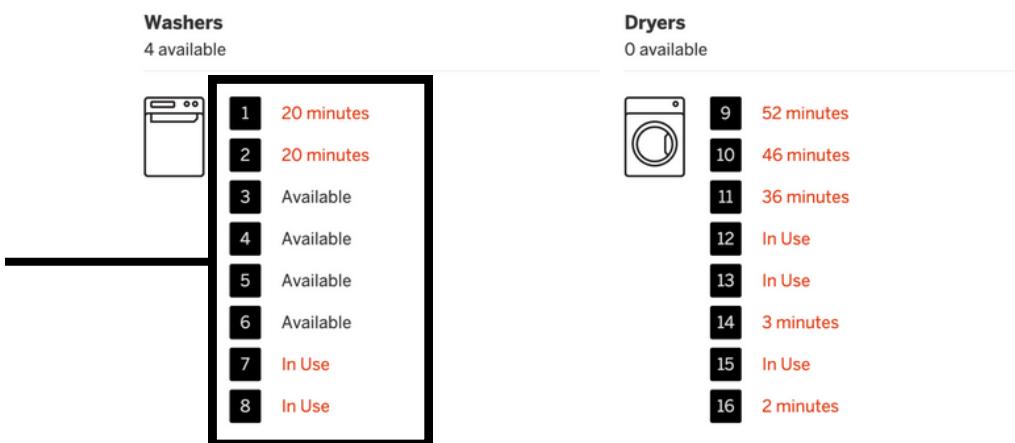
There is a log-in feature for the app to get notifications

This screenshot shows a detailed view of the Laundry Alert app. It includes a 'Hershey' section with a 'Log in' button, and separate sections for 'Washers' and 'Dryers'. The 'Washers' section shows 3 available units, with unit 1 available, unit 2 available, and unit 3 available. The 'Dryers' section shows 2 available units, with unit 4 available, unit 5 in use, and unit 6 available.

Washers	Dryers
3 available	2 available
1 Available	4 Available
2 Available	5 In Use
3 Available	6 Available

App shows open washers and dryers on each floor

The individual availability/time of the washers and dryers are shown here



The time remaining on the machines is shown when the cycle has started

## Insights:

- Indiana University uses a mobile application format to display the content instead of a website
- They show the number of minutes left for each load
- Log in feature to favorite a residence hall, so the user has to take less steps
- Users get dryer and washer notifications

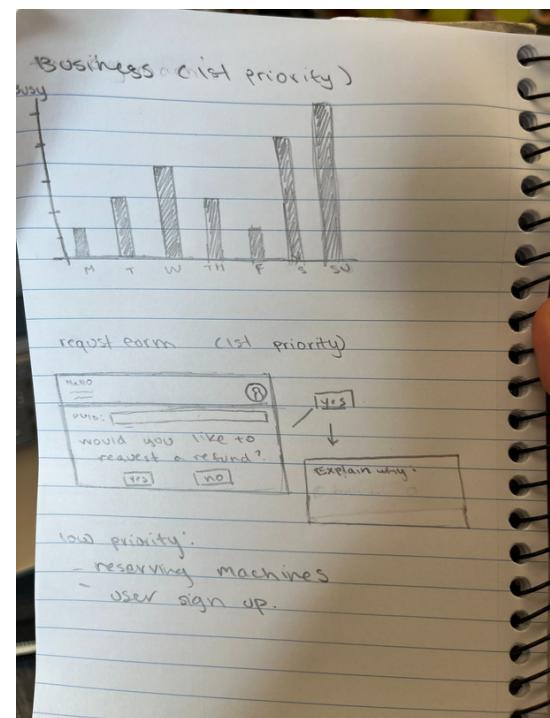
# INFORMAL IDEATION

From the interviews, we identified that the main pain points to target are machine availability and the refund process. With the interview feedback, we performed early ideation on features our users may find helpful, and wrote our thoughts below:

- Real time availability scale
- Reporting machines/File a Fix-It
- Refunds
- Comment section so people can report machines that flood/need maintenance/don't dry right; and/or a way to indicate which machines are broken that isn't fix it worthy?
- Diagnostic question after machine use: Have you switched loads/removed your clothes? Did you have a problem with this machine?- these can go over text
- user sign up- if they'd like notifications they can enter their phone number
- Reserving dryers only, ahead time- probably not
- Tutorial on laundry system?

Additionally, we prioritized features and performed some early sketches

Higher Priority	Lower Priority
- Machine availability	- Machine comment section
- Filing for refunds	- Reserving machines
- File a fix-it	- Laundry tutorial
- Machine report history	- User log-in
- Make site comprehensive	- User laundry completion notifications
	- creating an app over a website



# USER JOURNEY

To better our understanding of our user group, identify pain points chronologically, and visualize them, we developed a persona's experience with common issues in Purdue laundry rooms.

