



GUTENBERG WEPT...

...WHEN STUDENTS COULDN'T PRINT

...WHEN STUDENTS COULDN'T PRINT

but why can't they print?

...WHEN STUDENTS COULDN'T PRINT

but why can't they print?

**and how might we improve the user experience
of printing at northeastern ?**

...WHEN STUDENTS COULDN'T PRINT

but why can't they print?

**and how might we improve the user experience
of printing at northeastern ?**

LET ME TELL YOU A LIL STORY (BOARD)

**[POV: YOU ARE A FIRST YEAR DESIGN
STUDENT AT NORTHEASTERN]**

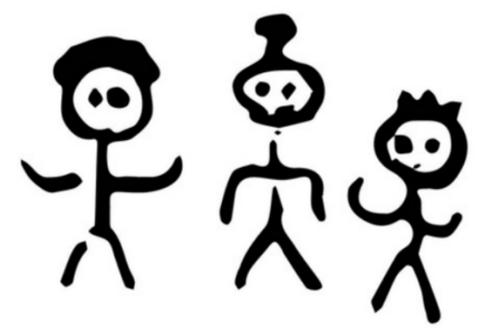
I command thee
to PRINT!



teacher

???

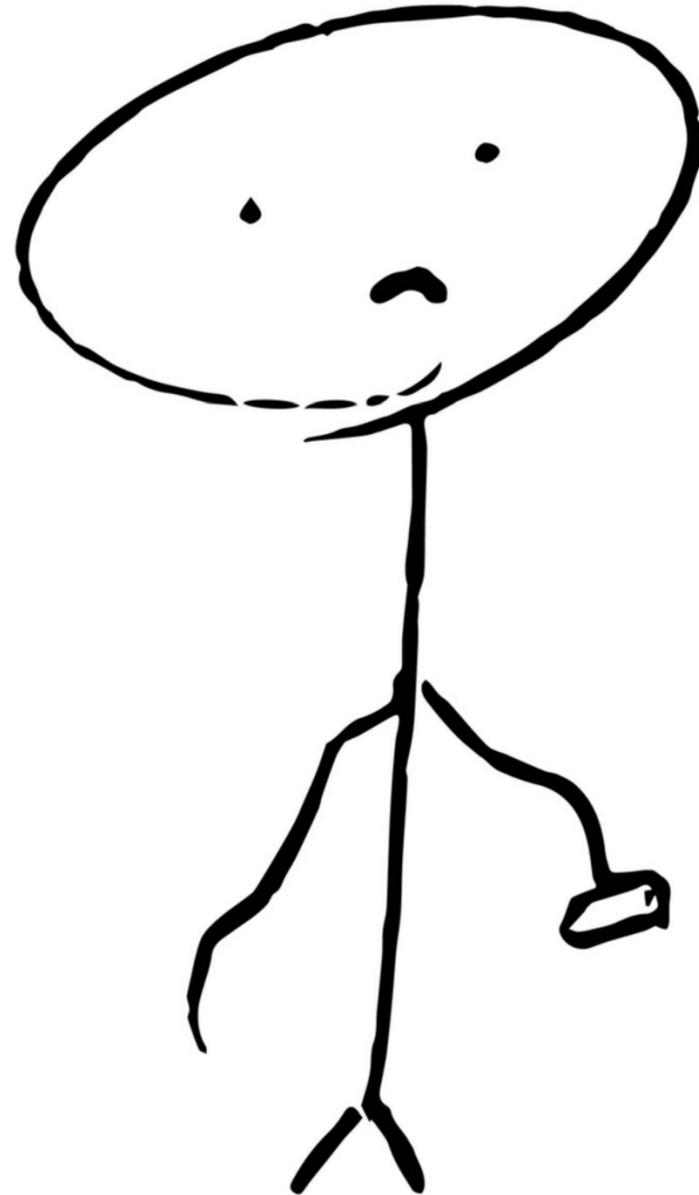
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class

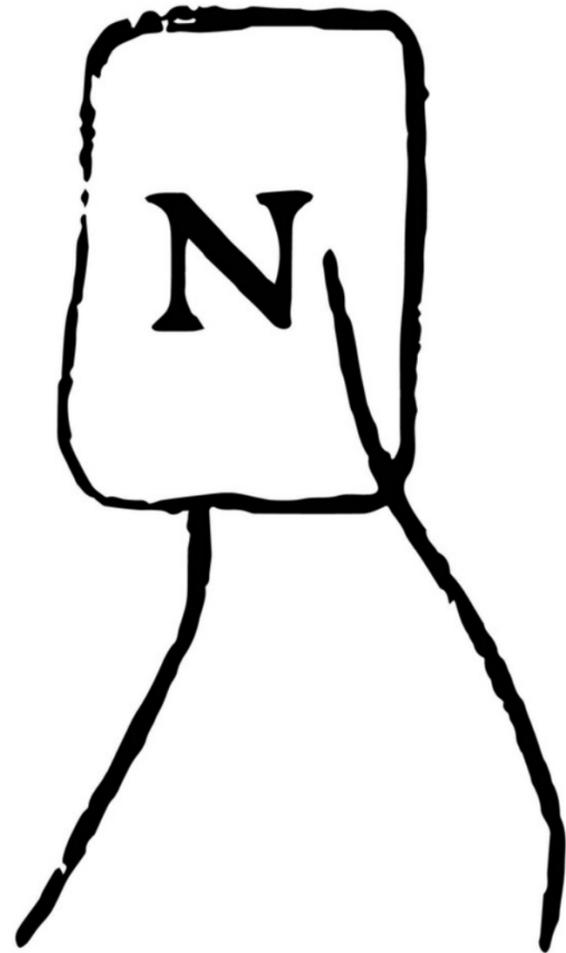
bruh.

/ — how

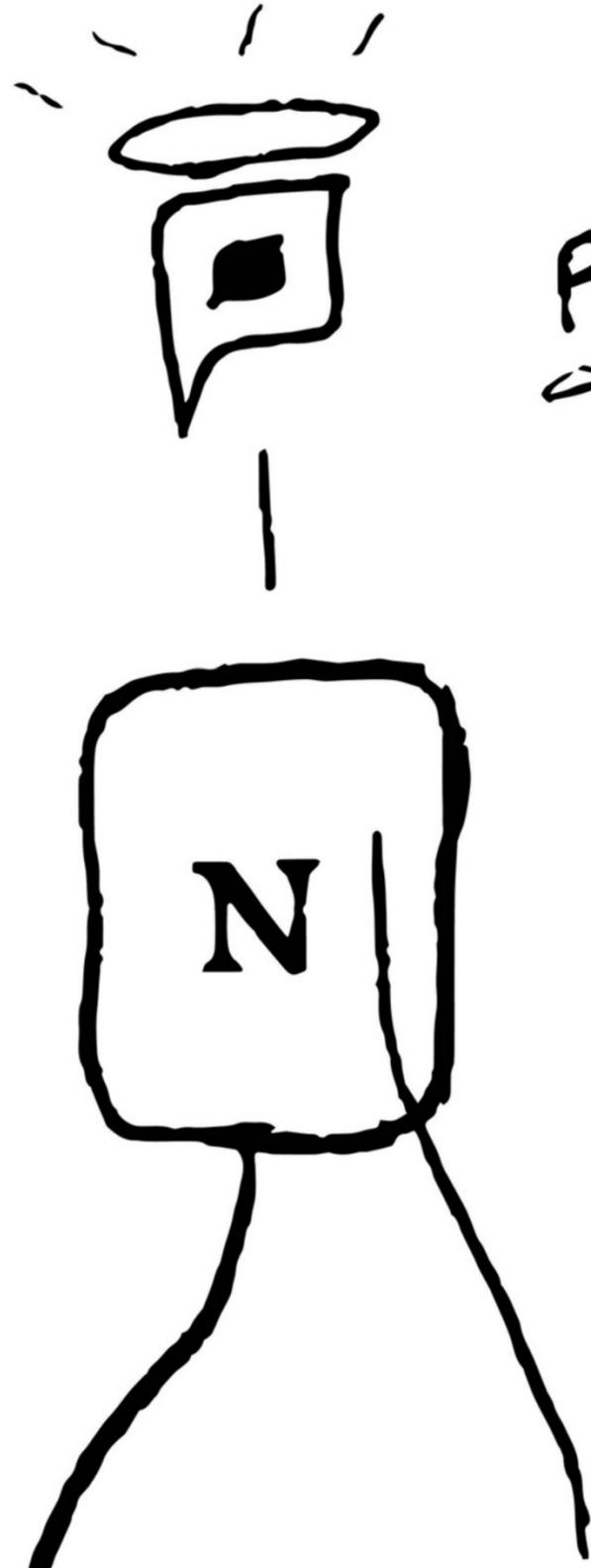


Northeastern[©]

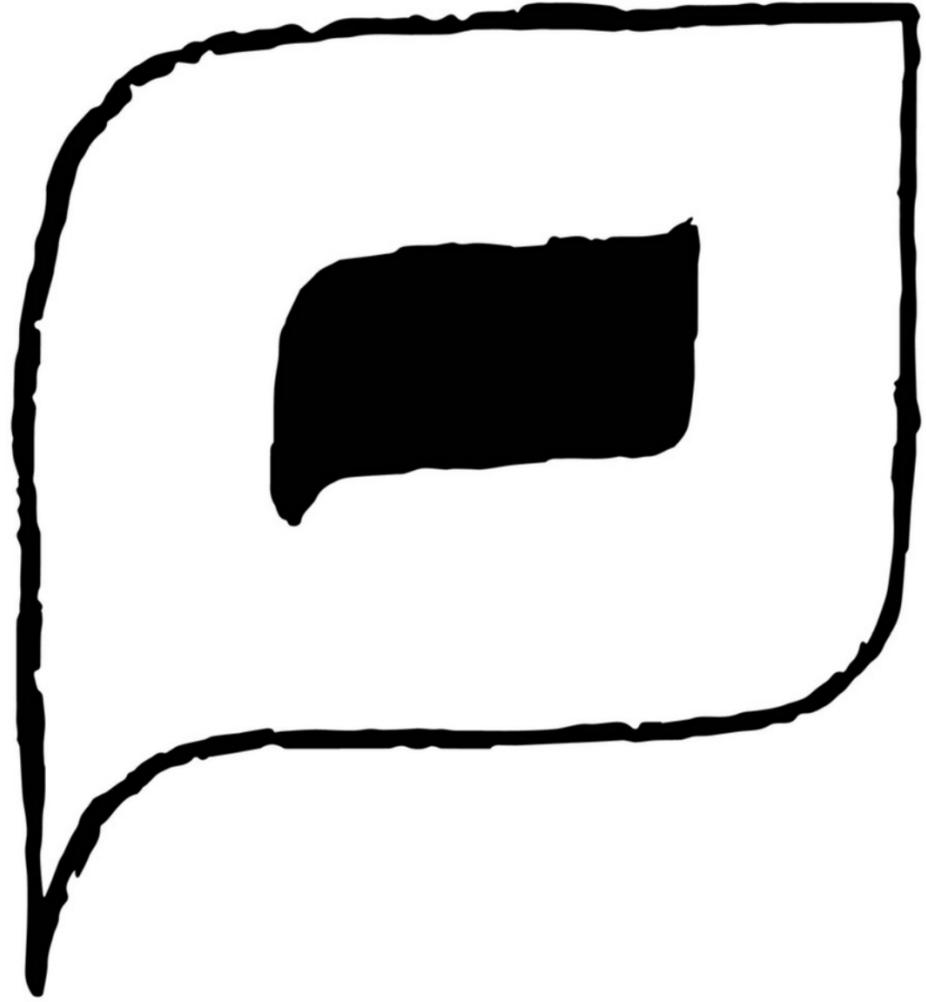
pls help..



