

GROUP 3 PRESENTATION

CSUN Accessibility
Competition

GROUP MEMBERS

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NANCY ANATUANYA



INTRODUCTION

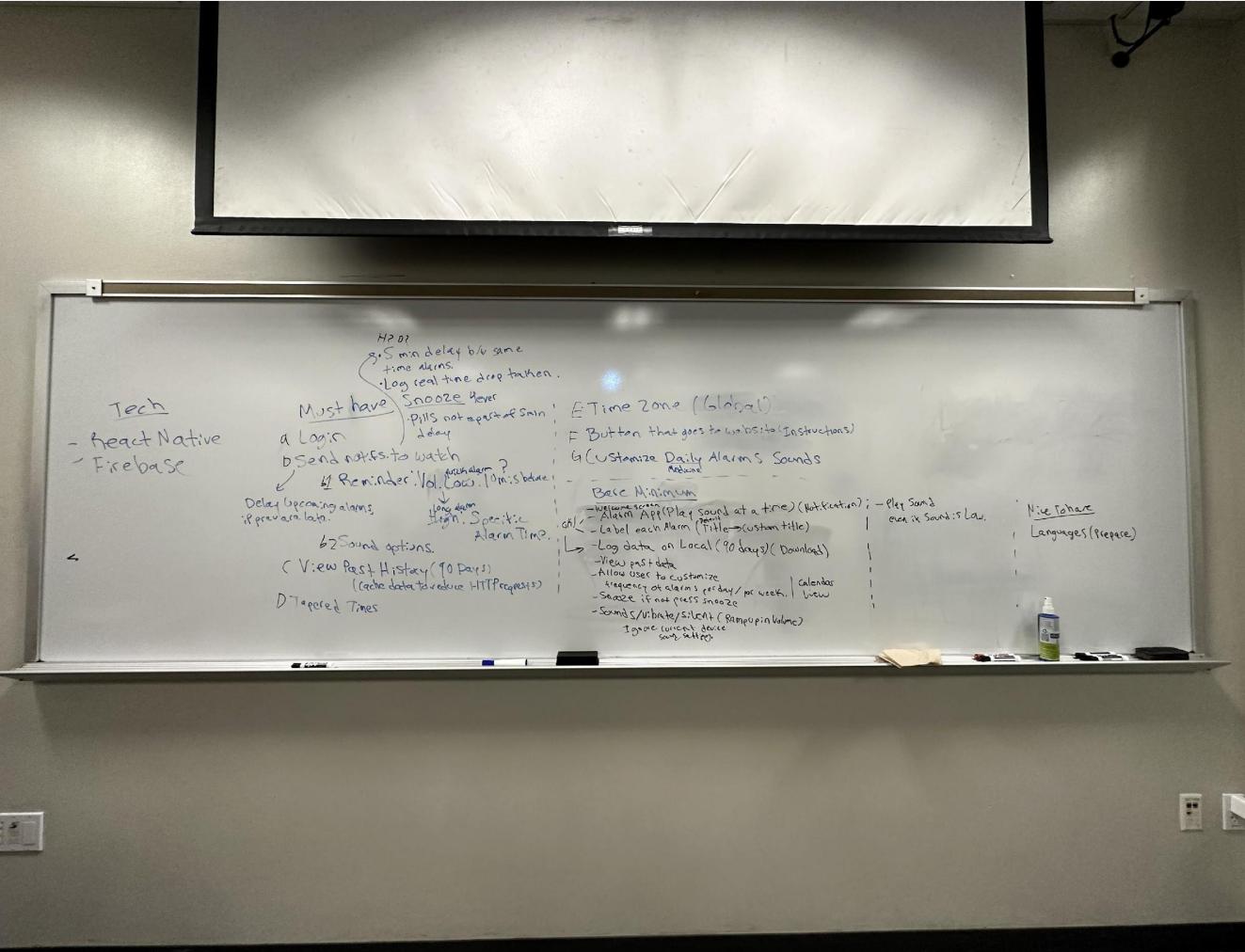
- Design Overview
- Features
- Challenges
- Conclusion
- Appreciation and Acknowledgements
- Questions