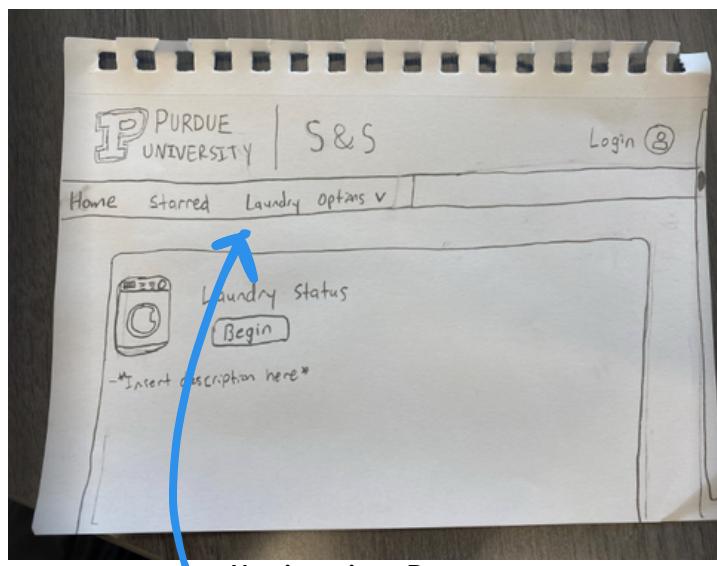
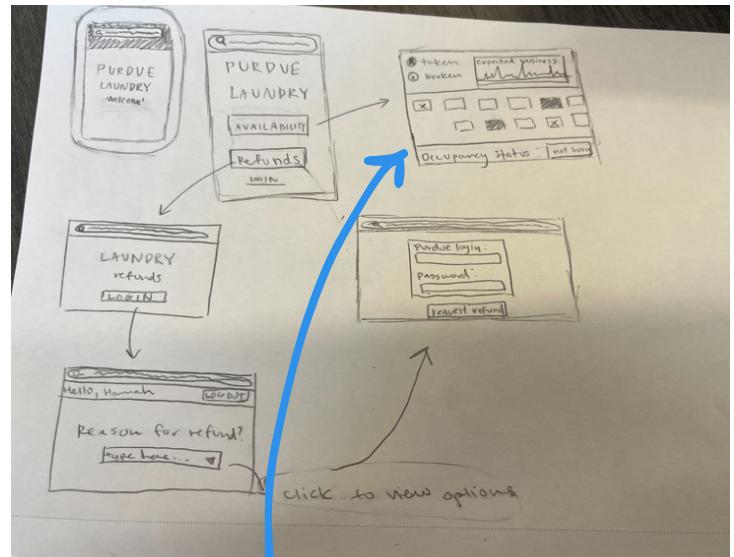
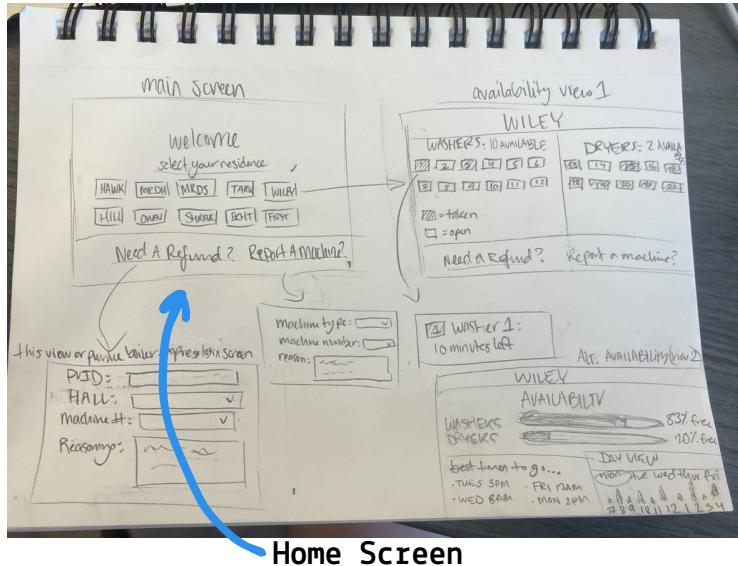
*John Smith is a typical college student: busy and on a budget. He's anxious to finish his homework and doesn't have hours to spend doing multiple loads in the laundry room. He's also a penny pincher, and after paying for his tuition, hopes unnecessary laundry charges won't add to his expenses.*

	<b>John Smith</b> Resident at Tarkington	 Successfully complete one laundry load				
 Journey Step	Walk down to the laundry room and select a washing machine	Place all the clothes in the washer and select the preferences	Pay for one cycle and start the washer	Switch the load from washer to dryer, select preferences, and pay for one dryer cycle	Dryer was broken so it didn't dry the clothes	
 Feeling	 Annoyed	 Curious	 Slight Anxiety	 Spike of anxiety	 Sad	
 Thought	"Gosh, I have to spend my Sunday night doing laundry instead of watching the game"	"Hopefully this machine actually works"	"Is the machine going to break down and ruin my clothes?"	"Ugh I can't find any dryers open, now others may throw my clothes out"	"Great now I have to switch dryers and pay more"	
 Issues	<ul style="list-style-type: none"><li>Don't know if there is any vacant washing machines</li><li>Laundry is approached as a hassle rather than an easy chore</li></ul>	<ul style="list-style-type: none"><li>Hesitant whether the machine actually works</li></ul>	<ul style="list-style-type: none"><li>Don't trust whether the machines will safely work and not ruin their clothes</li></ul>	<ul style="list-style-type: none"><li>Dryers are not available after a wash</li><li>People throw out clothes if the timers are up</li><li>Washers and dryers are so far from each other so the clothes may drop when transferring</li></ul>	<ul style="list-style-type: none"><li>Some don't have a big budget to pay \$5+ each time</li><li>People end up having to add extra time to dry their clothes</li></ul>	

After sympathizing with the persona, conclusion we drew from the user journey was that users have issues picking laundry machines that work and getting refunds for the broken machines. These setbacks can be costly in terms of time and money, which bring on feelings of annoyance, anxiety, frustration, and sadness. From this, we identified changes that users would benefit from. These included reporting which machines are available and working to avoid initial annoyance, as well as providing ways to mitigate the anxiety and sadness that come with losing money, such as providing a streamlined refund service.

