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# Thundr

— Assignment 7: Hi-fi Prototype —

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# The Team



Caroline Willis



Austin Jones

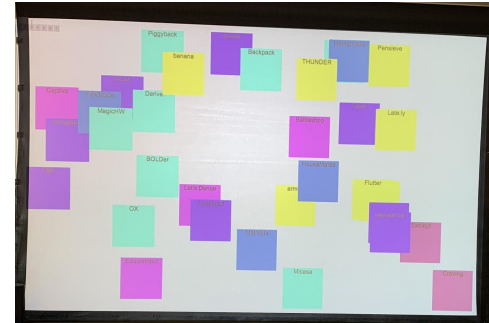
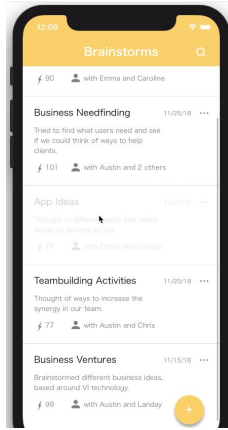


Emma Alderton



Daniel Kharitonov

# Where we were left from CS147



Demo day: app skeleton + Wizard of Oz web screen

# Existing parts / missing parts



idea concept



look and feel



end-to-end logic



architecture



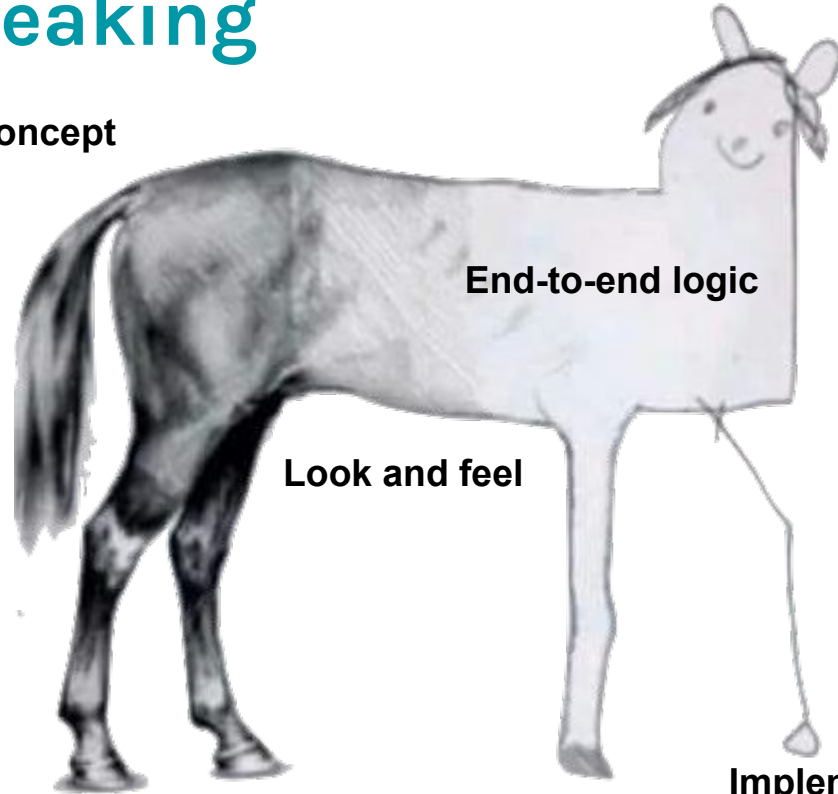
implementation



CS 147

# Visually speaking

Idea concept



End-to-end logic

Look and feel

Implementation

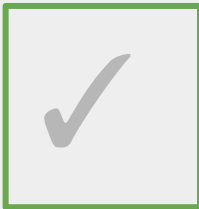
# Moving on



**idea concept**



**look and feel**



**End-to-end logic**



**Architecture**



**Implementation**

**CS 194h**

# End-to-end logic

## Questions

- Minimum viable user input
- Functions of different code parts
- Feature selection (voice, sessions etc)
- Information storage
- Information exchange over network