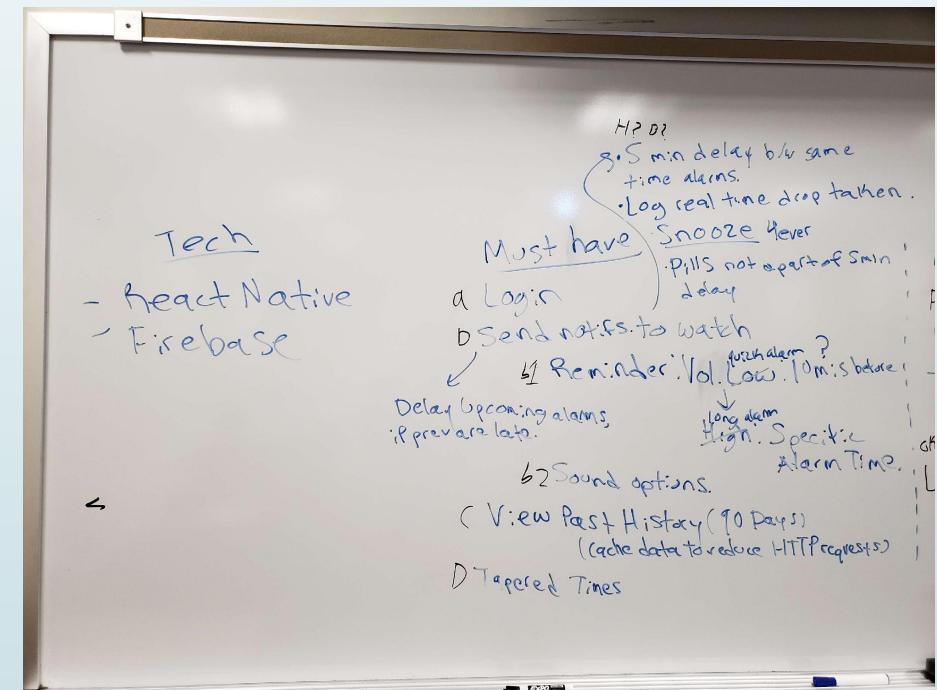
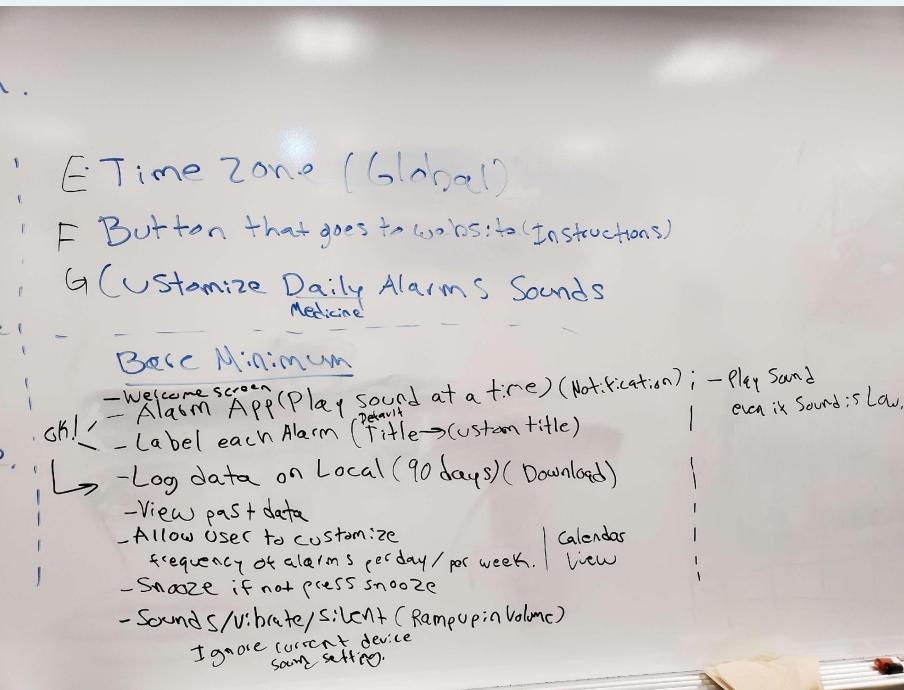
DESIGN OVERVIEW

- Review current design
- Design Tools
- Determine changes
 - Local Storage
 - Welcome page
 - Notifications/ Sound
 - Schedule
- Needs
 - Accessibility
 - Security

