Baljinder Benipal
Linnea Palmblad
Haifan Wang
Anushka Tayal

DEVOTE

Design Review

Background

- **User group**
  - Software developers
  - Computer Science students

- **Feedback from interviews**
  - Missing code formatting
  - Quick and minimal design
  - Most popular competitors among interviewees is Apple Notes and Atom

User personas
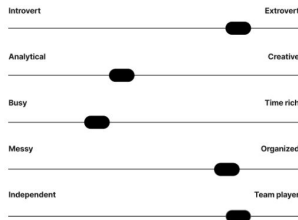
Student

Alice D.

Age: 19
Occupation: CS Student
Location: Waterloo, ON, Canada
Archetype: Student
Status: Single

Bio

Alice is a first year Computer Science student currently taking several CS courses. Previously she has been taking notes on paper, but is now transitioning to taking notes on the computer for her classes instead. For university she moved away from home and for the first time have to do her grocery shopping by herself. Additionally, she has 5 different courses. So, having notes organized by courses would be a very useful feature.

Personality

Introvert — Extrovert
Analytical — Creative
Busy — Time rich
Messy — Organized
Independent — Team player

Motivations

- She wants to do well in school
- Be more efficient
- Get better organised

Pain Points / Frustrations

- Hard to organise all notes for all courses
- Hard to keep track of what things to buy in the grocery store
- It is hard to write and to see the code snippets in the notes
- Uses an older computer, so heavier software causes a lot of lag

Goals

- Better organise all the notes
- Structure grocery lists to minimise grocery store runs
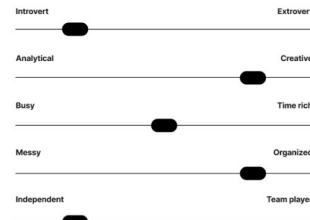- Find a better way of writing down code in notes

Developer

Bob D. Builder

Age: 27
Occupation: Software Engineer
Location: San Francisco, USA
Archetype: Software professional
Status: Married

Bio

Bob is a professional software engineer who has worked in Silicon Valley for the last 4 years. He is a full-stack developer that enjoys coming up with features at the higher-level but doesn't mind getting his hands dirty with the lower-level implementation from time to time. Bob is pragmatic, he is not obsessed with Vim or Emacs, instead he uses an IDE. Bob likes to write small scripts to test out new language features or do independent unit testing of small functions. Bob is very creative and whenever inspiration strikes him, he reaches out to a pen and paper to jot down his thoughts. Bob wants the software he uses to be intuitive and very simple. He also values organization highly, he doesn't spend time looking at assembly, it's too tedious and boring for his tastes.

Personality

Introvert — Extrovert
Analytical — Creative
Busy — Time rich
Messy — Organized
Independent — Team player

Motivations

- As an engineer in a big company, he wants to keep everything clear and organized
- Since the living expenses are high in Silicon Valley, Bob wants to keep his job and survive there.

Pain Points / Frustrations

- Bob does not like to spend all his time worrying about small details, he likes to code but he's a high-level kinda guy
- Bob hates software that is slow or lags, and crashes all the time, which causes him to lose important work
- Bob wants his applications to have an intuitive design, shortcuts are cool but they should be a bonus
- Bob doesn't like mess, whether it's Confluence docs or software Bob hates duplication

Goals

- Bob wants to make the world a better place
- Bob wants to stay organized and have an easy way to record his thoughts when he feels inspired

Extracting Requirements

Affinity Diagram

Basic features
Linnea Palmblad

Special features
Linnea Palmblad

UI / design
Linnea Palmblad

Technical
Linnea Palmblad

New note *Linnea Palmblad*	Check-lists *Linnea Palmblad*	Creating lists • Bulleted/ numbered /boxes *Balmin Berque*	Simple design *Linnea Palmblad*	Simple, minimal interface *Balmin Berque*	Fast launch *Linnea Palmblad*	Fast and quick to use *Balmin Berque*