behold



Papercut

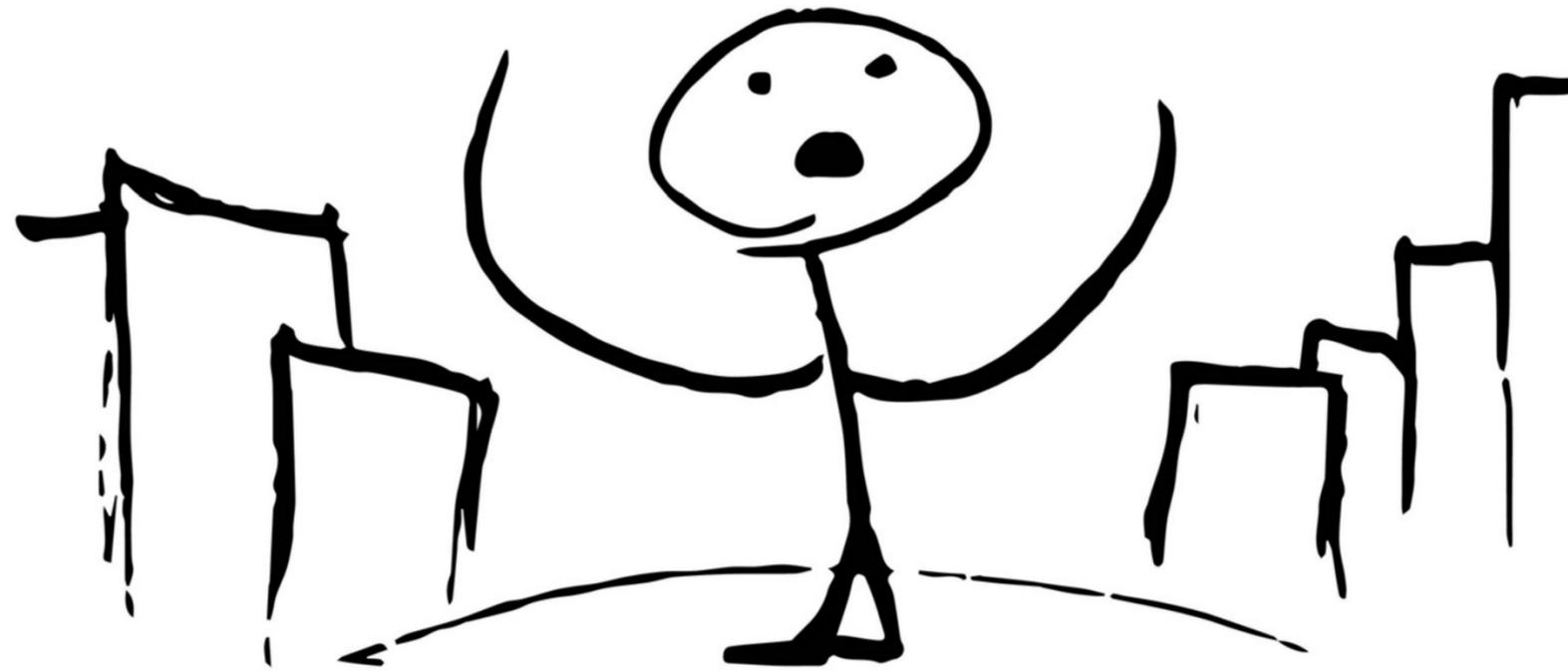


it has everything



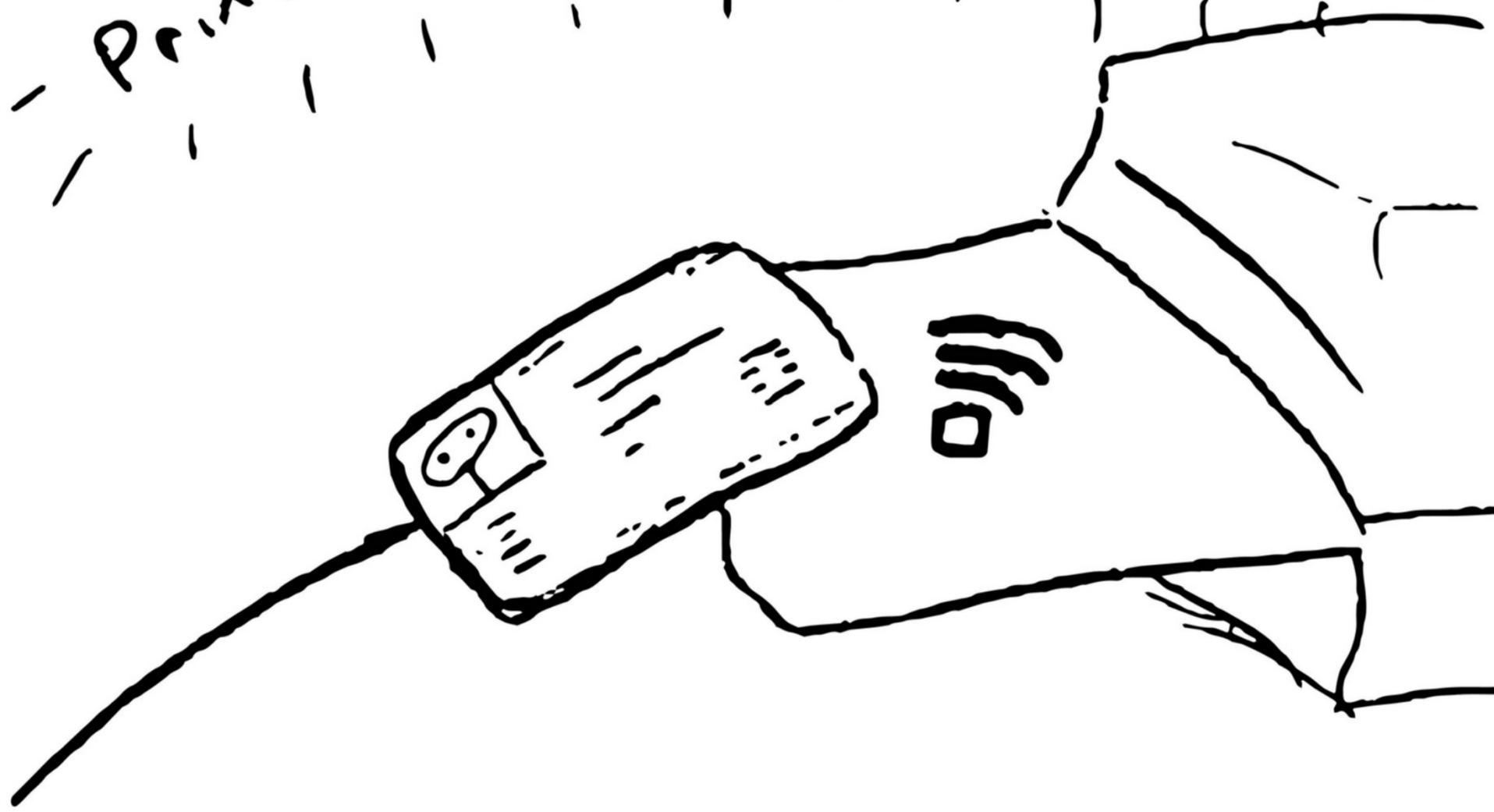
a website with
a few help links! -
| | | | | | | |

- Any printer on campus -



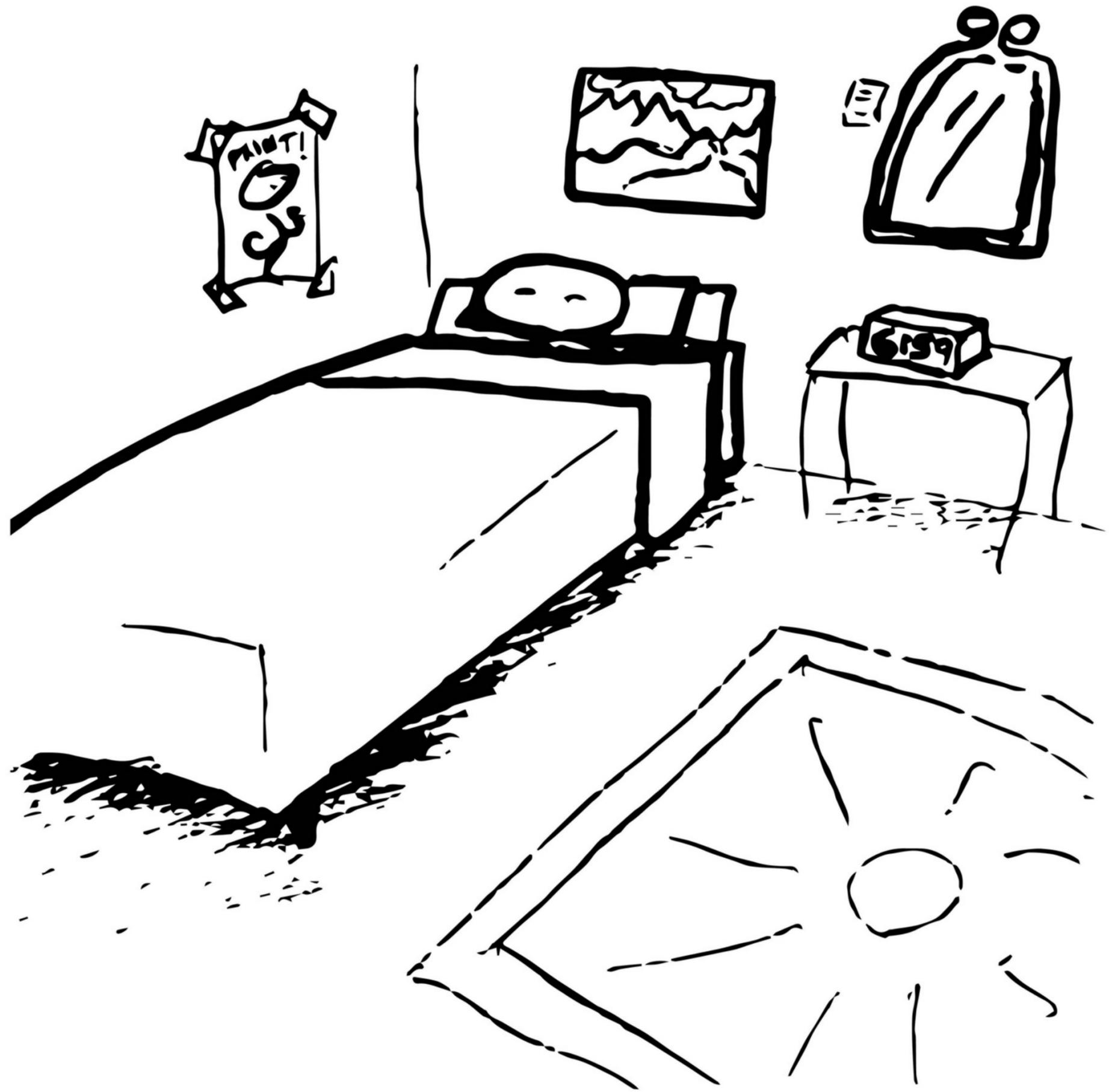
Campus wide printing...

Print using your Husky Card



Instant release...

[ONE WEEK LATER - 6:59 AM]