# INITIAL IDEATION SKETCHES

Sketched features include: home screen, the availability screen for machines, and refund forms.



Back to top

Report & Refund

Machine ID:

Machine desc:

Refund reason:

Student ID:

(optional) Photos of damage:

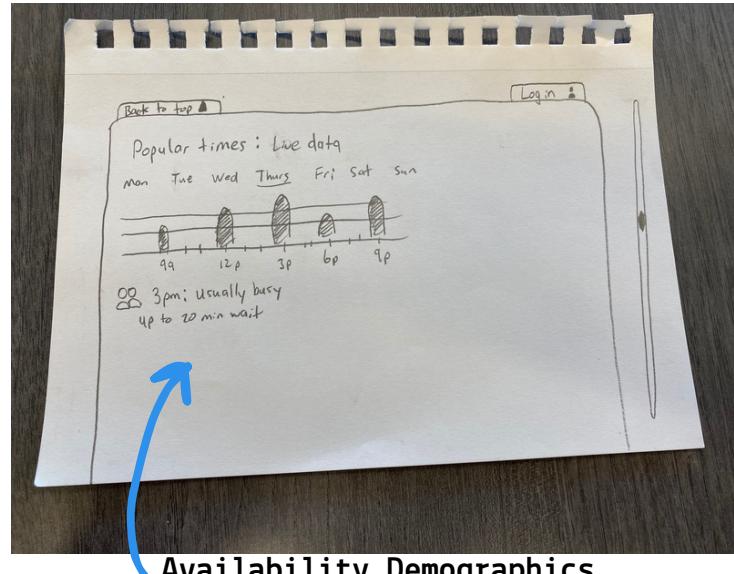
Customer support: 1-800-762-3452

or even add student e-mail too

Refund Form

\* Bottom of page: Link to add more Boiler express \$ \*

\* Also maybe add live comments or disclaimer if someone has a broken machine but just reported it & it hasn't gotten fixed \*



# LOW FIDELITY MOCKUP

**Soap & Solutions**

Home Availability Fix-It Refunds Comments

Purdue Laundry Assistance

This site is created to help Purdue students with their laundry. Whether it's checking which washers are free in your dorm hall, reporting a broken machine, applying for a refund, or letting others know.

[Check Availability](#) [File a fix it](#)

Select a Residence Hall

Meredith South Residence Hall

Washing Dryer

1	2	3	4
5	6	7	8
9	10	11	12

1	2	3	4
5	6	7	8
9	10	11	12

[Submit a form](#)

File a Fix It

Get a Refund

[Submit a form](#)

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[Check Availability](#) [File a fix it](#)

Select a Residence Hall

[+](#)

[Submit a form](#)

File a Fix It

Get a Refund

[Submit a form](#)

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[Check Availability](#) [File a fix it](#)

Select a Residence Hall

[+](#)

[Submit a form](#)

File a Fix It

Get a Refund

[Submit a form](#)

For our lofi mockup, we decided to implement features of the commonly identified problems from our interviews. With scheduling and refunds being the main issues with the Purdue laundry system, we decided to add options where users can see the availability and status of the machines. When needed, users can file a fix-it form and request refunds when issues with laundry machines occur. These forms would be submitted to our hypothetical laundry service.

## CO-DESIGN

After recruiting 4 of our interviewees to participate, we had the following goals for our codesign:

- Challenge participants to think like designers
- Better understand our users' pains & expectations for the website
- Take away new design opportunities

## PROTOCOL

### Link

Activities we included:

- Icebreaker
- Slideshow: Gave the background of our problem space & discussed interview findings
- Ideation: Participant's made their own lofi of a laundry site
- Feedback: Participants gave feedback on our lofi and affinity diagrammed on Miro
- Competitive Analysis: Participants gave feedback on IU's site and affinity diagrammed

## RESULTS

Our codesign helped our participants understand the problem space better, as they reported. It opened their minds to features such as a streamlined refund process, and reinforced their confidence in using a laundry site. It also helped them ideate, and they came up with new features they'd like to see, such as hovering to see how much longer an in-use machine has left, and an ability to see repair history and comments on a machine to know more about its condition.