New note
Linnea Palmblad

Delete note
Linnea Palmblad

Name note
Linnea Palmblad

Save note
Linnea Palmblad

Type text. Like a text editor
kaflar

Edit previous note
Linnea Palmblad

Check-lists
Linnea Palmblad

Creating lists
• Bulleted/ numbered /boxes
Balmin Berque

Text formatting (scalability, different fonts etc)
Linnea Palmblad

Code-friendly formatting
Linnea Palmblad

Code formatting
• Snippets
Balmin Berque

Copy-paste friendly without changing fonts and colour
Linnea Palmblad

Have UML shapes (stick man, square, triangle, etc), or just general shapes
kaflar

Insert previous notes on paper (as an image)
kaflar

Use digital pen to draw/ write on the screen
kaflar

Simple design
Linnea Palmblad

Simple, minimal interface
Balmin Berque

Intuitive use
• obvious commands (not requiring special knowledge)
Balmin Berque

Scalable window
Linnea Palmblad

Easy to navigate through previous notes
Linnea Palmblad

Fast launch
Linnea Palmblad

Fast and quick to use
Balmin Berque

Export data easily
Linnea Palmblad

Produce PDF. This PDF can be submitted as assignments.
kaflar

Notes organization
• Folders
Balmin Berque

top-level category to organize different courses

Requirements

- Set up infrastructure
- Create application window
- Create new note
- Save note

- Resize application window
- Restore state of application window
- Edit existing note
- Delete note
- Add title to note

- Create menu bar
- Add folders for notes
- Format text
- Format code
- Create bulleted list
- Create checklist

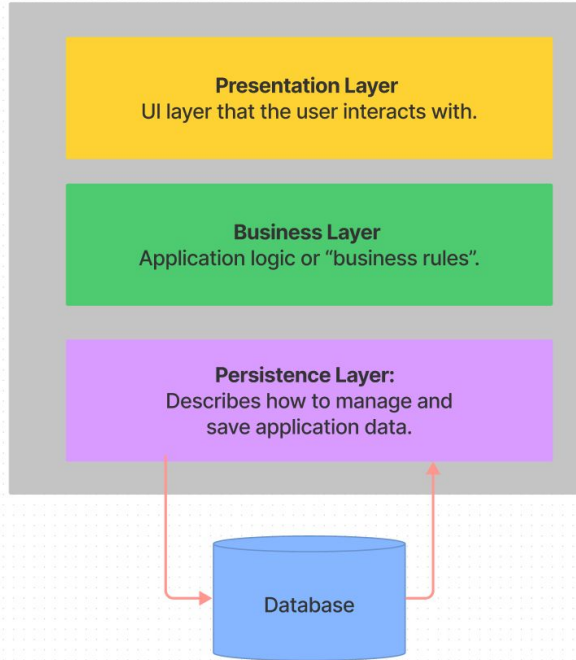# Application Architecture

System Diagram

Presentation Layer
UI layer that the user interacts with.

Business Layer
Application logic or "business rules".

Persistence Layer:
Describes how to manage and save application data.

Database

V
C
M

Create the main application window

Create checklist

Create bulleted list

Format text

Code-friendly formatting

Copy-paste friendly without changing fonts and colour

Have UML shapes (stick man, square, triangle, etc), or just general shapes

Insert images

Setup infrastructure

Support spell checking

Add title to note

Edit existing note

Support keyboard shortcuts (e.g. hotkeys)