Prima bag
of powder
for design
class
@ 8:00am

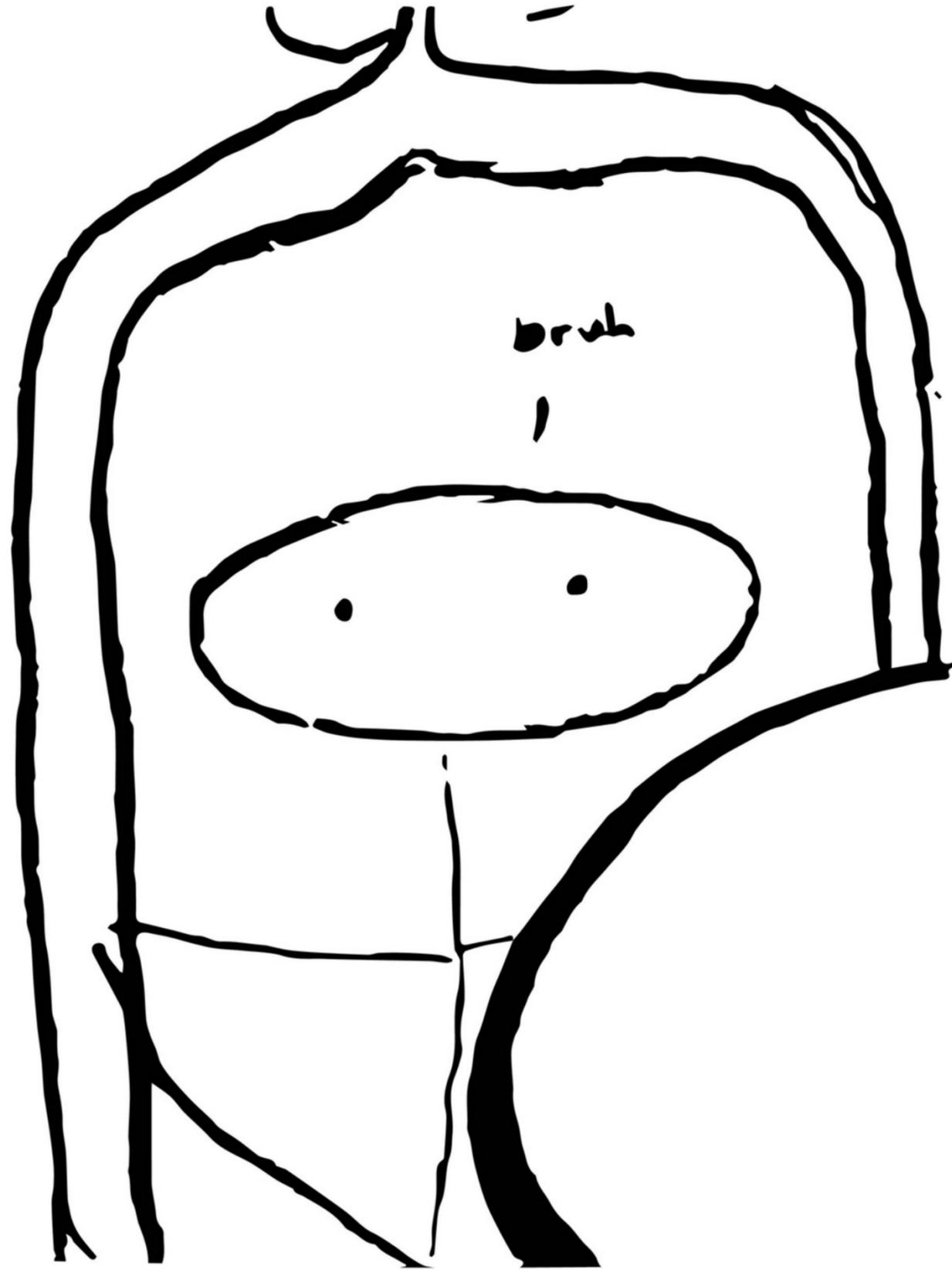
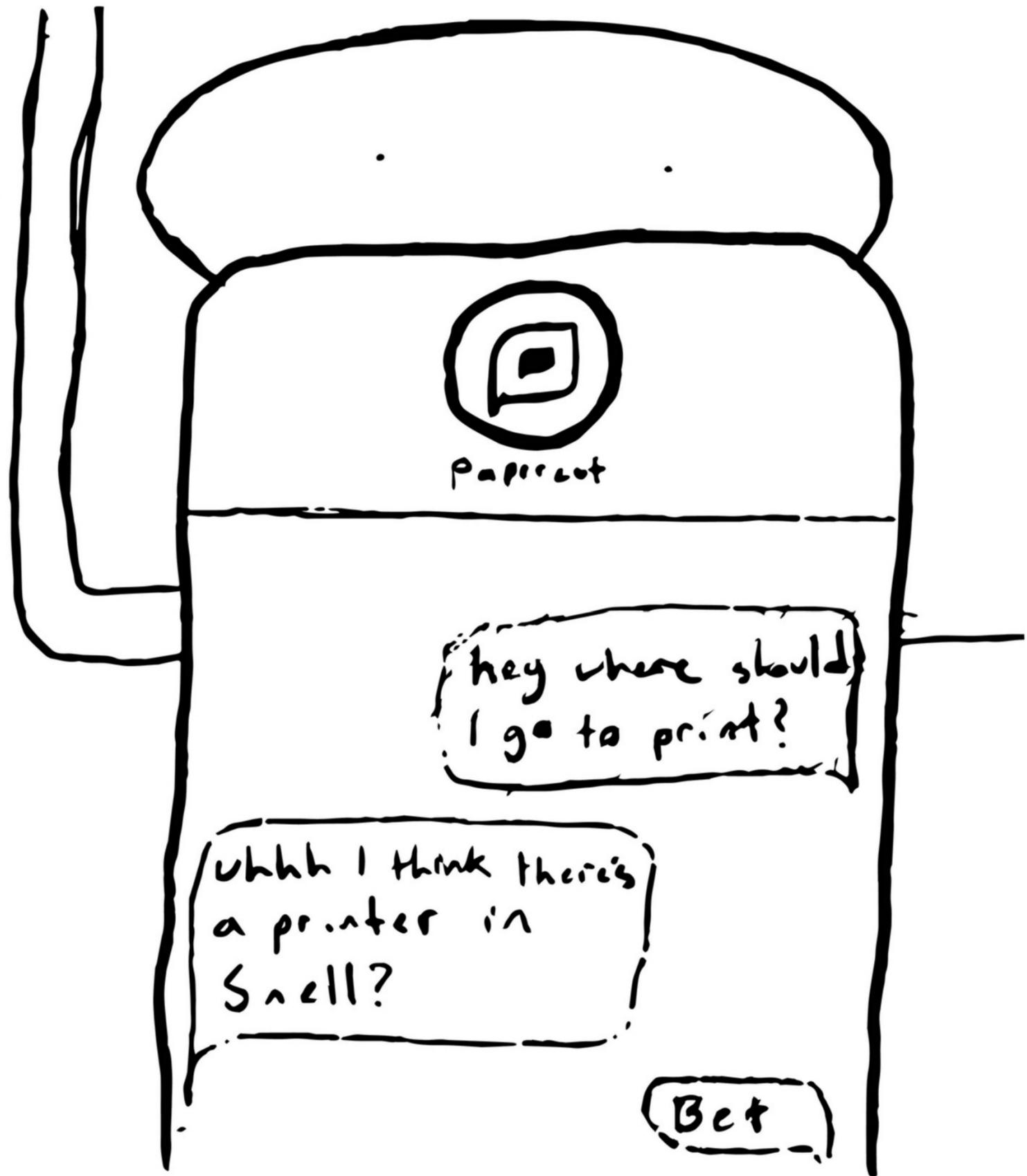


fig
ter
ign
Qam



PaperCut

hey where should
I go to print?

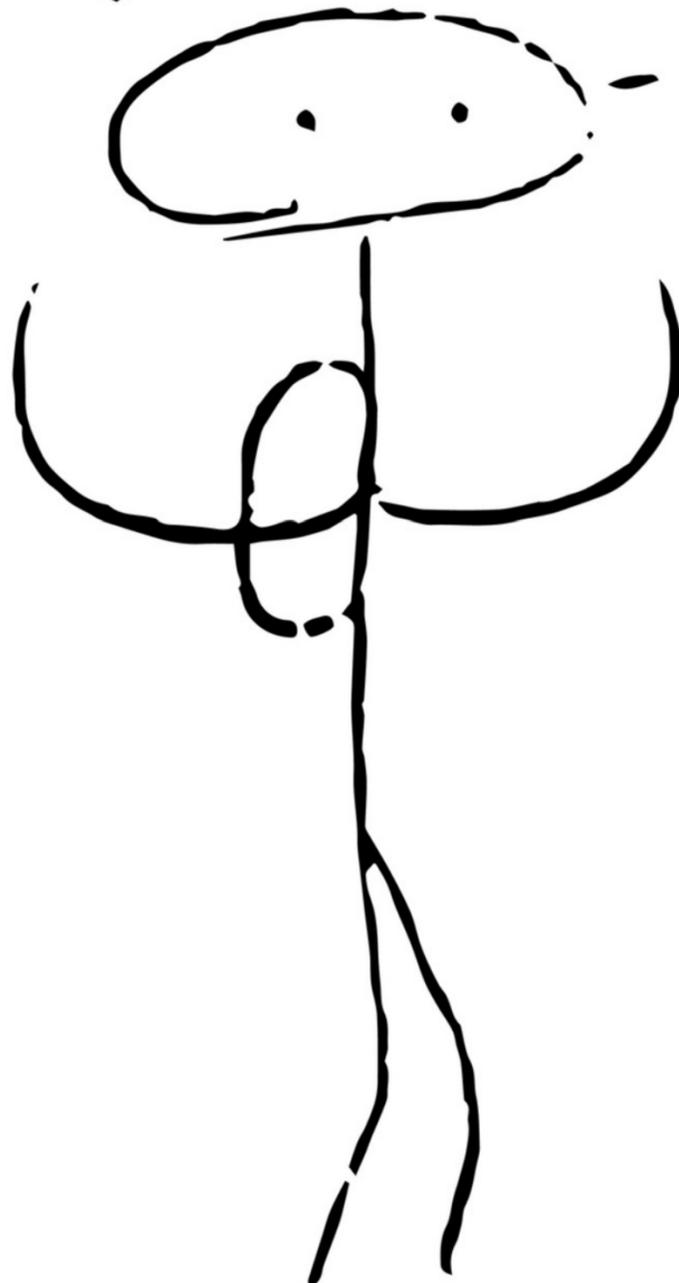
uhhh I think there's
a printer in
Snell?

Bet

ur busted?

7:59

- fr?



Sorry bro!







i see

i see

**so how might we consolidate campus
printing resources and optimize
functionality in order to improve
critique participation in design classes?**

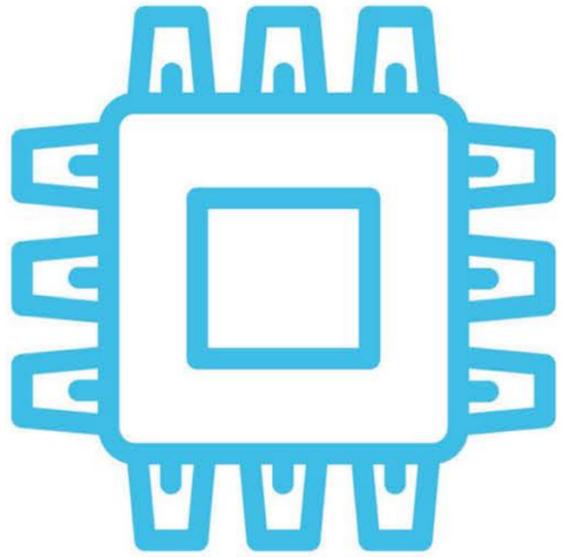
i see

**so how might we consolidate campus
printing resources and optimize
functionality in order to improve
critique participation in design classes?**

and why does it matter?