# CO-DESIGN MOCKUP FEEDBACK

## Our Lofi

THE GOOD: what works?			THE BAD: Things that don't work and are unnecessary		
<b>Intuitive layout</b>	<b>Features</b>	<b>Aesthetics</b>	<b>Unnecessary Features</b>	<b>Opportunities with finding residence halls</b>	
<ul style="list-style-type: none"> <li>Information is very concise. It is easy to navigate, and very intuitive.</li> <li>The division of information is spread out well.</li> <li>Good use of whitespace.</li> <li>Very user-friendly and easily understandable.</li> </ul>	<ul style="list-style-type: none"> <li>I like the file a fix-it form</li> <li>I like the ability to file for a refund</li> <li>Like separation of refunds &amp; fix its</li> <li>I like the file a refund option. I remember having problems with the washing machine and had to spend extra money until</li> </ul>	<ul style="list-style-type: none"> <li>The paragraph font is good.</li> </ul>	<ul style="list-style-type: none"> <li>Availability and Refunds within the first section and the navbar is redundant</li> <li>Comment or blog section is not needed x2</li> </ul>	<ul style="list-style-type: none"> <li>You have to search for your residence hall instead of search by name</li> <li>You should be able to log in and set a residence hall as a main</li> </ul>	
<b>SUGGESTIONS FOR IMPROVEMENT:</b> layout, features, colors, etc					
<b>Availability Features</b>	<b>Other Features</b>	<b>Format</b>			
<ul style="list-style-type: none"> <li>Hovering over an unavailable machine says how many minutes remaining.</li> <li>Phone alerts or notifications when a dryer or washer is free</li> </ul>	<ul style="list-style-type: none"> <li>Have machines be selectable so that you can see the time left on each</li> <li>feature where students could track costs for laundry to mange their expenses</li> <li>Implementing reservation system for students to book in advance to avoid waiting</li> <li>Have machines be selectable so you can see a comments or repair history</li> </ul>	<ul style="list-style-type: none"> <li>Instead of the comments page, have a page for the washing/drying machine function descriptions since some might be students doing laundry for the first time.</li> <li>Having a mobile version of the website would work better</li> <li>A different font.</li> </ul>			

Positives: Easy navigation, intuitive designs, refund & Fix it features

Pains: Redundancy of buttons

Suggestions: Participants wished the process of choosing residence halls

was more streamlined, with an ability to search for and favorite halls.

Also they suggested hovering on in-use machines to see time left, sending notifications for newly free machines, an ability to see machine comments and repair history, the addition of a laundry tutorial, linking our site with BoilerExpress to track costs, and adding a reservation system.

# CO-DESIGN MOCKUP FEEDBACK

## IU's Laundry System

THE GOOD: what works?		THE BAD: Things that don't work and are unnecessary		
<b>Finding/saving residence halls</b>	<b>Availability Features</b>	<b>Clutter</b>	<b>Comment Section</b>	
I like the favorites feature it saves time	I like how it shows how much time the machines have left	Tons of login screens	I hate how many buttons you have to click to get where you want to go	Im not sure how many people will use the user review section
I like the favorite building feature, but may be unnecessary with Purdue's choices	The red indication for machines that are not free is very helpful	Is the login screen necessary?		
SUGGESTIONS FOR IMPROVEMENT: layout, features, colors, etc				
<b>Features</b>	<b>Usability</b>	<b>Aesthetics</b>		
A machine refund request place	Less login prompts if possible?	Larger texts and bigger elements		

In an optional portion of our codesign, we had our participants share their views on IU's laundry system

Positives: the ability to save favorite laundry buildings and seeing how much time machines in-use had left

Pains: the clutter and difficulties of excess login screens and an unnecessary review section

Suggestions: Participants wished for a refund feature, simpler navigation, and larger design elements.

# REVISED LOFI MOCKUP

**Typography**

**Eliminated "Comments" Page**

**Total availability**

**Reduce navigation repetition**

**Pop-up form for fixes**

**Pop-up form for refunds**

The image displays three sets of wireframes for a laundry system. The top set shows the 'Availability' and 'Refunds' pages. The middle set shows the 'Fix-It' and 'Refunds' pages. The bottom set shows the 'Availability' and 'Refunds' pages again. Red arrows point from specific annotations to the corresponding wireframes. A green arrow points from 'Pop-up form for fixes' to the 'File a Fix It' form in the middle set. Another green arrow points from 'Pop-up form for refunds' to the 'Get a Refund' form in the bottom set.

We revised low fidelity mock-up based off of the information we gathered from our codesign results. We had participants review IU's current laundry system as well as our first lofi mockup. The feedback we received asked for us to include the time left for the machines. However, we aren't sure if we can access that information about the laundry machines. We will need to do more research to see if this feature would even be a possibility. The major design changes like including a pop up form was integrated so the user has to take the least amount of steps to accomplish their desired goals.

# PROJECT ROAD MAP

With our codesign finished, feedback compiled, and mockup revised, our immediate next steps include presenting our lofi and design space and receiving class feedback. Afterwards, we will create a hi-fi and usability test it before coding our final solution, updating our documentation along the way. We'll complete final testing with our user group, and look forward to presenting our results in class come October 15. The chart below details our upcoming actions:

	Now	Next	Later
Documentation	Add co-design results Design slide deck for project 2 presentation Fine-tune doc for project 2 deadline Add rationale	Add presentation feedback in the doc	Update doc with coding journey Create a slide deck for project 1 presentation Add website screenshots onto doc
Research	Affinity diagram wireframe feedback Affinity diagram IU competitive analysis feedback		HTML/CSS syntax Javascript microinteraction
Design & Developments	Use Co-Design feedback to iterate low-fi mockup	Use lo-fi to create high-fi Create a design system	Start coding HTML and CSS Add Javascript interactive element Confirm unity and consistency throughout the website
Testing		User Interviews with high-fi mockups	User Interviews with completed website Maybe send out a survey to help gauge users' perspective on the website

## NEXT STEPS

The roadmap highlighted our team's action plan for finishing project one. Along with tasks, we want to take a deeper dive into the new content we were asked to integrate from our co-design. A great piece of feedback from the activity was adding machine timestamps that will allow students to better plan their laundry room visits. Unfortunately, with the knowledge we currently have about Purdue's laundry system, the only way to check the timings on the machine, is by looking at the actual machine. It's not listed on the payment screen. So, as part of our next steps following our presentation we want to do another round of research/user interviews with the Purdue Laundry Service, to better gauge the possibilities surrounding this new idea. We hope to come up with an innovative strategy that can assist students with their laundry runs.

