cs398 w22 team 209

## goat notes

@abhay @jusdeep @jeffery @philips

## Introduction

### What we're building

desktop note taking application for CS students

### What we solve

- taking coding and math notes
- flexibility in organizing notes
- users don't have to switch between multiple apps for different features

## **Our inspirations**

Joplin, Notion, Calendar Apps, OneNote

### What makes us different

- combining markdown editing with inline drawing capabilities
- a calendar view to keep students on track with their assignments

# Project Plan

Resources: Our team! Abhay Sharma, Jusdeep Dhaliwal, Jeffery Li, Philips Xu

### **Constraints**

- Coop interviews end of January to February
- Midterms middle of February
- General course load

### **Deadlines:**

- Sprint 1 Demo: February 18<sup>th</sup>
- Sprint 2 Demo: March 11<sup>th</sup>
- Sprint 3 Demo: March 25<sup>th</sup>
- Final Report: April 5<sup>th</sup>

### **Risks**

Member gets COVID: remote work through Teams

## **Goat Notes Plan of Action**

Sprint 1			Sprint 2			Sprint 3	
Note App Navigation (i.e. not note editor)							
Note Editor Frontend							
Notes Database							
	Note Backend/CRUD						
Research Markdown Library Prototype							
Inte	egrate Markdown Library with te Backend						
		Enhance Markdown to Support LaTeX math					
		Autosave					
		Integrate Note Editor Toolbar with markdown backend					
		with markdown backend					
		Folder Functionality					
		Search Functionality					
				Tags Backend			
					,		
					Tags Frontend		
					Add dates to Notes		
						Calendar View	
						Reminder Notifications	
					Define Term Backend		
						Define Term Frontend	
					Image Editing Func	tionality	
					Settings		