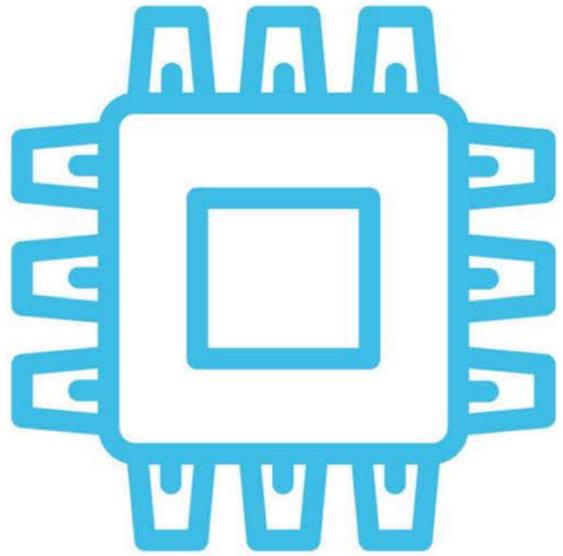
NORTHEASTERN VALUES

NORTHEASTERN VALUES

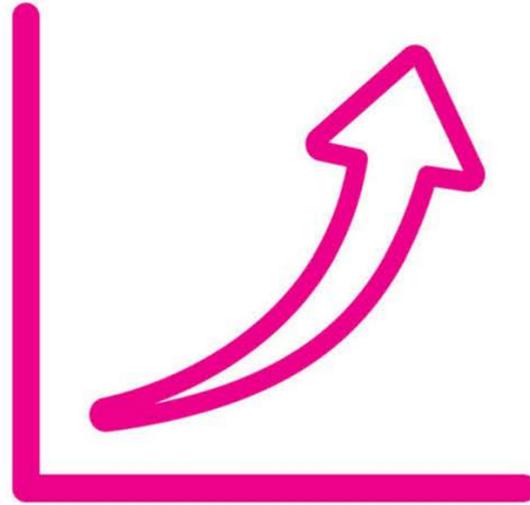


STEM

NORTHEASTERN VALUES

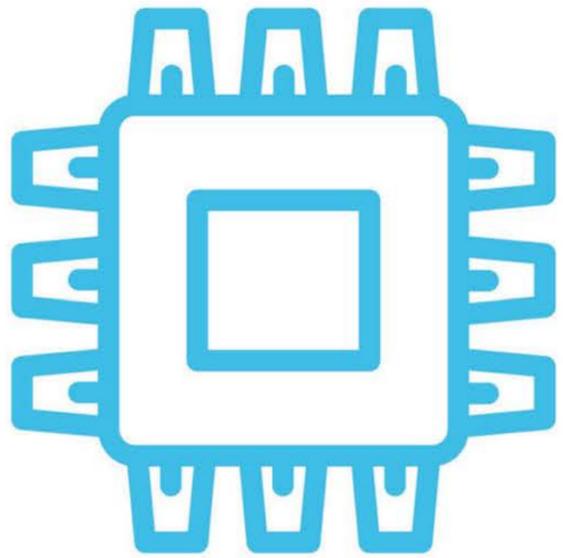


STEM

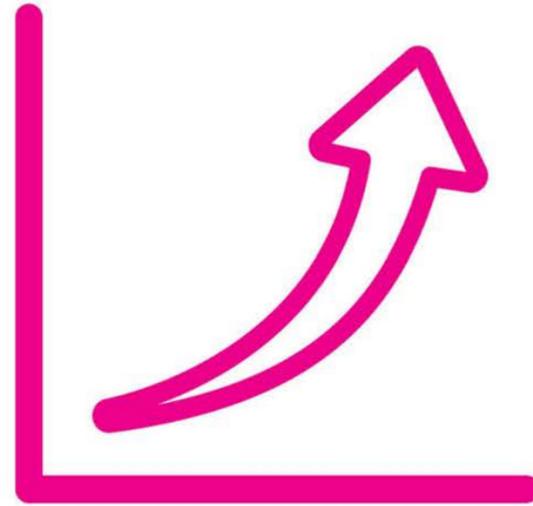


INNOVATION

NORTHEASTERN VALUES



STEM

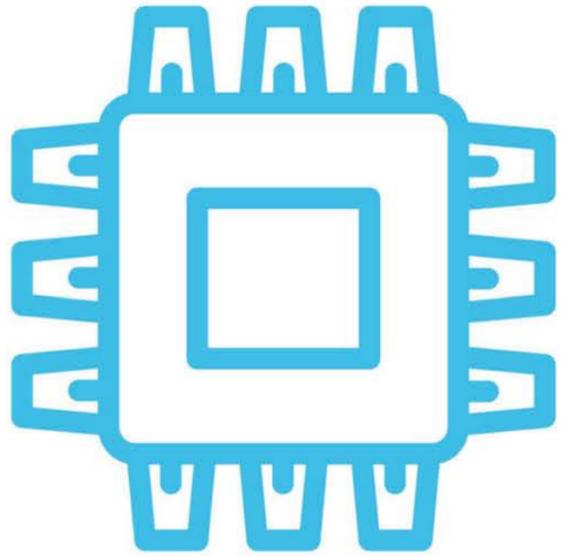


INNOVATION

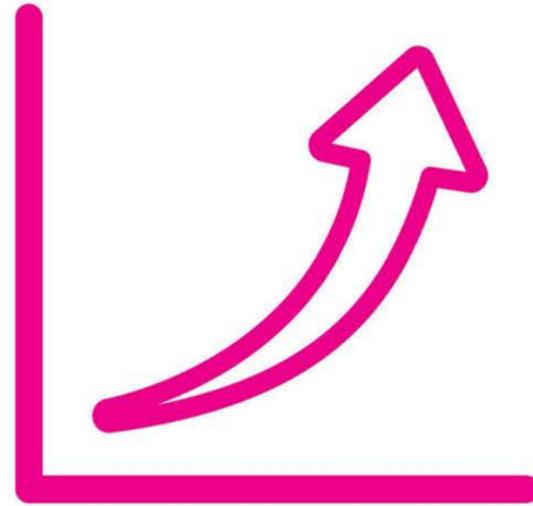


MONEY

NORTHEASTERN VALUES



STEM



INNOVATION



**EXPERIENTIAL
LEARNING**

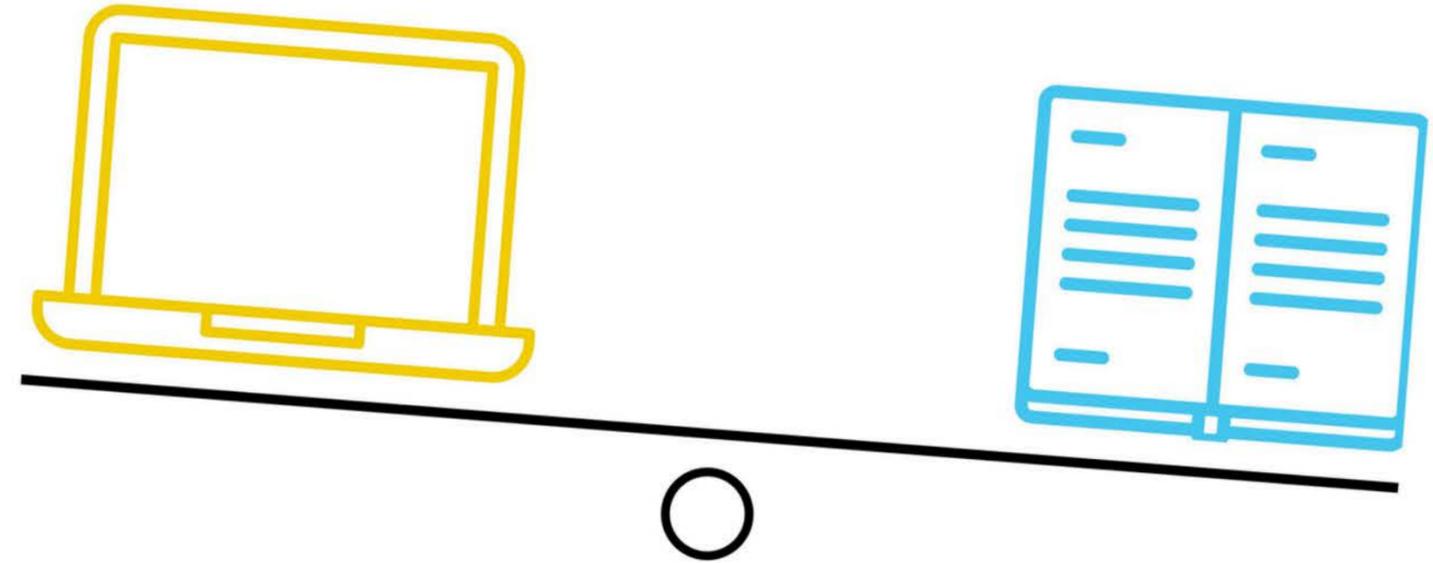
WHY PRINT?

DIGITAL VS. PHYSICAL INTERACTION IN THE CLASSROOM

Printed material engages students better than digital tools, with increased comprehension and retention of classroom materials.¹

Real world prints translate work done on digital devices to the physical environment. This allows for a better understanding of the element of scale especially.²

Reinforces color theory principles, emphasizes the process of trial and error, problem solving, and intuition.²



¹ Singer, Lauren M. Reading Across Mediums: Effects of Reading Digital and Print Texts on Comprehension and Calibration, The Journal of Experimental Education, V. 85, 2017 – Issue 1, pp. 155-172.

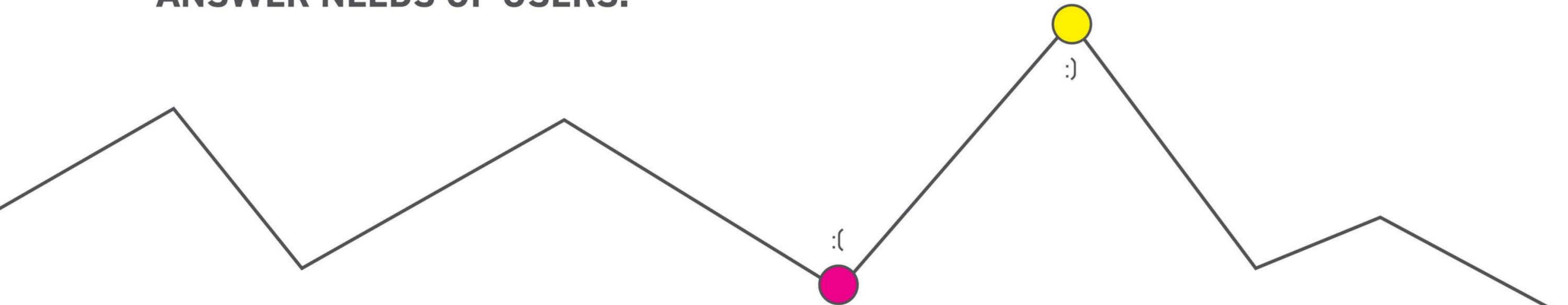
² <https://www.sumnerone.com/blog/benefits-of-student-print-education-and-experience-in-the-digital-age#:~:text=The%20first%20major%20benefit%20of,mastering%20printing%20techniques%20and%20workflows.>

PROJECT GOALS

BETTER UNDERSTAND THE MOVING PARTS OF NORTHEASTERN'S PRINTING ECOSYSTEM AND STUDENTS' ATTITUDES TOWARDS IT.

IDENTIFY PAIN POINTS AND INTERVENTION OPPORTUNITIES.

ANSWER NEEDS OF USERS.



CONSULTANTS

17 INTERVIEWEES

7 SURVEY ANSWERS

1.5 SHADOWEES

5 USERS FOR TESTING

1 STALKED PROFESSOR

INTERVIEWEES

14

Northeastern
Design Students

2

Northeastern
Design Professors

1

Mass Art
Student

Most people have routines and habits about printing.

It's impossible to know if a printer will work in advance.

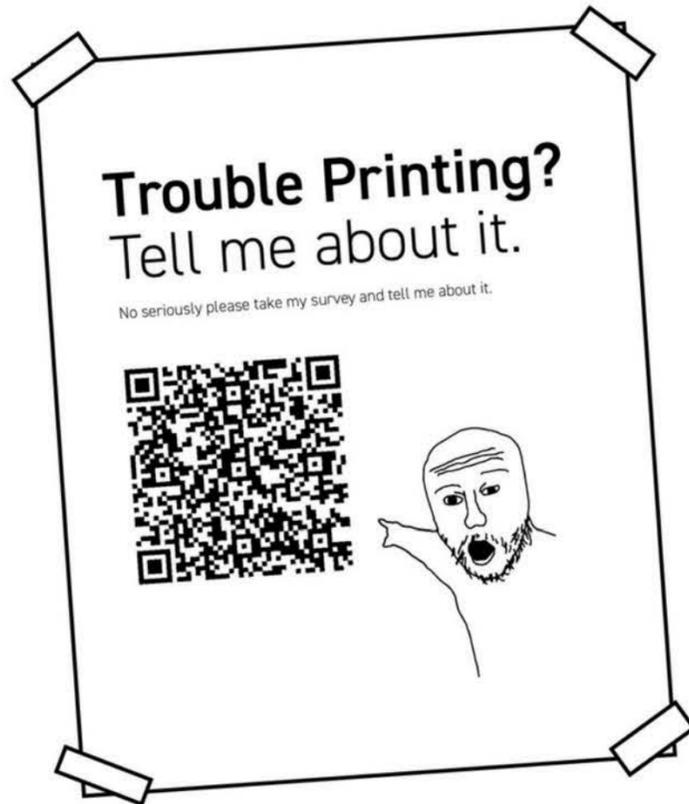
Different payment methods for different services. >:(

Hard to know how to report broken printers.

Learning is not intuitive, and resources are scattered.

People do like the papercut workflow and functionality.