# USABILITY TESTING

We took our initial HiFi and tested it with 5 students

To specify, our initial design involved the following elements commented on by our testers:

- Red & green colors indicating machine availability
- Having to click a button to navigate to a second page for residence halls, as opposed to fitting them all on one page

The following are our participants' ideas for improvement summarized in our Miroboard:

Pain Points:	Color coding can be confusing. How do you tell which ones are broken or occupied?	Differentiation between washer and dryer availabilities	Less clicking, it would be nicer if everything was on one page.	Would be nice if the machines were greyed out
	Contact information	Send a confirmation email	Add time and remaining time	Map of the room for washer and dryer
Useful features	Forms are useful	Simple designs		

# **HIFI (UPDATED)**

[HiFi Layout in Figma](#)

[HiFi Prototype](#)

To best provide for our users, we updated our HiFi with new features and details indicated in our feedback. Changes made after usability testing include:

- Updated machine descriptions with repair history on click (idea from codesign)
- Show time left for in use machines on click, not hover
- Show out of service machines on hover (with X on broken ones)
- Fit all machines into one page, got rid of “See More” button
- Added washer & dryer icons
- Changed red & green machine colors to grey (in use) and blue (available)
- Require Purdue email entry on forms; could allow for a confirmation email to be sent
- Added more accuracy to refund requests (added more forms)

# HIFI LAYOUT

(Single Scrollable Page)

**Soap & Solutions**

Home Availability Fix It's Refunds

Your Laundry Assistant

Welcome! This site was created to help Purdue students like you with their laundry. Whether it's checking which washers are free in your hall, reporting a broken machine, or submitting a refund request, Soap & Solutions has you covered!

Get Started

Select a Residence Hall

Cory Eshart First Street Friend  
Harrison Hawkins Hillenbrand Honors  
McCutcheon Meredith MRDH South Owen  
Shreve Tark Wiley Windsor

Wmifred



Machines: Availability & OOS

Meredith South Residence Hall

Washing: 7 available Dryer: 6 available

1	2	3	4
5	6	7	8
9	10	11	12

1	2	3	4
5	6	7	8
9	10	11	12

This machine is in use. X

There are **30 minutes** until the cycle ends.

Repair History:

1/22/23: fixed machine leak  
11/08/22: fixed issue of soaking clothes

See More

Machine Descriptions: Time left & history



File a Fix It

Help report some of the laundry room's most common issues. The following conditions are most often reported:

- Machine Flooding
- Washer Soaks Clothes
- Insufficient Drying

Submit a form

Fix It Form

File A Fix It

Name:   
Purdue Email:   
PUID:   
Residence Hall:   
Machine Type:   
Machine ID:   
Issue:

Submit

Request a Refund

Did your laundry get soaked in the wash?  
Did the dryer burn your shirt?

We're here to help! Submit a form below and the Purdue Laundry team will look into the case and respond promptly.

Submit a form



Refund Form Page 1

Request a Refund X

Select Situation

Machine Failure (no damage) Damaged Items

# DESIGN SYSTEM

## Colors:

Buttons & textboxes: C7E0E8 (below) or white

Submit

## Fonts:

Logo: Sansita One - Laundry , LAUNDRY

All text: Sarabun - Laundry , LAUNDRY

## Logo:



## Icons:

Washer:



Dryer:



## Photos:

Background:



Home:



## Fix it:



## Refund:



# SITE CHANGES & LAYOUT

When turning our HiFi into code, we noticed few limitations. Our major features including the residence hall list and forms were feasible. However, we did change aspects of our design as we went. These changes include:

- The design system:** Although not commented on in our testing, we felt the font, images, and colors we used previously weren't the most coherent. We instead wanted a modern look with consistent illustrations. Typography plays a sizable role in aesthetic and user experience, therefore we tested many fonts, and ultimately decided on one that we felt was clean and simple. As for the color scheme, we chose one more fitting for laundry, similar to colors brands like Tide and Downey use.

- Representing machine availability with words, as opposed to just colors:** Colors such as red and green can be difficult to differentiate for those who are color blind, as reported in our usability tests. We felt these colors were the most intuitive though, and adding "Available," "In Use," and "Broken," would alleviate confusion while maintaining a logical design.

## Purdue Laundry Assistant

Welcome! This site was created to help Purdue students like you with their laundry! Whether it's checking which washers are free in your hall, reporting a broken machine, or submitting a refund request, Soap & Solutions has you covered!

Scroll to Start



## Select a Residence Hall

Cary Quad	Earhart	First Street
Frieda Parker	Harrison	Hawkins
Hillenbrand	Honors	McCutcheon
Meredith	Meredith South	Owen
Shreve	Tarkington	Wiley
Windsor	Winifred	



## Request a Refund

Did your laundry get soaked in the wash? Did the dryer burn your shirt?

We're here to help! Submit a form below and the Purdue laundry team will look into the case and respond promptly.