Make the state of the window restorable

Export to different formats

Save note

Delete note

Store notes in subject folders

Create new note

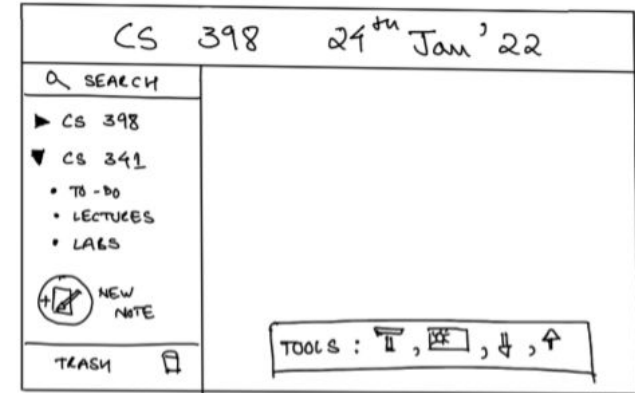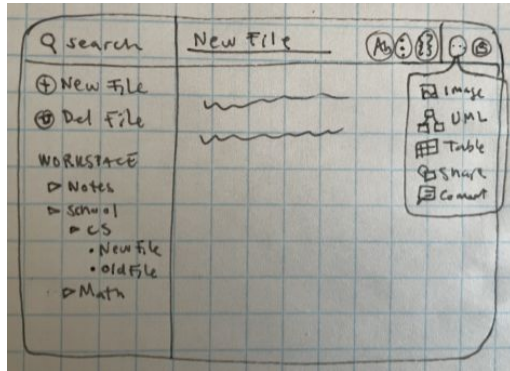# Application Architecture
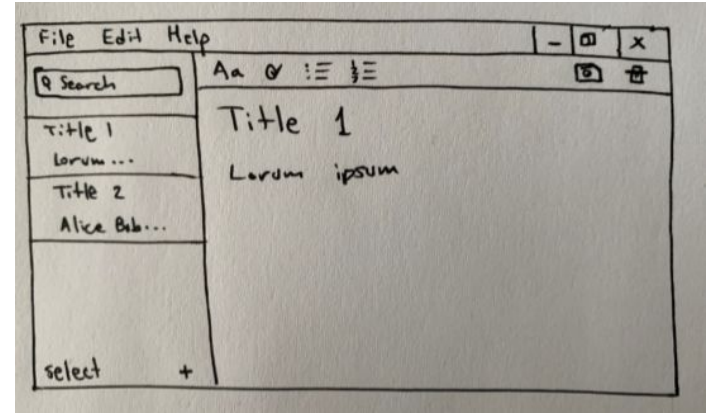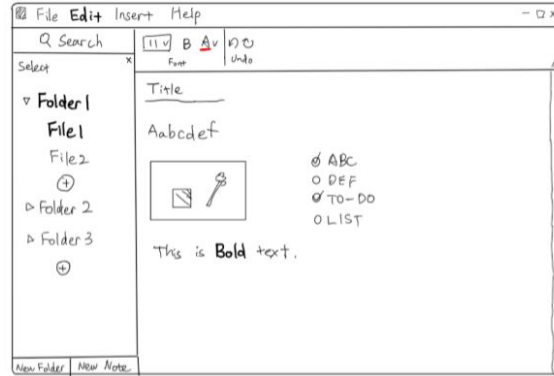
Observer Pattern

- Subject/Publisher: Model (Data)