SURVEY



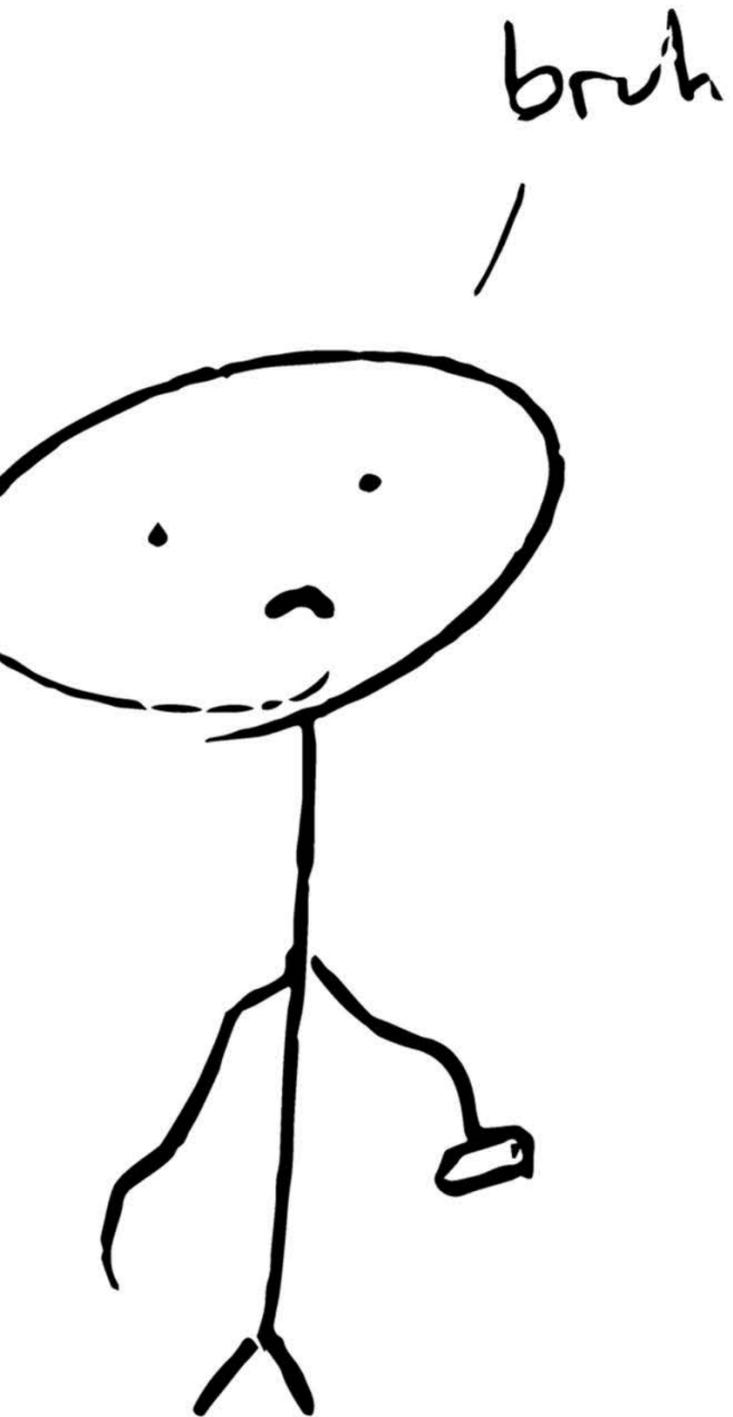
PRINTING COMFORT LEVEL: ~7

OVERAL EXPERIENCE LEVEL: ~3

57% PRINT THINGS THE DAY OF CLASS

**7 respondents helped me realize physical
printed intervention is not the way to go**

SHADOWEES



VIEWING LEVEL OF (HUGE) INSTRUCTION POSTERS

APPARENT MAX EYE LEVEL OF STUDENTS

PRINTING AREA

USERS

3

Northeastern
Design Students

1

Northeastern
Nursing Grad

1

Mass Art
Student

First round helped understand how to consolidate site features.

Second and third rounds focused on visual design system.

Fourth round focused on interaction expectations and visual cues.

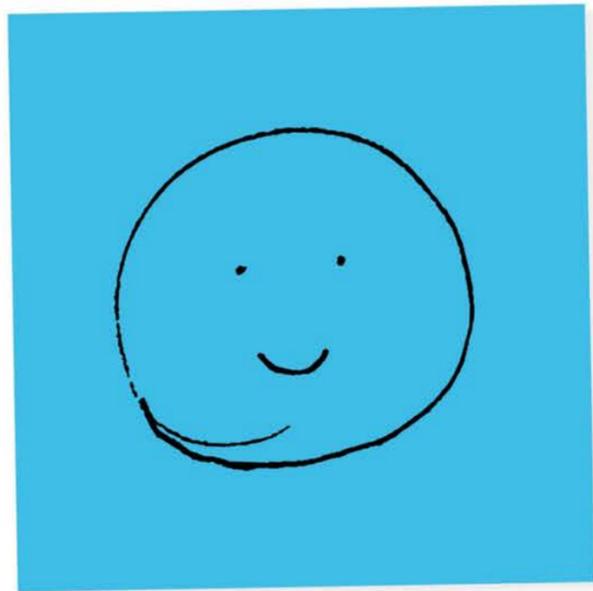
PROFESSOR

(oldhead design professor, waited outside of his class)

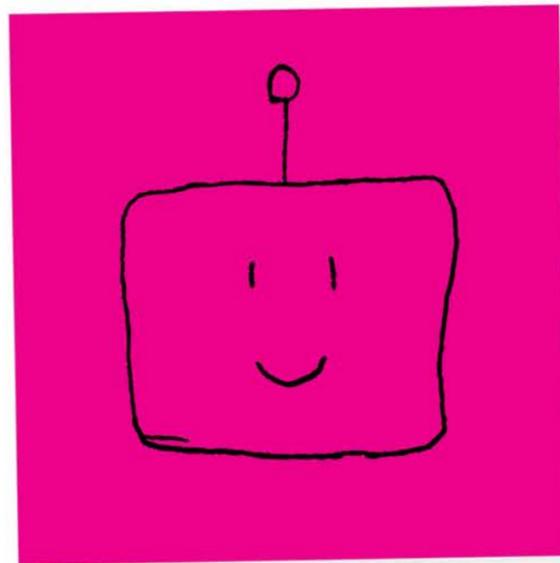
He basically said that I need to find some wealthy benefactor and ask them to donate **50 grand** to every class of design students to use for printing.

“THAT IS THE ONLY WAY PRINTING WILL BE FIXED

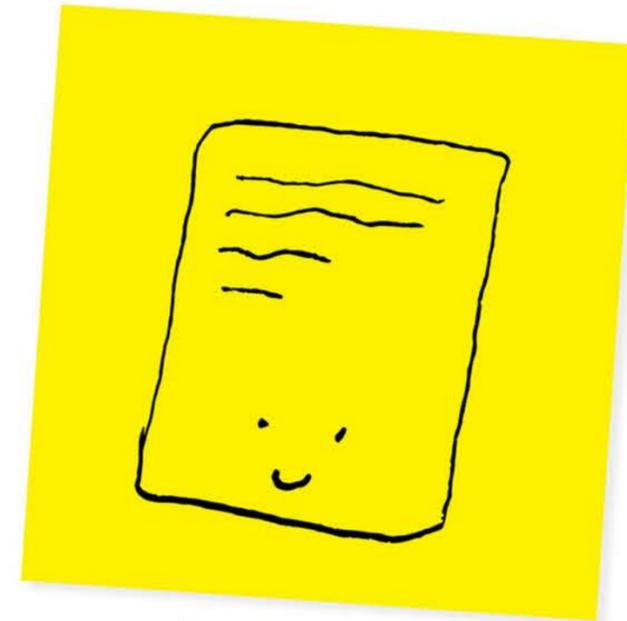
IDEATION



Human



Robot



Print

IDEATION

1-hr
printing
workshop

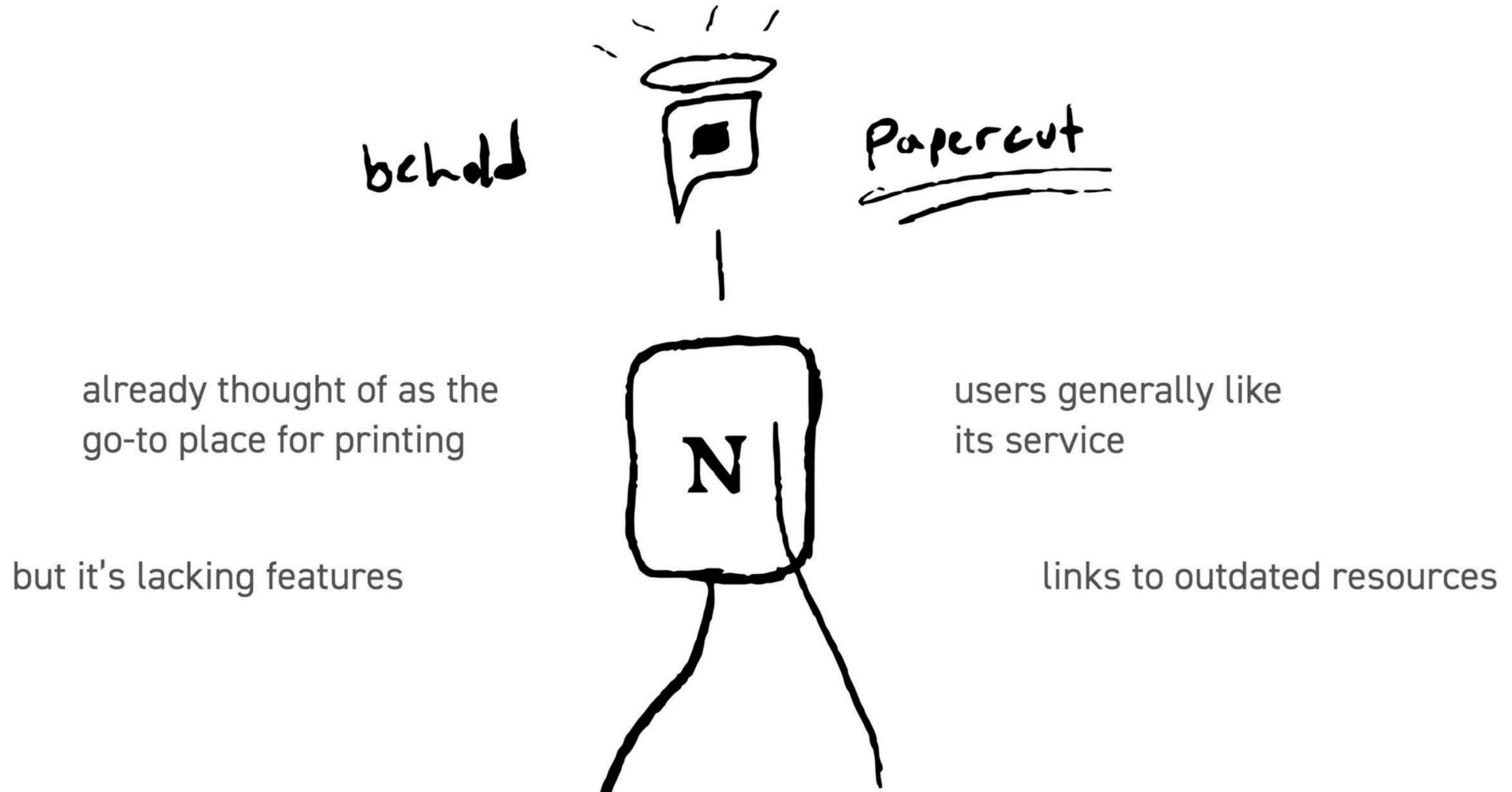
Printer talks
to you

navigation
+
wayfinding





MAIN MAGIC POINT - PAPER CUT!



PAPERCUT EXPANSION



**SUBSTITUTE FUNCTIONALITY OF CAMPUS WIDE
PRINTING WITHOUT DOWNLOADING DRIVERS, ETC.**

PAPERCUT EXPANSION



**SUBSTITUTE FUNCTIONALITY OF CAMPUS WIDE
PRINTING WITHOUT DOWNLOADING DRIVERS, ETC.**



**PRINTER LOCATING MAP WITH CROWDSOURCED
STATUS REPORTING**

PAPER CUT EXPANSION



SUBSTITUTE FUNCTIONALITY OF CAMPUS WIDE PRINTING WITHOUT DOWNLOADING DRIVERS, ETC.



PRINTER LOCATING MAP WITH CROWDSOURCED STATUS REPORTING



AI IT CHATBOT WITH ALL INSTRUCTIONAL ARTICLES HOSTED ON SITE

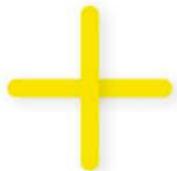
PAPERCUT EXPANSION



SUBSTITUTE FUNCTIONALITY OF CAMPUS WIDE PRINTING WITHOUT DOWNLOADING DRIVERS, ETC.