Machine Failure

Damaged Items

## File a Fix It

Help report some of the laundry rooms' most common issues. The following conditions are most often reported:

- Machine Flooding
- Washer Soaks Clothes
- Insufficient Drying

Submit a Form



# WEBSITE FEATURES ANALYSIS

Fixed Navigation Bar

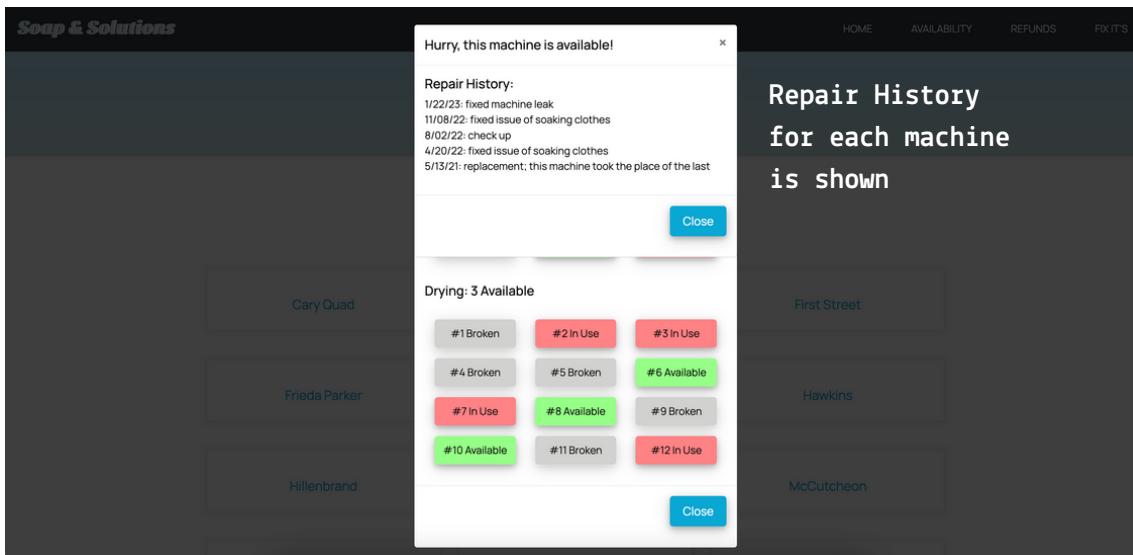
The screenshot shows the homepage of the Soap & Solutions website. At the top, there is a navigation bar with links for HOME, AVAILABILITY, REFUNDS, and FIX IT'S. Below the navigation bar, the title "Soap & Solutions" is displayed. A red circle highlights the entire navigation bar area. The main content area has a light blue background and features a cartoon illustration of a person in a red shirt and white shorts loading laundry into a washing machine. To the left of the illustration, the text "Purdue Laundry Assistant" is written, followed by a welcome message: "Welcome! This site was created to help Purdue students like you with their laundry! Whether it's checking which washers are free in your hall, reporting a broken machine, or submitting a refund request, Soap & Solutions has you covered!" Below this message is a blue button labeled "Scroll to Start". A red box highlights this button. Further down, the text "Scrolling Tip for first time users" is visible.

Home Section

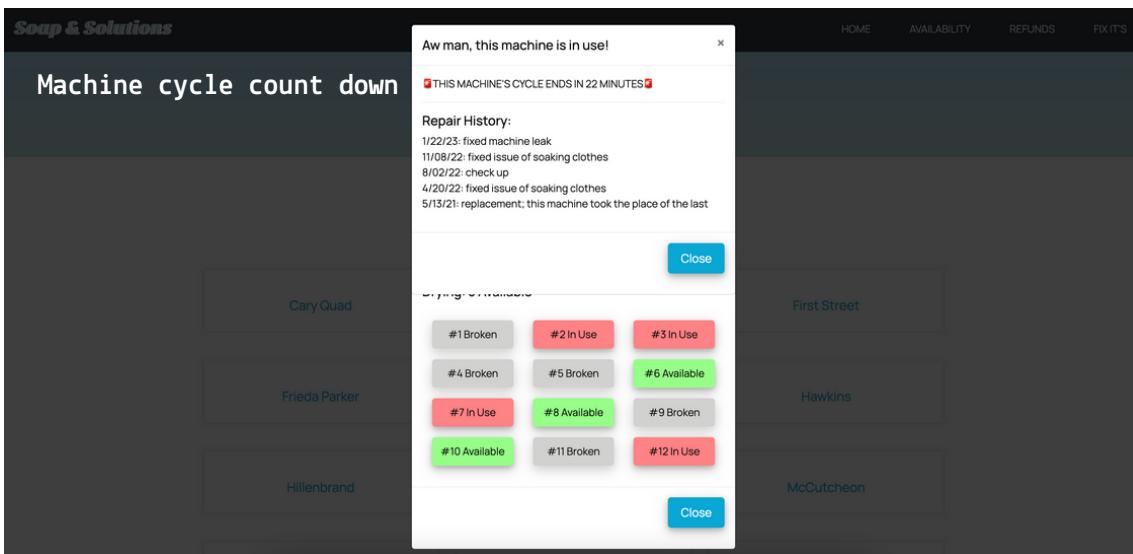
The screenshot shows the "Availability" section of the Soap & Solutions website. A modal window titled "Availability" is open, displaying two sections: "Washing: 6 Available" and "Drying: 3 Available". Each section contains a grid of 12 items, each representing a laundry machine with its status: Available (green), In Use (red), or Broken (grey). The "Washing" section includes items #1 through #12. The "Drying" section includes items #1 through #12. A large bracket on the right side of the modal window groups the two sections together, with the text "First Street Clickable list of machines" written next to it. In the background, the main website interface is visible, showing lists of residence halls: Cary Quad, Frieda Parker, Hillenbrand, Meredith, Shreve, McCutcheon, Owen, and Wiley. Arrows point from the text "Click one of the residence halls to show the availability pop up" to the Cary Quad and Meredith residence hall names.