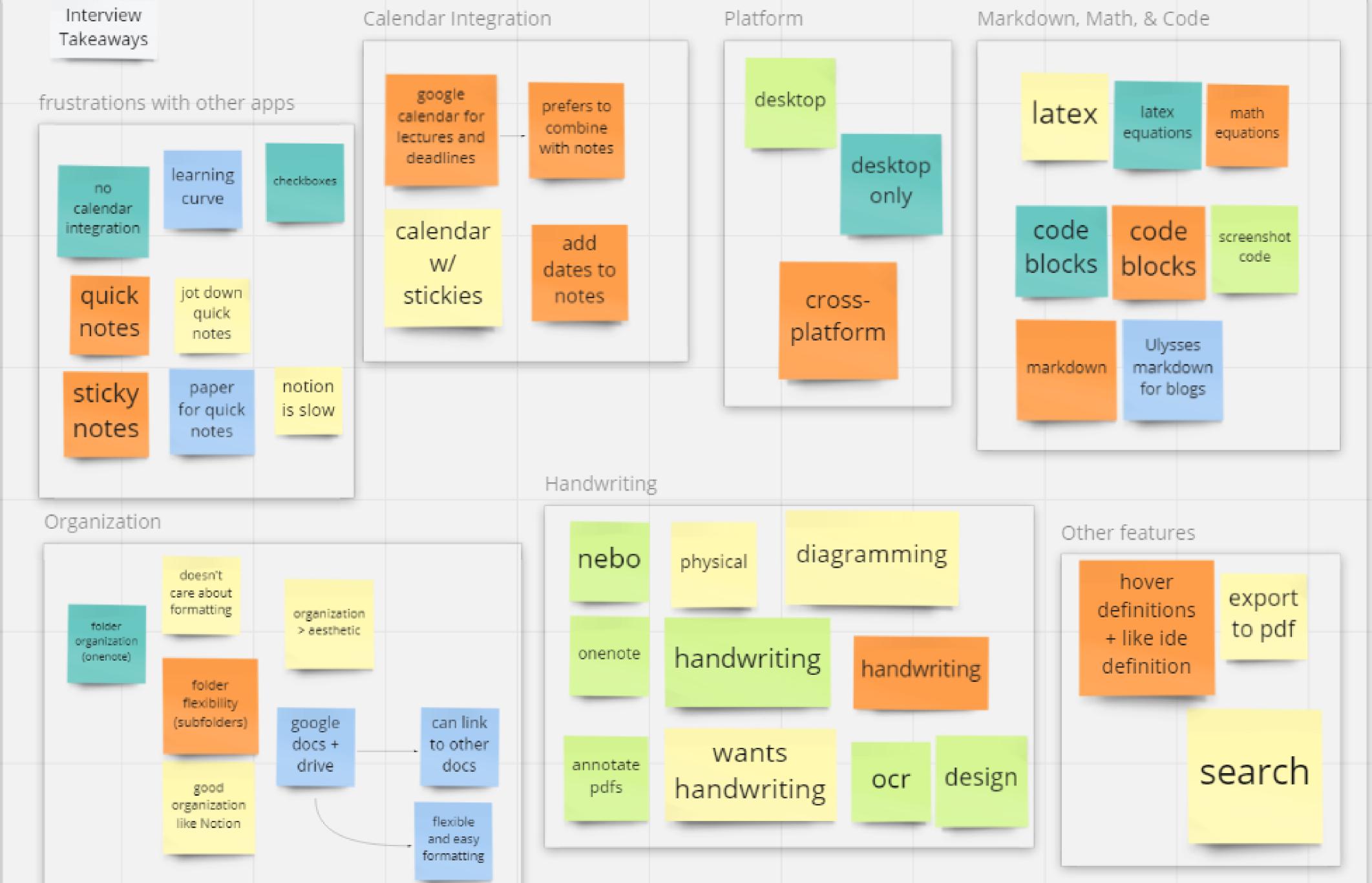
# Requirements

Target users: Computer Science Students

**Affinity Diagram**: https://miro.com/app/board/uXjVOWtOUg4=/

## **Functional Requirements**

- Markdown
- LaTeX
- Drawing Support for Handwriting
- Calendar View for Student Planning
- Specialized definition markdown element for easy review/lookup
- Search
- Folders & Tags





### Sam P. Gander

CS Student at Goose State University (GSU)

21, single

#### **OVERVIEW**

Sam is a computer science student and has worked as a software developer in his co-op terms. He is a power user is always looking for ways he can make his workflows more efficient.

#### **GOALS**

Needs to be organized at all times to so he can keep track of lectures and deadlines. He needs to take notes with formatted code for his classes and work terms.

### **MOTIVATIONS + BEHAVIOUR**

Power: 5/5

Social: 4/5

Achievement: 4/5

Fear: 3/5

Growth: 4/5

#### **LEVEL OF MOTIVATION**

moderate

### **SCENARIO**

He's asked about how proof-of-stake cryptocurrencies function. He had written down the definition, but he can't find it!

He copied down code that were on the slides but the formatting makes it unreadable

### FREQUENCY OF NOTE-TAKING

Every day for lectures and scheduling

### **ARCHETYPE**

Power User

### **NEEDS AND DESIRES FOR THE PRODUCT**

- No-nonsense note-taking experience, must be able to open the app and start typing
- Easy to search and find notes (shouldn't need to read any documentation)
- Dark mode
- Helps him do well in class and get a job

### **FRUSTRATIONS**

- Can't organize notes as flexibly as he wants to
- Some note-taking applications are slow to load and use
- Some apps don't allow use of code blocks and math text

## Non-Functional Requirements

### **Performance**

• App opens in 4 seconds

## **Usability**

- No training required, easy to create a note and start typing
- Introduce key features upon first start up through pop-ups

## Configurability

Settings to configure preferences such as:

- Default homepage
- Appearance
- Keybinds

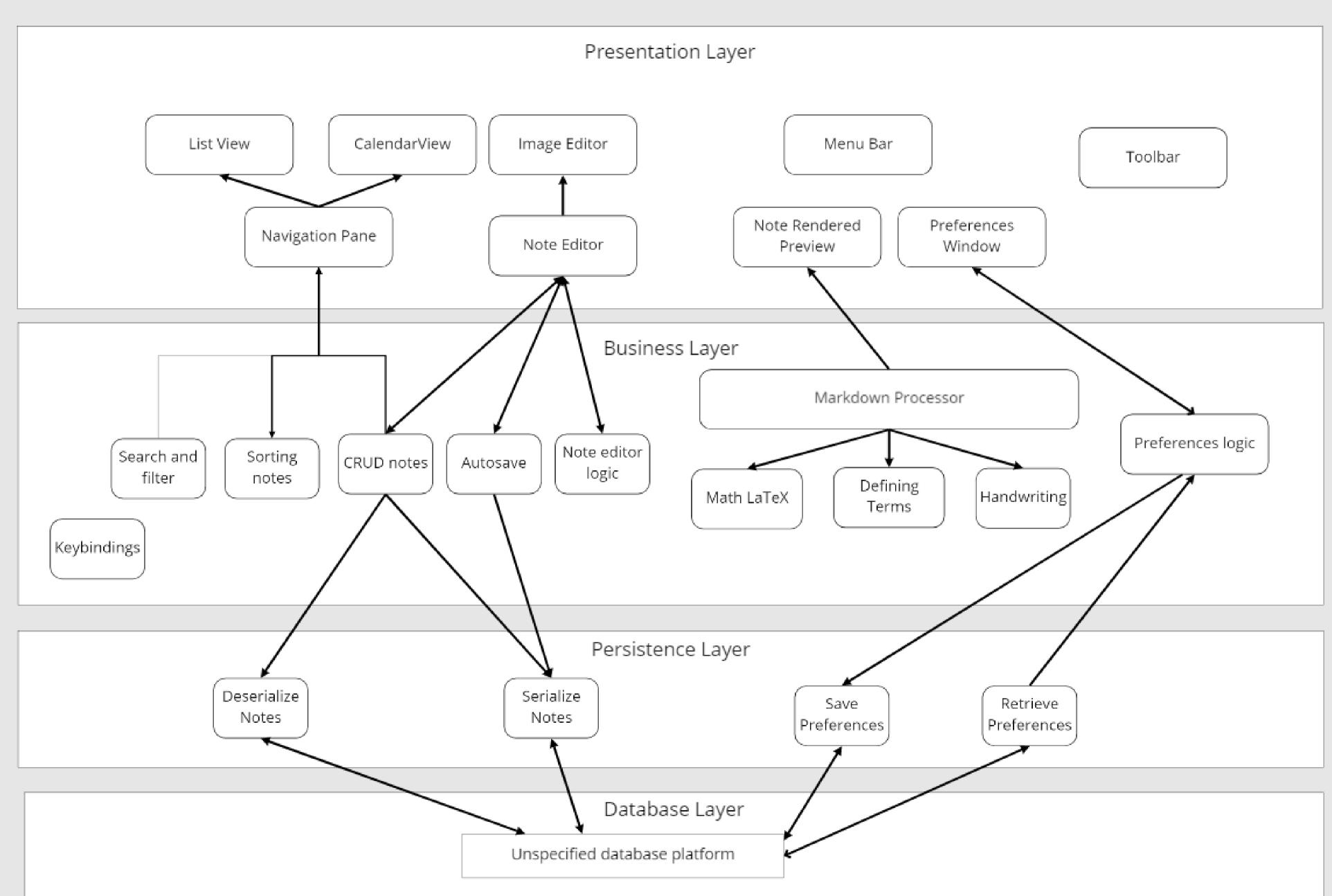
# Architecture & Design

### **Constraints:**

- Markdown processor library may not be as customizable as required
  - customizibility will be required to insert LaTeX math and definition notation in the same file

### **Patterns:**

- Observer Pattern
  - Notes toolbar observes what style is selected
  - Example: Ctrl+b enables bolding, the bolding button observes this and changes colour
- Command pattern
  - Changing styling, saving, undo/redo will all use the command pattern



folder (for goats)subfolder (goats)Note about Goats

Other Note

### Note about Goats

### Some Other Note

Undo Redo **B** I  $\underline{U}$  H1 H2 H3 f(x) <code> bullets list hyperlink Insert image handwriting add to calendar

### # Note about Goats

This is a \*note\* about \*\*goats\*\*.

How many notes can a goat note goat if a goat note could note goats.

floaty goat -> what is a goat but a note that floats

I forgot what a floaty goat is

![drawing1](files/drawings/drawing1)

### Note about Goats

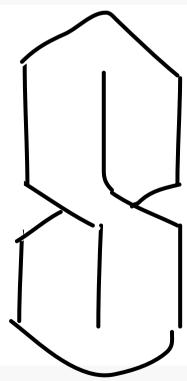
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### Tags

- Assignments
- Midterms
- Notes

Notes

> page1 > page 2

> ...

Other Note

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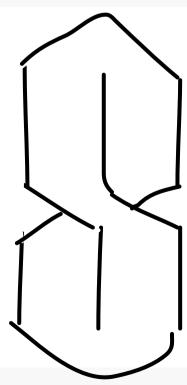
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Tags

Assignments

- Midterms
- Notes

Notes

- > folder (for goats)
  - > subfolder (goats)
    - > Note about Goats

Undo Redo **B** I  $\underline{U}$  H1 H2 H3 f(x) <code> bullets list hyperlink Insert image

Goat	How does one define a goat?
Goat	How does one define a goat?
Goat	How does one define a goat? A goat is one who takes notes, However, a true goat is one who **learns** from their notes

Goat	How does one define a goat?	
Goat	How does one define a goat?	
Goat	How does one define a goat?	

### Tags

- Assignments
- Midterms
- Notes

- > folder (for goats)
  - > subfolder (goats)
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### Other Note

### Drawing Example

Some Other Note

Undo Redo **B** I  $\underline{U}$  H1 H2 H3 f(x) <code> bullets list hyperlink Insert image handwriting add to calendar

## # Drawing Example

![drawing1](files/drawings/drawing2)

## **Drawing Example**



### **Drawing Pane**

### Tags

- Assignments
- Midterms
- Notes



Pencil Pen Marker Eraser Select

Notes

## File Edit View Help

### Search

- folder (for goats)subfolder (goats)Note about Goats

- TagsAssignmentsMidterms
- Notes

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	Assignment 1 5 p.m.					
				Note about Goats		

Notes

Note about Goats

Note 2

Note 3

Q Search

Undo Redo **B**  $I \cup U$  H1 H2 H3 f(x) <code> bullets list hyperlink Insert image handwriting add to calendar

- ✓ folder
- ✓ subfolder
  - > subsubfolder

Note about Goats

Note 2

Note 3

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Tags

- ➤ Assignments (5)
- ➤ Midterms (2)
- Exams (1)

Note about Goats

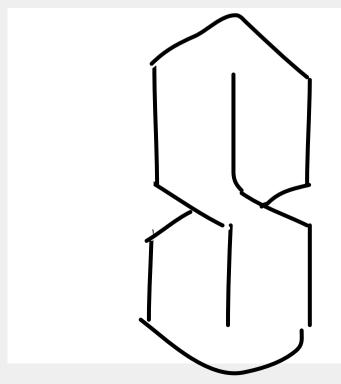
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Notes