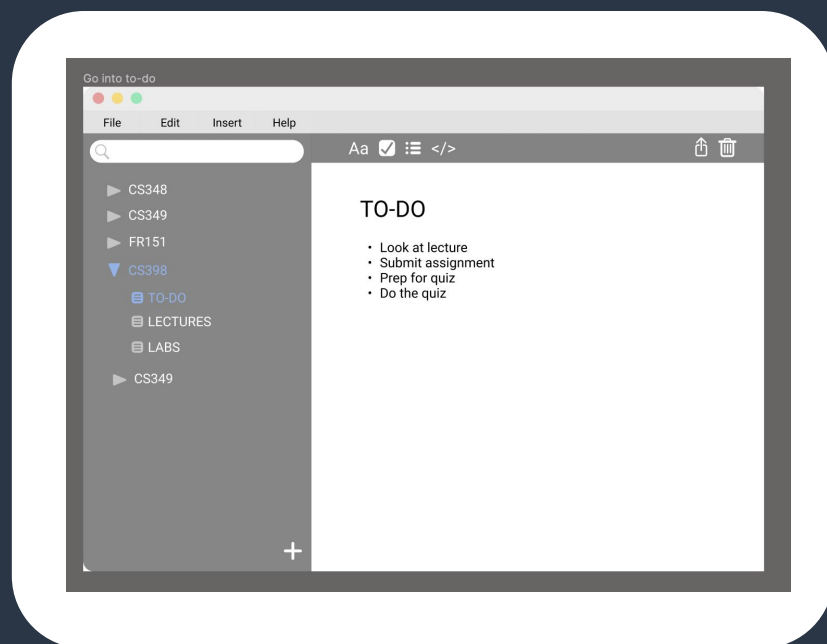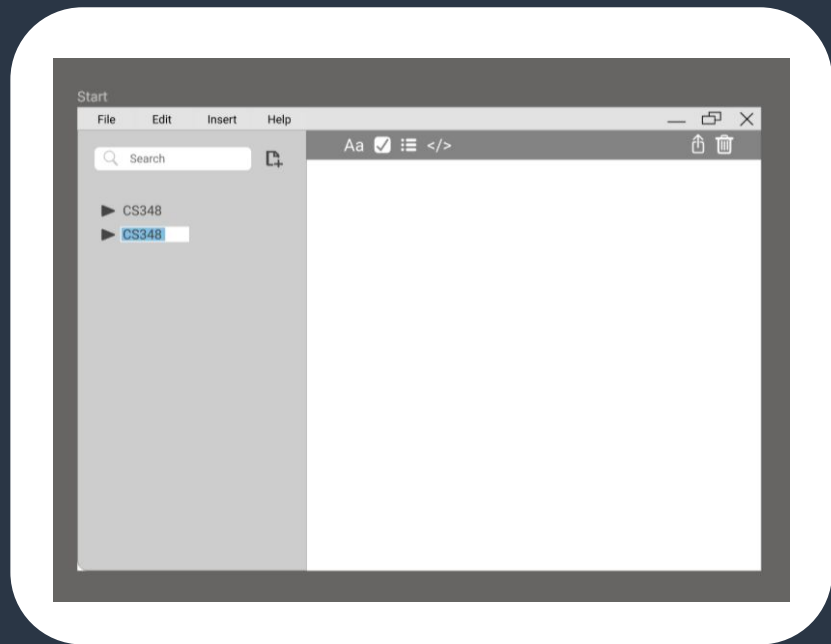- Observer/Subscriber: View (UI components)

Adapter Pattern

Markdown	Adapter	Object

Raw note data

Note object in app

Prototypes

Interactive prototypes in Figma

Gantt Chart

Task	Duration (Days)
High priority	
Create application window	2
Create new note	2
Set up database	5
Save note	3
Medium priority	
Delete note	3
Add title to note	3
Edit existing note	5
Resize application window	3
Restore state of application window	3
Low priority	
Add folders for notes	3
Format text	5
Create bulleted list	2
Create checklist	3
Format code	4
Create menu bar	4
Unassigned priority	
Support keyboard shortcuts	4
Export note to different formats	5
Insert images	6
Create shapes/UML diagrams	4
Remove formatting from pasted text	3
Support spell checking	4

Schedule columns: Sprint 1 (Week 1, Week 2), Sprint 2 (Week 4, Week 5), Sprint 3 (Week 7, Week 8) — each week with days M T W R F.

Resources Identified

Developers

- Anushka Tayal
- Baljinder Benipal
- Haifan Wang
- Linnea Palmblad

Assistant

- Professor
- TAs

Other Human Resources

- Interviewee
- Testers for user testing

Software

- Kotlin
- IntelliJ IDEA
- Git: GitLab
- Oracle VM VirtualBox - Ubuntu Linux
- Google Docs
- Google Slides
- Google Sheets
- Figma

GitLab