Availability Section

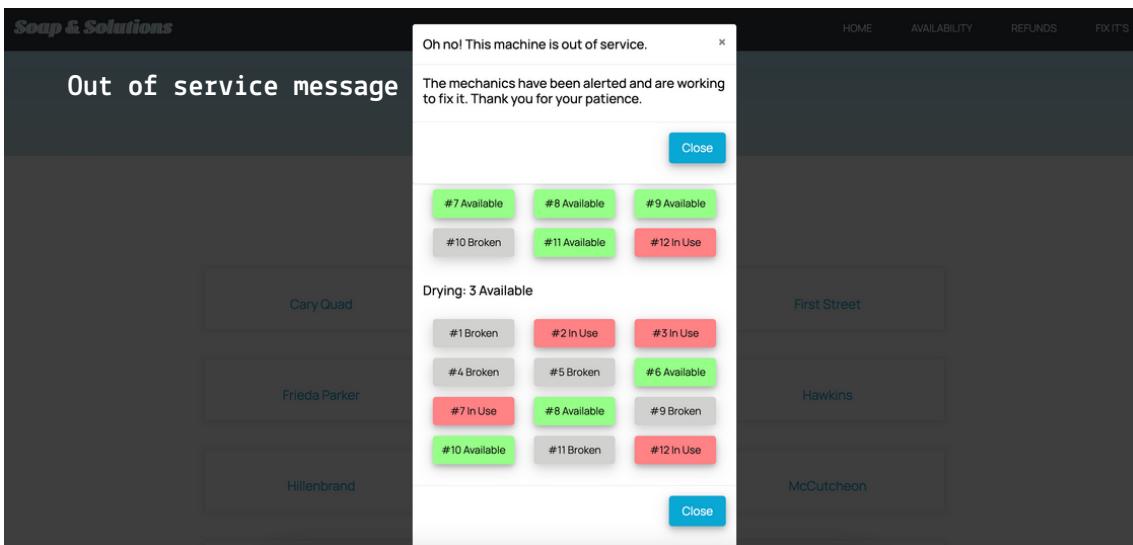
# WEBSITE FEATURES ANALYSIS



if "Available" button is clicked



if "In Use" button is clicked



if "Broken" button is clicked

# WEBSITE FEATURES ANALYSIS

**Request a Refund**

Did your laundry get soaked in the wash? Did the dryer burn your shirt?

We're here to help! Submit a form below and the Purdue laundry team will look into the case and respond promptly.

**Machine Failure**   **Damaged Items**

**2 forms for the user to fill out**

**Refund Section**

This page says  
Your request will be processed as soon as possible, and if accepted, credit will be returned to your BoilerExpress account.

**Hitting the "Submit" button will display a completion alert.**

**Drop down list of residence halls to make it more efficient**

**"Submit" button**

**File a Fix It**

**click "Machine Failure" button to pop up the Form**

**Estimate cost of damages**

**Asks the user to upload a photo**

**Similar alert for this form**

**File a Fix It.**

**click "Damaged Items" button to pop up the Form**

# WEBSITE FEATURES ANALYSIS

**Soap & Solutions**

HOME AVAILABILITY REFUNDS FIX IT'S

## File a Fix It

Help report some of the laundry rooms' most common issues. The following conditions are most often reported:

- Machine Flooding
- Washer Soaks Clothes
- Insufficient Drying

**Submit a Form**

In order to file a fix it



Soap & Solutions

## Fix It Section

**Soap & Solutions**

HOME AVAILABILITY REFUNDS FIX IT'S

## File a Fix It

This page says  
Your request will be processed as soon as possible, and the Fix It team will be notified.

**OK**

Hitting the "Submit" button will display a completion alert.

Purdue Email

PUID

Residence Hall

Residence Hall

Machine Type

Machine Type

Machine ID

Machine ID

Issue

Issue

**Submit**



click "Submit a Form" button to pop up the Form

# UPDATED DESIGN SYSTEM

## Colors:

Primary Colors:

#3DC4F5

#03a7d3

#353A3F

#f8f8f8

Secondary Colors:

#ff4646

#E16453

#0C93C5

#ffffff

## Elements:

Main Page Buttons:

Scroll to Start

Submit a Form

Machine Availability Buttons:

#1 Available

Unclicked

#1 Available

Clicked

#2 In Use

Unclicked

#2 In Use

Clicked

#4 Broken

Unclicked

#4 Broken

Clicked

Close

Unclicked Clicked

## Fonts:

Logo: Sansita One -

***Soap & Solutions***

Bold text: Manrope - **LAUNDRY laundry**

Regular text: Manrope - **LAUNDRY laundry**

## Logo:

Web Icon:



## Graphics:



# CONCLUSIONS

## Soap & Solutions Website

### Summary

Overall, we are very proud of the work we've accomplished during the last 2 months. We were able to perform strong primary and secondary research on our design space, while retrieving constructive feedback on ways to narrow our focus. Our team was able to conduct interviews, competitive analysis, and rapid sketching rounds to help design our low fidelity mockup for our co-design. The co-design workshop went smoothly, we were able to generate some great ideas and feedback to inform our high fidelity prototype. During the walk-around session during class, we finished conducting usability testing, which assisted us in fine tuning the functionalities for our website. Our last step was to code the actual site. We definitely hit a lot of challenges during our coding journey, however, we are very excited with the results.