## Tools we employed

- Usability study
- Brainstorming
- Paper
- Beer

# Discoveries

Minimalistic UX

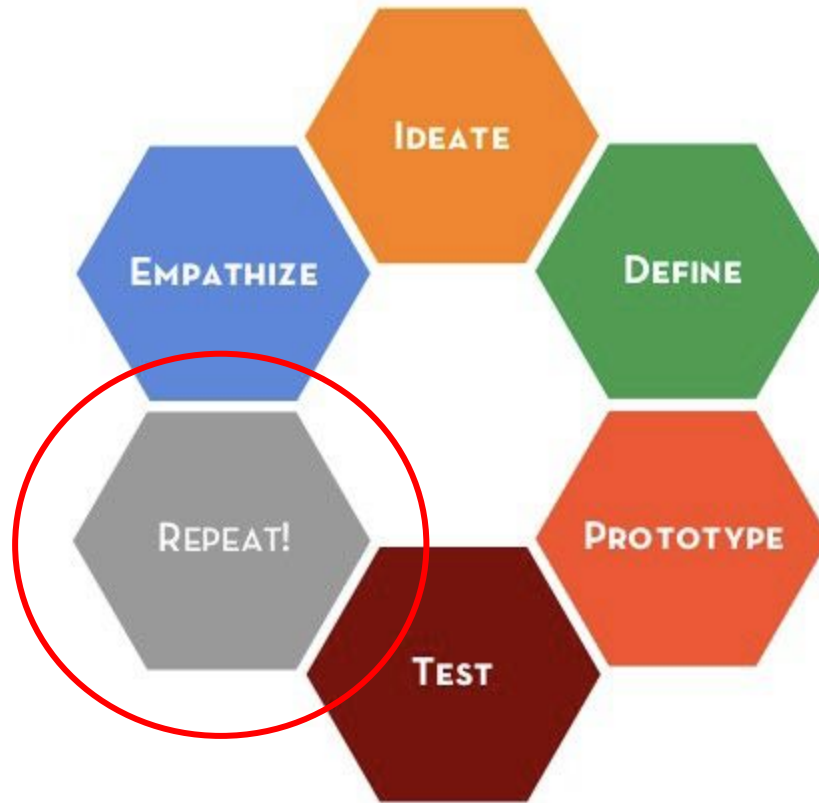
No auth needed

Interactions!

High bar

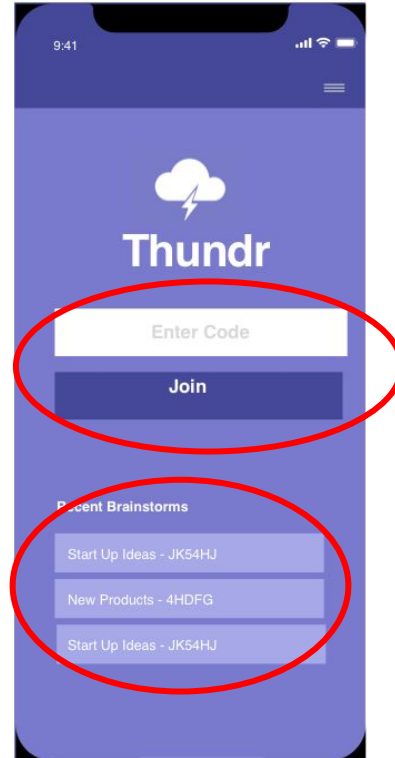
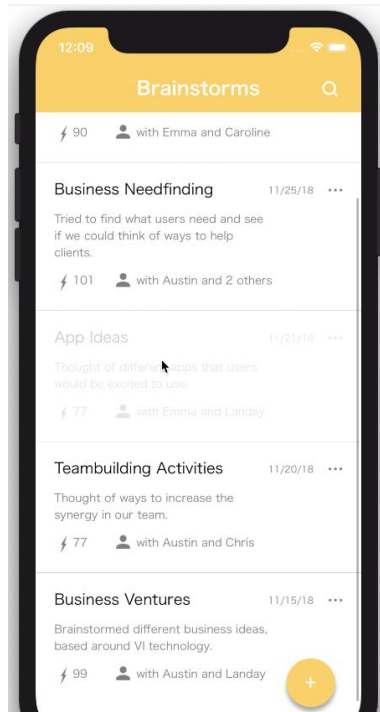