PRINTER LOCATING MAP WITH CROWDSOURCED STATUS REPORTING



AI IT CHATBOT WITH ALL INSTRUCTIONAL ARTICLES HOSTED ON SITE



A CHEEKY REDESIGN

PAPER CUT EXISTING DASHBOARD

Northeastern University hudson.o ▾

Summary

PRINT JOBS 74	PAGES 296
------------------	--------------

Environmental Impact

- 3.1% of a tree
- 3.3 kg of CO2
- 203.6 hours running a 60W light bulb

Since Aug 26, 2019

Environmental Dashboard

Sidebar:

- Summary
- Recent Print Jobs
- Jobs Pending Release
- Web Print
- Check Print Balance
- How To Print
- Install Printers - Windows
- Install Printers - Mac

PAPER CUT EXISTING DASHBOARD

UNCLEAR
"NEW PRINT"

EXTERNAL LINKS

Northeastern University hudson.o

Summary

PRINT JOBS 74

PAGES 296

Environmental Impact

- 3.1% of a tree
- 3.3 kg of CO2
- 203.6 hours running a 60W light bulb

Since Aug 26, 2019

Environmental Dashboard

PEOPLE DIDN'T CARE ABOUT THIS

UNCLEAR "NEW PRINT"

EXTERNAL LINKS

EXTERNAL BALANCE MANAGEMENT

cbord CS Gold WebCard Center® Logout ?

Search Menu

- myAccount ▲
 - Account Balance**
 - Notification Preferences
 - Spending History
- myAccess ▲
 - Open MyDoor
- myActivity ▲
 - Get Mobile Apps
- myCredentials ▲
 - Report Lost Card
 - Report Lost Phone
 - Set PIN
- Access ▲
 - Student Lockers
 - Swipe2Care
- Monitoring ▲
 - Access Monitor
- Other ▲
 - Home
 - Logout

Welcome to CS Gold WebCard Center, Owen Hudson

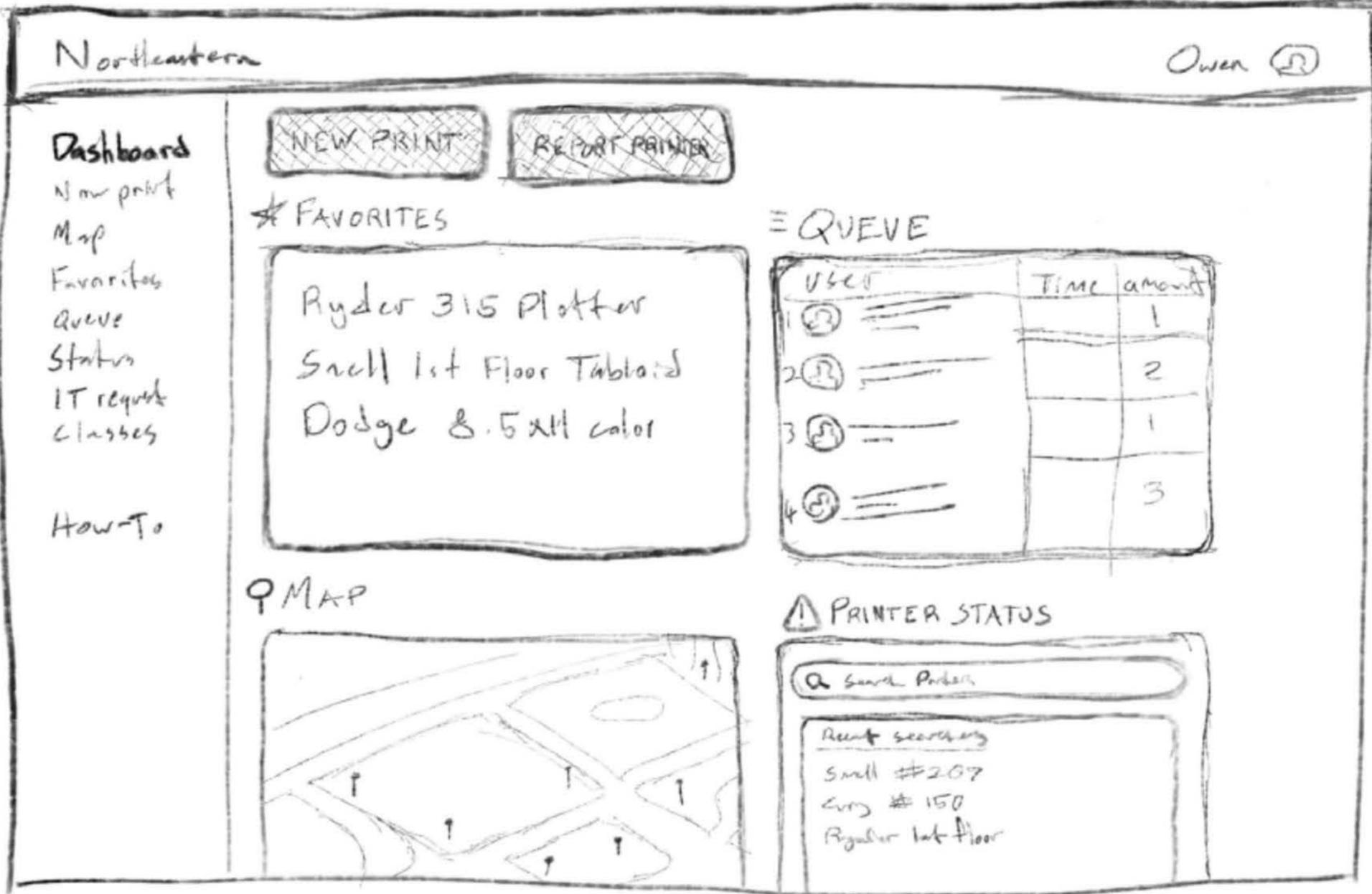
As of April 17, 2024 at 02:08 PM, Your SV&C plan balances are as follows:

Account	Balance
Husky	\$8.19
Student Printing Allowance	\$118.10
Student Free Text	\$1.00

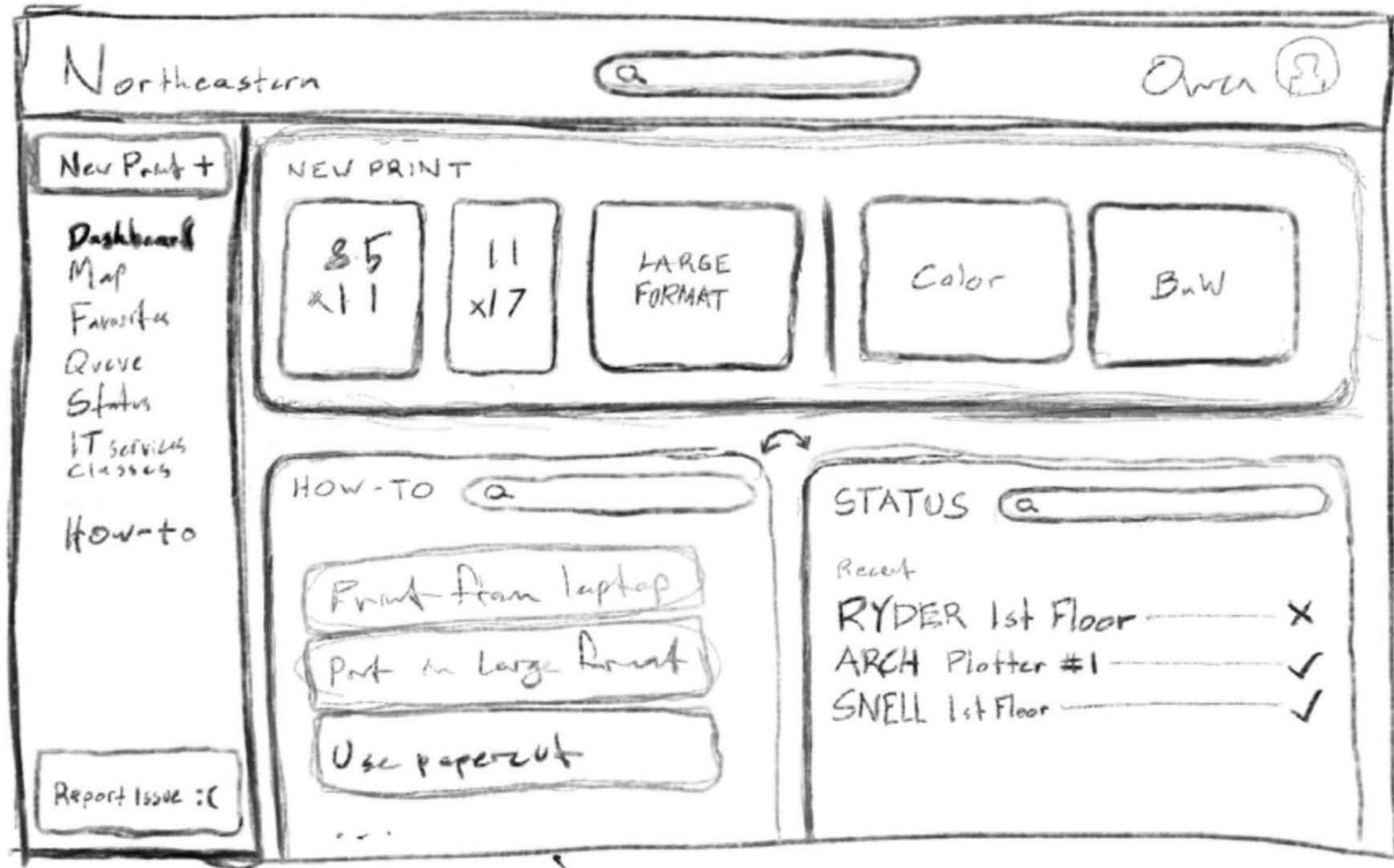
???

WHERE DO I EVEN ADD MONEY?