### Limitations and Next Steps

Just like all design spaces, ours has its limitations. We wished we had a chance to interview some of our other stakeholders like the Purdue Laundry system or mechanics that receive messages from the File a Fix it form. Getting information from them would have made a huge impact on our designs and given Purdue a stronger possibility in integrating our ideas into their current system. If we had more time to iterate on our website, we would conduct usability testing once again, to receive feedback. We would also find a way to connect Purdue's current laundry system into our "machine availability" section.

# **CONTRIBUTIONS**

## **Aashika**

Completed user journey breakdown, brainstormed co-design activity, assisted with informal ideation, sketched website designs, produced all low-fidelity mockups (original and revised), designed final presentation, and completed Project Roadmap model and next steps; coded full website, updated the design system, and completed the conclusion page.

## **Avery**

Completed three interviews & summarized findings; produced sketches; developed codesign protocol, slideshow, and miroboard; assisted with codesign & summarized findings; added design rationale to and organized documentation; produced hi-fi in figma; made final presentation

## **Logan**

Completed industry research and insights, created initial ideation sketches, assisted with co-design and summarized lo-fi revisions, and assisted in informal ideation & and sketches; updated the documentation after receiving feedback

## **Hannah**

Contributed to brainstorming, conducted a total of 5 interviews, assisted with codesign activities, helped create sketches and ideation, organized Miroboard for user testing feedback, and finished up documentation; updated the documentation after receiving feedback

# APPENDIX

## LINK TO THE INTERVIEW PROTOCOL

1. What is your name and what year are you in?
2. Do you live in University Residence Housing?
3. Does your housing come with washing and drying machines?
4. Describe your experience with laundry at Purdue
  - a. Have there been any issues? If so, what caused these issues: the machine, or other people?
5. Have you had your clothes thrown out of a machine before?
6. What do you think works well with the current laundry system?
7. What works poorly?
  - a. What is your biggest complaint, if any?
8. Do you like the current machine reservation system?
  - a. Do you wish you could reserve machines ahead of time?
9. Would you benefit from knowing how busy the laundry room is ahead of time?
10. Would it help to know what machines are in use?
  - a. How about knowing which are not operating properly?
11. Would you use an app/website to assist you in making your laundry process more efficient?
12. What would be the most helpful to know/which of our suggestions do you think would be most beneficial?
13. What changes, if any, would you like to see to Purdue's laundry?

## CODESIGN PROTOCOL

### Link

:00-:05 wait for everyone to arrive & do group introductions  
:05-:10 Ice breaker (creative thinking, maybe have them draw their definition of "design"); maybe collect everyone's emails and share the miro link during this time  
:10-:17 Slideshow Overview: explain problem space, findings, and goals:  
<https://www.canva.com/design/DAFuceKvFSI/15tM6fOV-MX1PpE5B7BLvw/edit>  
:17-:19 Explain what they can expect in our codesign;  
ACTIVITES:  
:19-:30 Wireframe Ideation: If you were designing a laundry site, what would you want it to include? Draw your own idea of a site and its features  
:30-:34 Discussion  
:34-:40 Have them evaluate our lofi design & put feedback in the miro:  
[https://miro.com/app/board/uXjVMIdxquU=/?share\\_link\\_id=664286009309](https://miro.com/app/board/uXjVMIdxquU=/?share_link_id=664286009309)  
:40-:45 explain affinity diagramming and have them group their ideas in the miro  
Optional competitive analysis: Have participants give their feedback on the IU laundry app in miro  
:55-:00 Debrief & get final feedback:

- Did the codesign help you learn more about the problem space?-
- (If they interviewed) Did the codesign change any of your views or priorities before?
- Do you have any final suggestions or features you'd like to see?

## CODESIGN FEEDBACK

### MIROBOARD LINK

## USABILITY TESTING FEEDBACK

- tab should be a different color on hover - nav bar
- confused about colors
  - maybe have a key
  - redo washing/drying interface
    - do you click on it?
  - add time left/remaining
  - shortest time to wait...
- likes the fix-it form
  - dropdown menu instead of typing
- request a refund
  - ask for email
- where to contact people
- send a confirmation email after the form is sent (for proof)
- take out "see more"
- EASY TO USE
- "we do need this"
- change red and green to icons or gray out for in use
- red makes me think it's broken
- show the user needs to scroll down
- back-to-home feature - or overlay of the nav bar
- map of the room for the washers and dryer
- don't have to post previous issues for the file a fix it
- simple, useful, good feature to have a residence hall, all on one page, good forms



Project Two

**RESPONSIVE WEB  
DEVELOPMENT**

# **Soap & Solutions**

**Prepared By:**  
**Aashika Parekh, Avery Kruppe,  
Logan Carter, & Hannah Ahn**