# Repeat!

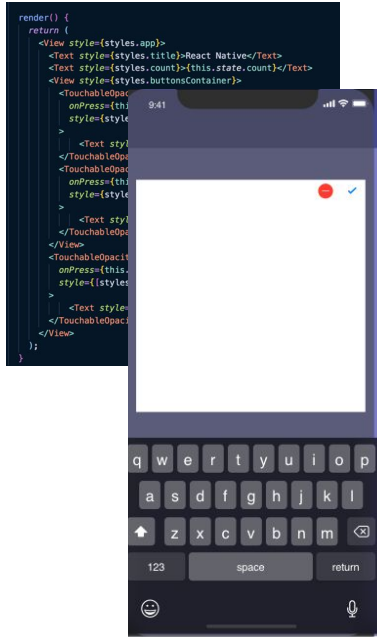




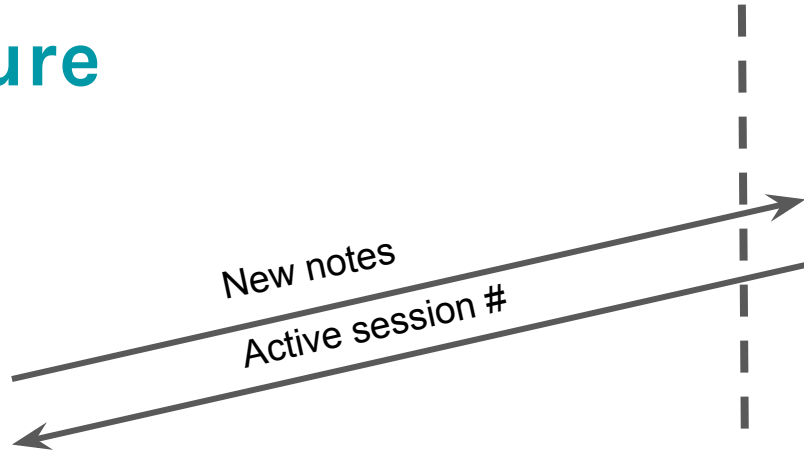
# Interface changes



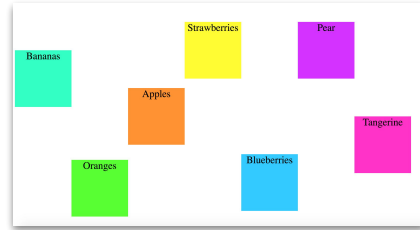
# Architecture



IOS client app ReactN

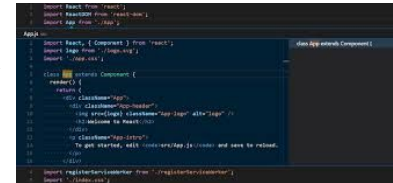


Storage Push/Pull



Main screen / moderator screen  
Web browser @ Thundr URL

Web server



**Last but not least: voice input**



# Voice options galore

## Voice dictation



- + Zero programming
- + Word-by-word
- Needs enabling
- Needs keyboard up
- No Android version

## Speech API on-device



- + No enabling
- + No need for keyboard
- + Word-by-word
- No Expo support
- No RN support
- Not portable

## 3rd party speech-text API

- + No enabling
- + No need for keyboard
- + Portable
- Entire utterance only
- Complex RN support
- Delays

Did we forget one more option?



**Code & train a proprietary neural network**

# Voice puzzle

## IOS supports

PCM  
ULAW  
.WAV  
.CAF

No MP3, FLAC

## Google Voice expects

MP3  
FLAC  
Base64 sounds  
Broken .WAV  
No .CAF

## RN supports

Fetch Base64  
Binary multipart

No binary fetch

## EC3 Voice expects

WAV  
FLAC  
EC3 files only  
No multipart  
No submitted sounds

## IBM Voice expects

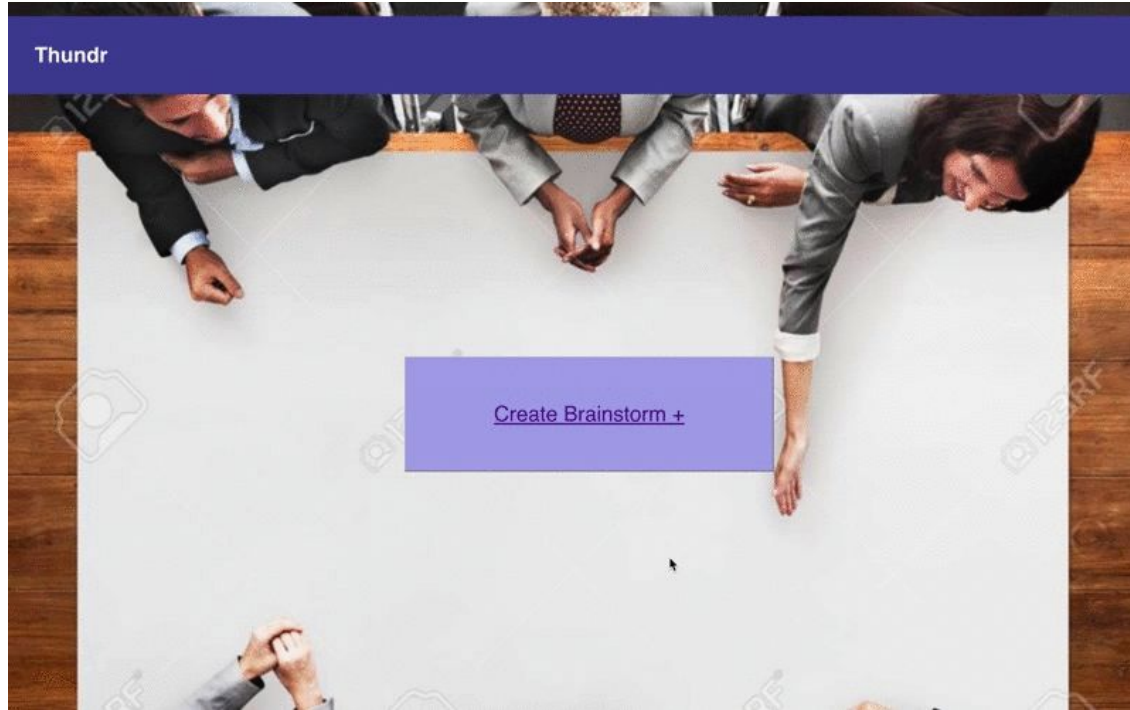
WAV/PCM  
FLAC  
MP3  
Submitted sounds  
No multipart