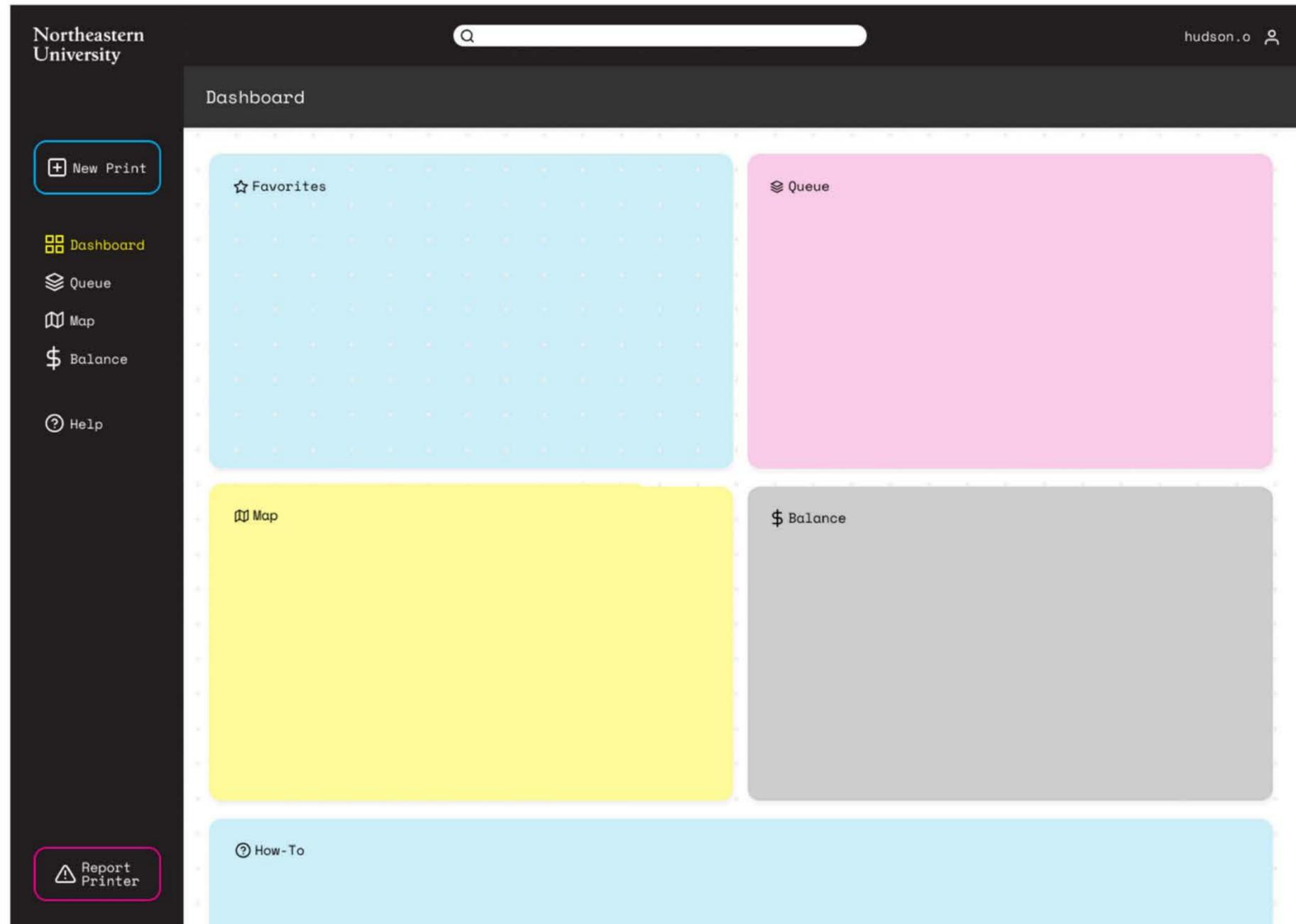
PRELIMINARY SKETCHES



PRELIMINARY SKETCHES

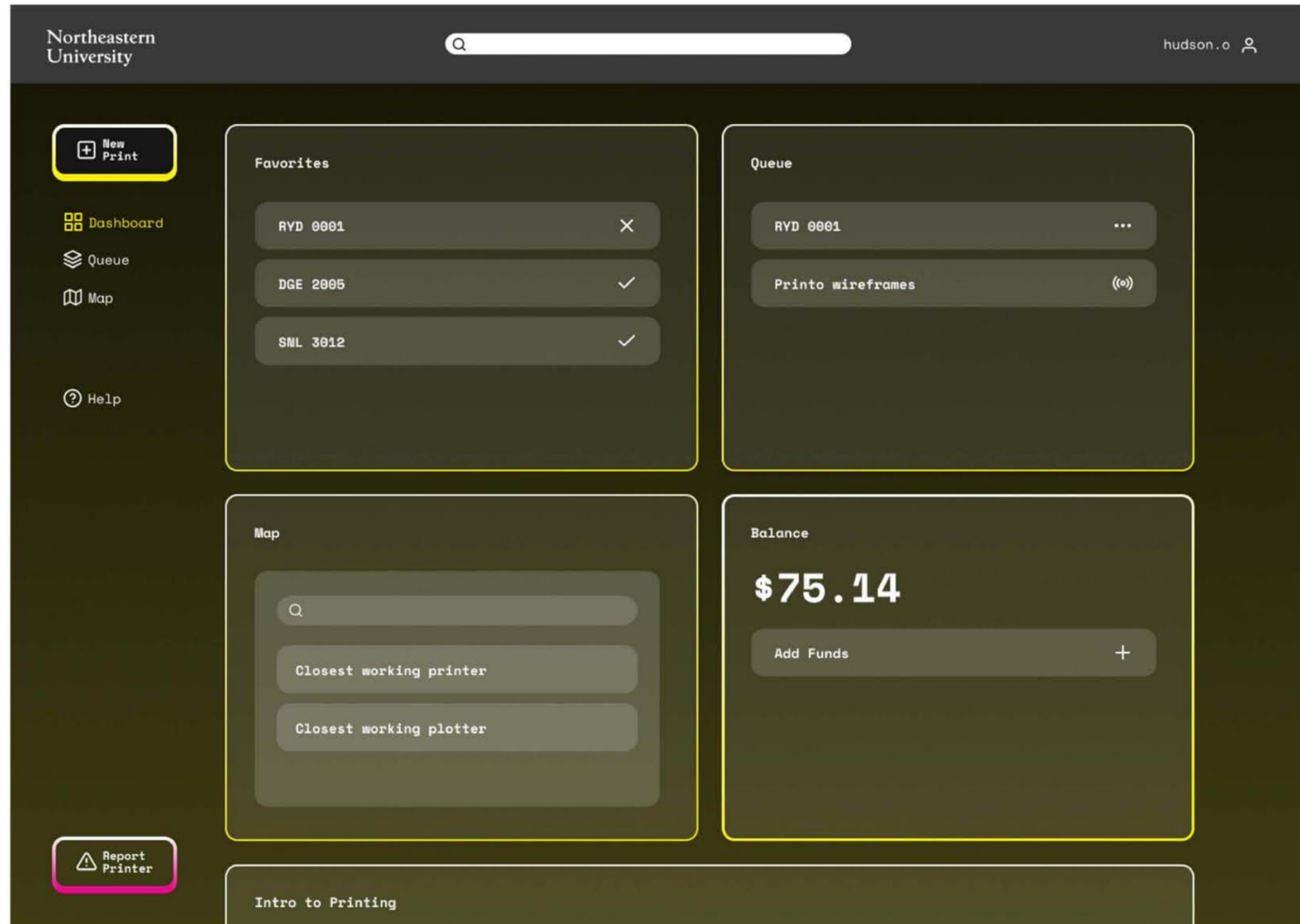


PROTOTYPES



COLOR SIGNALING SYSTEM ?

PROTOTYPES



CONTRAST ISSUES



PRINTO

campus printing made easy

Dashboard

[+ NEW PRINT](#)[Dashboard](#)[Queue](#)[Find Printer](#)[Help](#)[Report Printer](#)

☆ FAVORITES

[RYD305A-Plotter](#)[SNL103-Color](#)[Ryder Hall](#)

📍 FIND PRINTER

[Closest printer](#)[Search buildings](#)

📄 QUEUE

Printo yay

... PENDING

nFlow instructions

... PENDING

Chinatown air quality report

✓ RELEASED

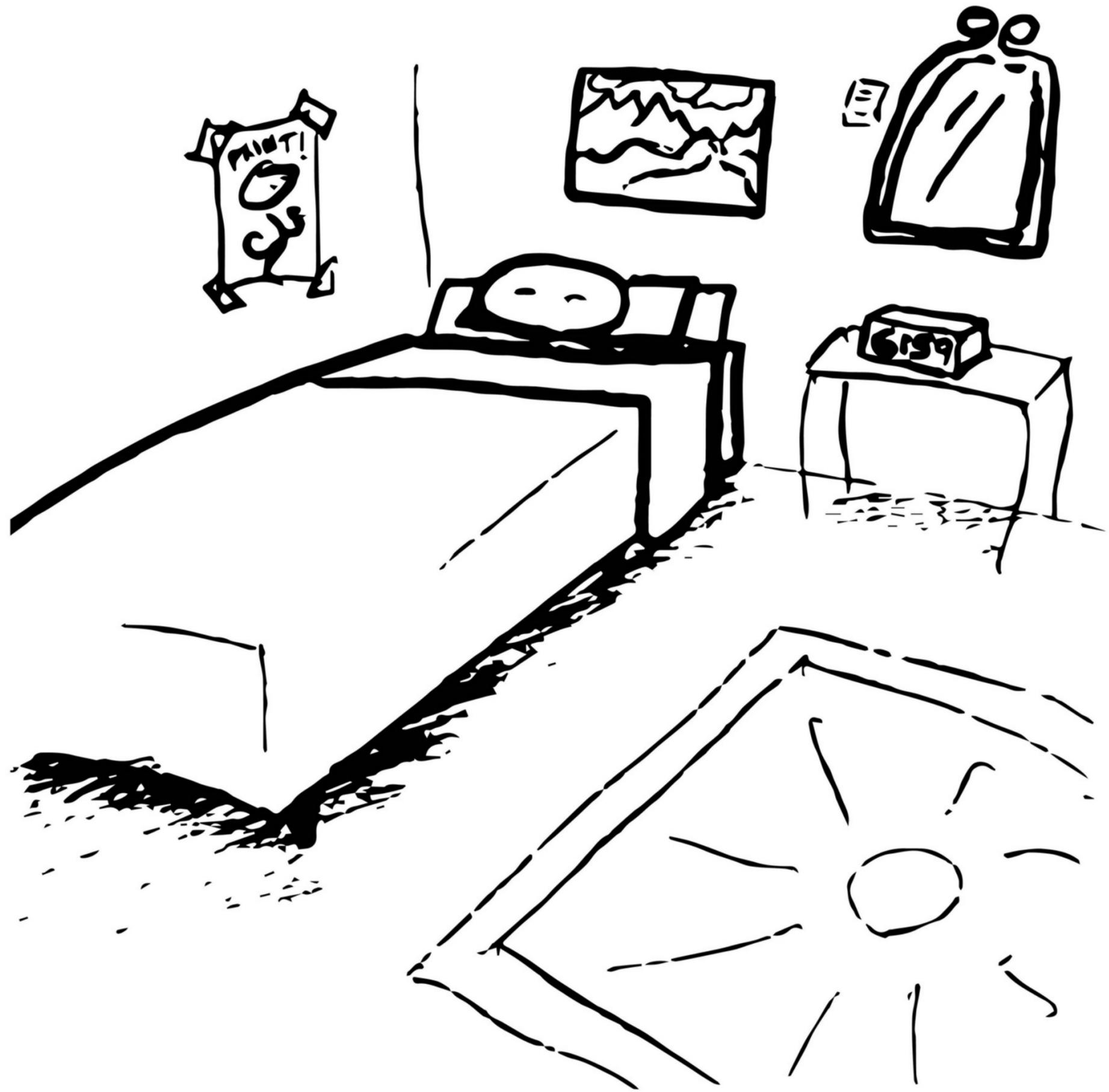
PRINTING BALANCE

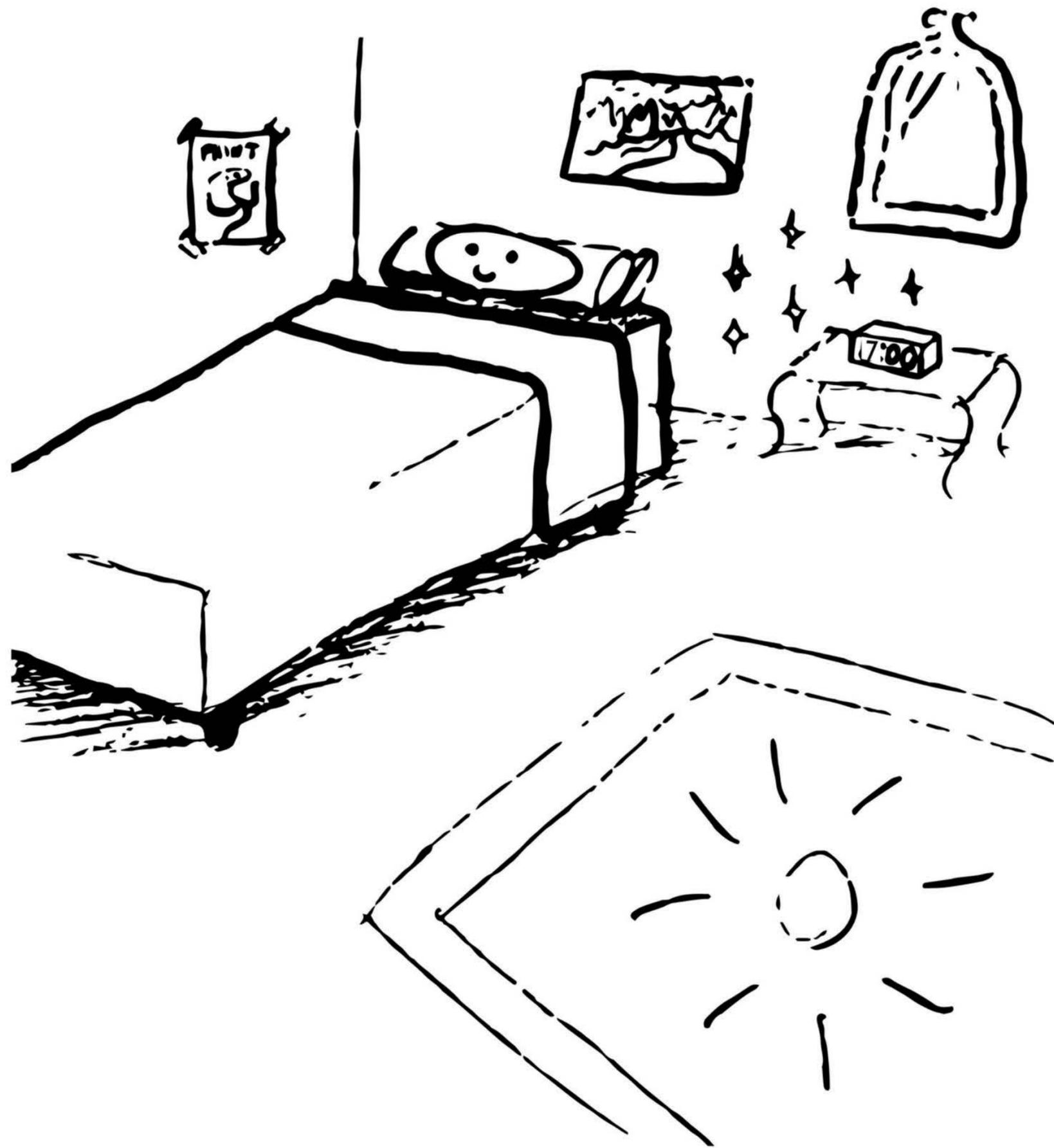
\$72.14[+ Add Funds](#)

📄 HELP

[Getting Started](#)[Plotter Printing](#)

[ANOTHER WEEK LATER - 6:59 AM]





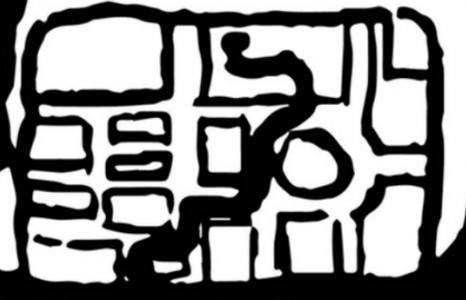


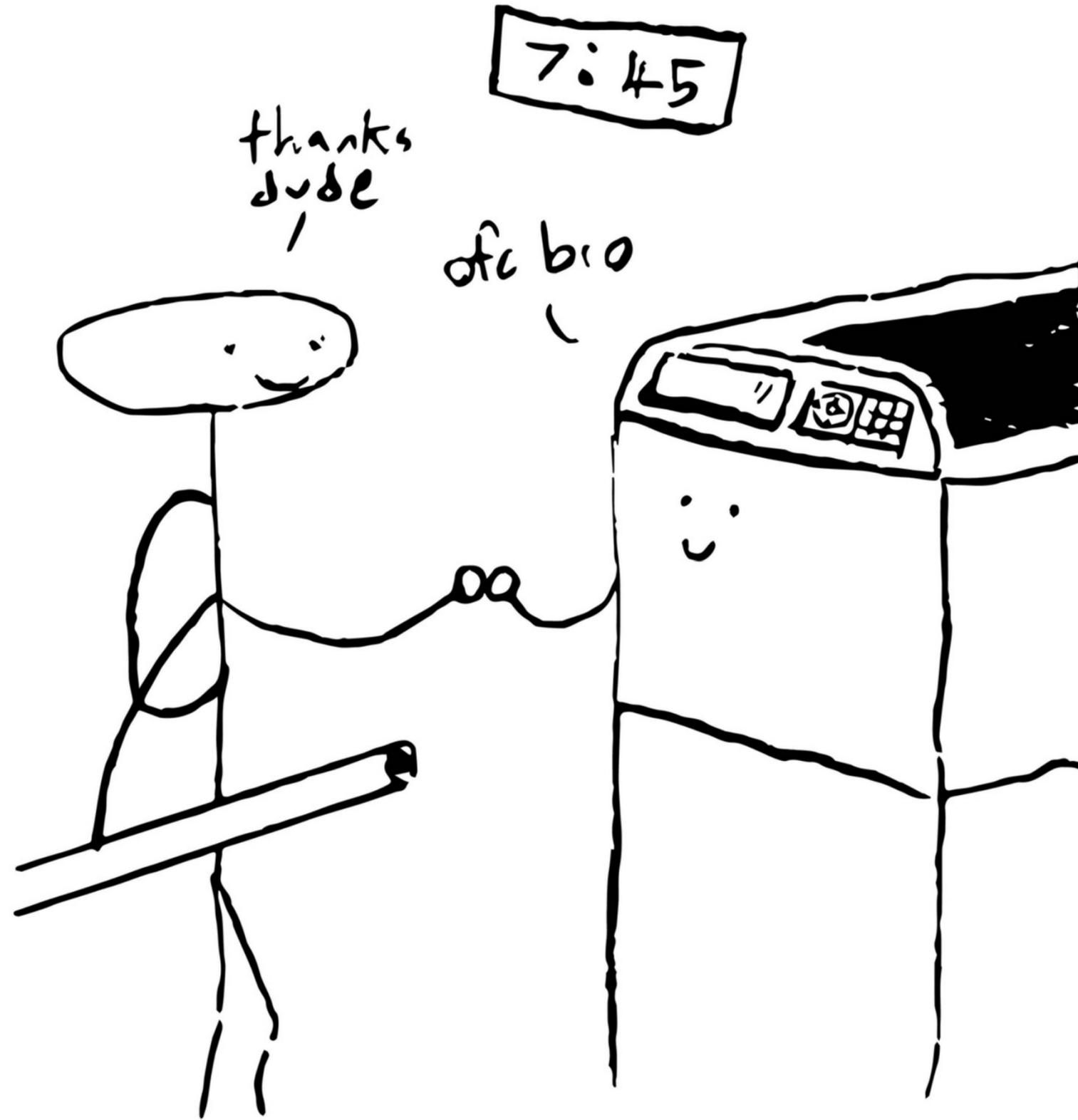
Hey, I'm available!

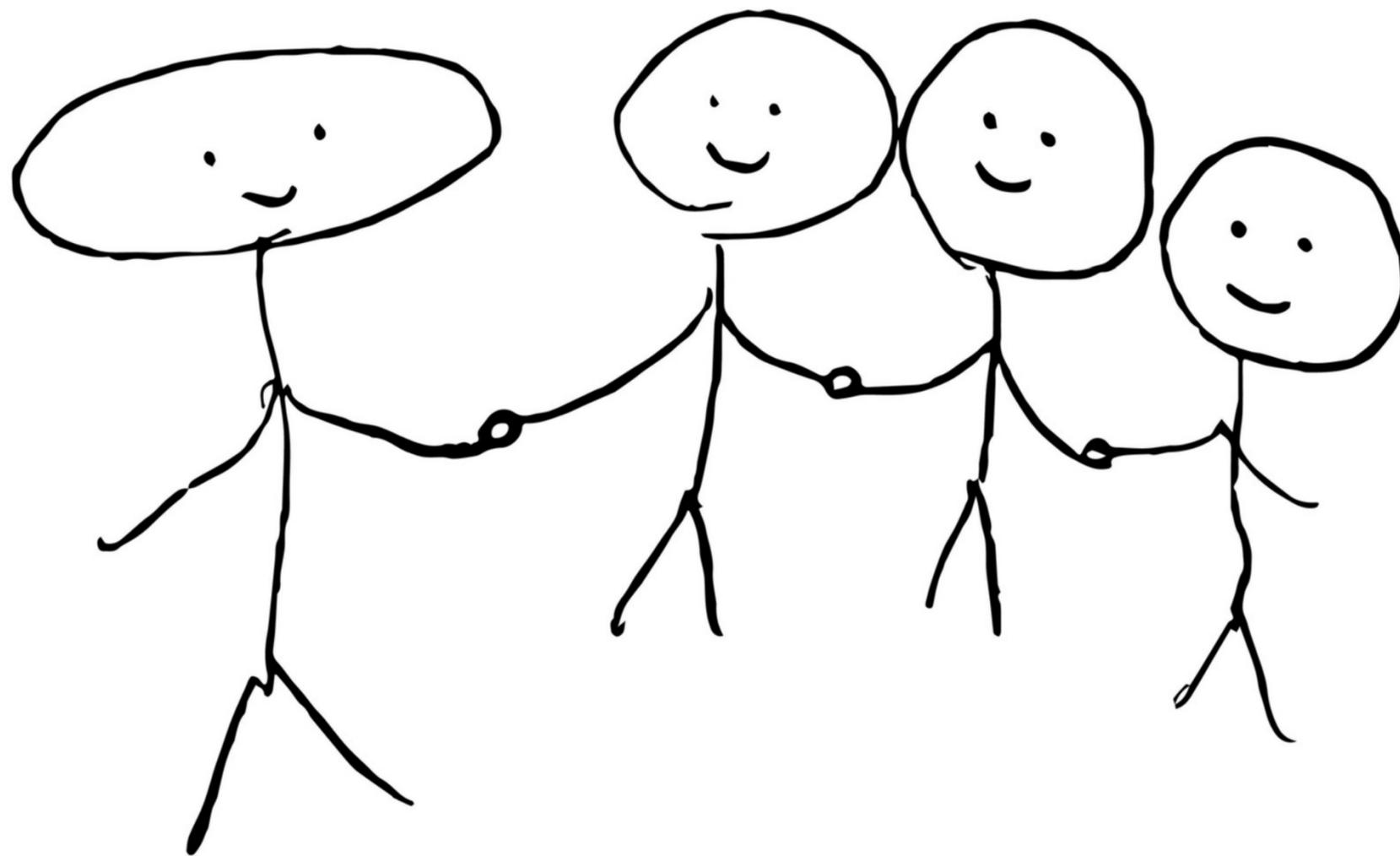


RYDER HALL
301

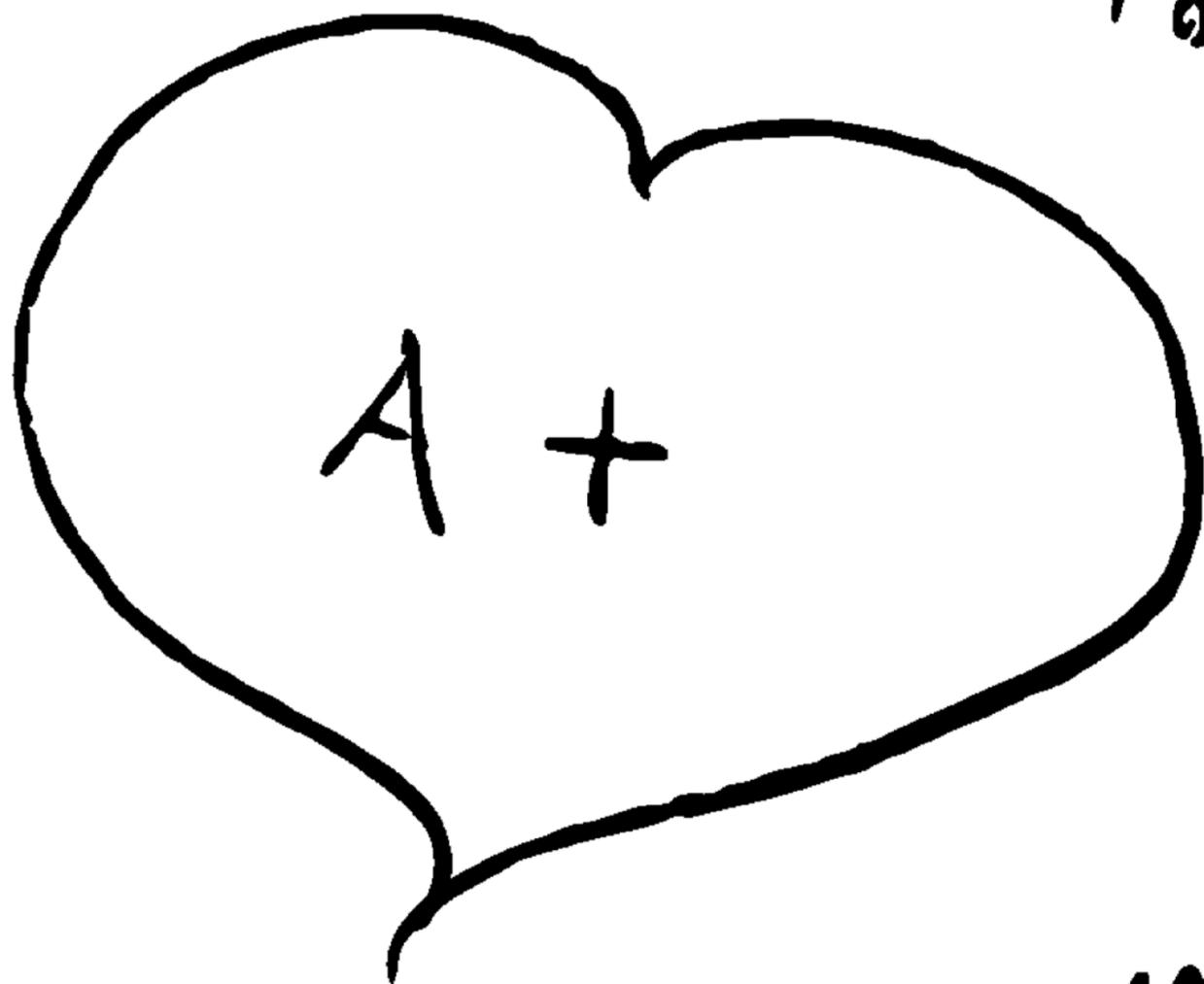
WALK - 10 min.







Now revel in your newfound



Share learning environment



THANK YOU :)