Solution

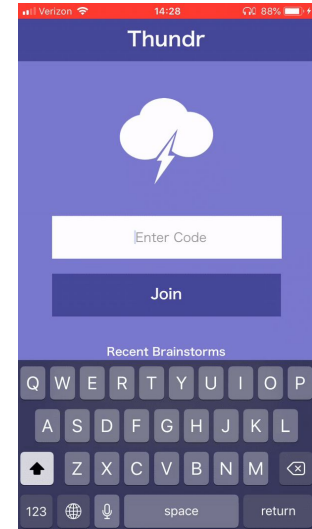
Fix React Native fetch,  
Use IBM Watson Voice

# Voice Demo

# Common screen



# Private screen



# Where we are now



**idea concept**



**look and feel**



**End-to-end logic**

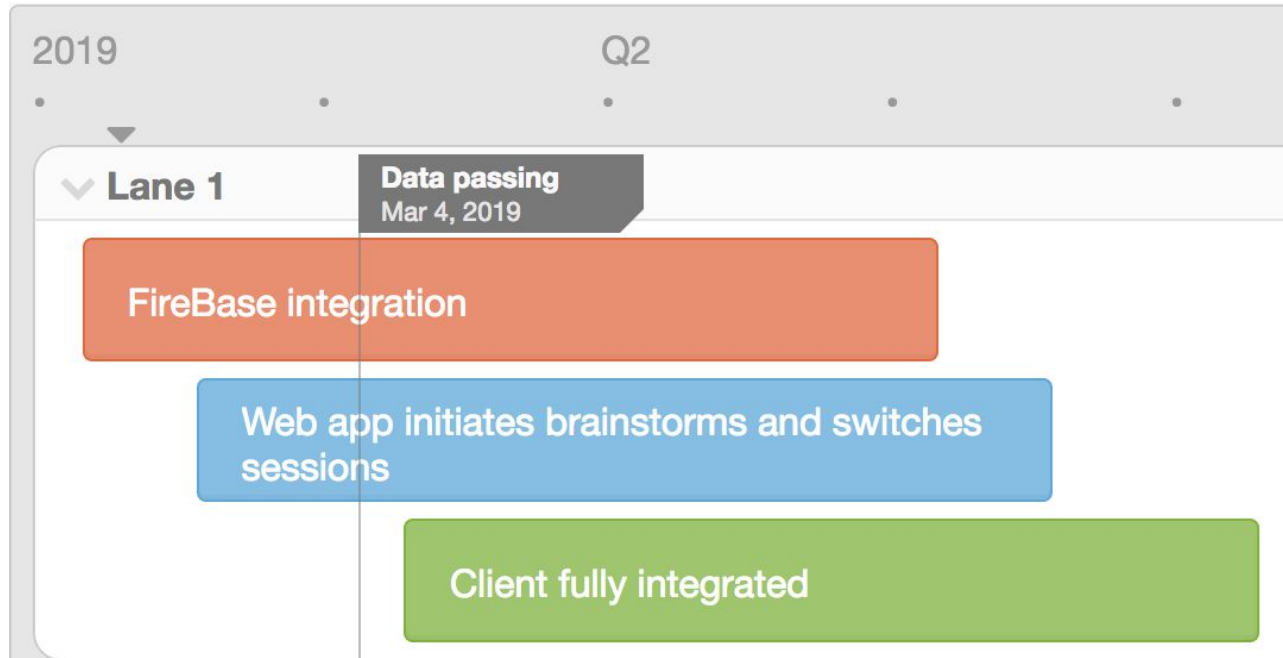


**Architecture**



**Implementation**

# Where we are going



# Review of Presentation

- Where we've been
- Where we are going
- Thunder is violet
- Life is hard
- Questions?