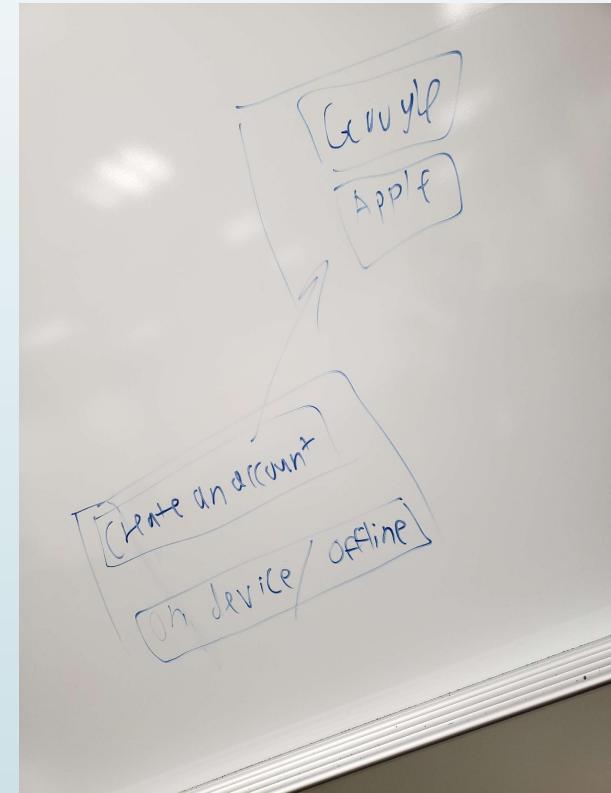
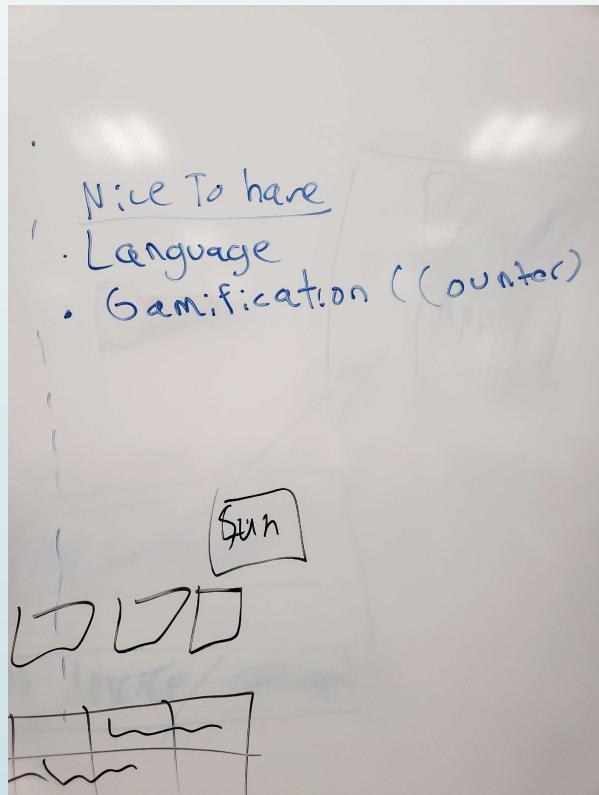
DESIGN OVERVIEW



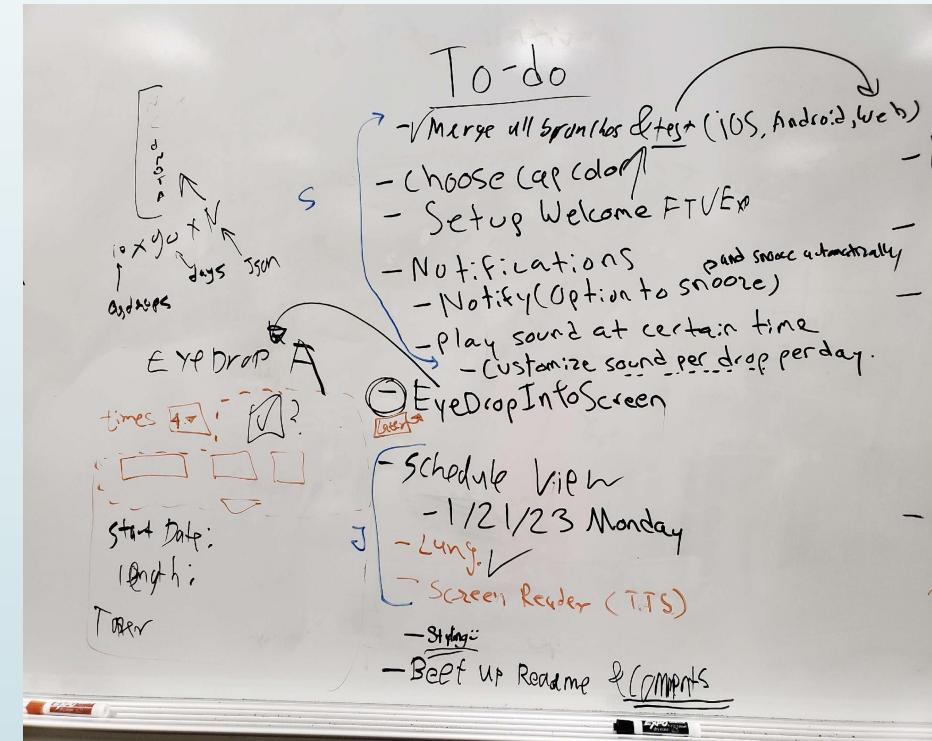
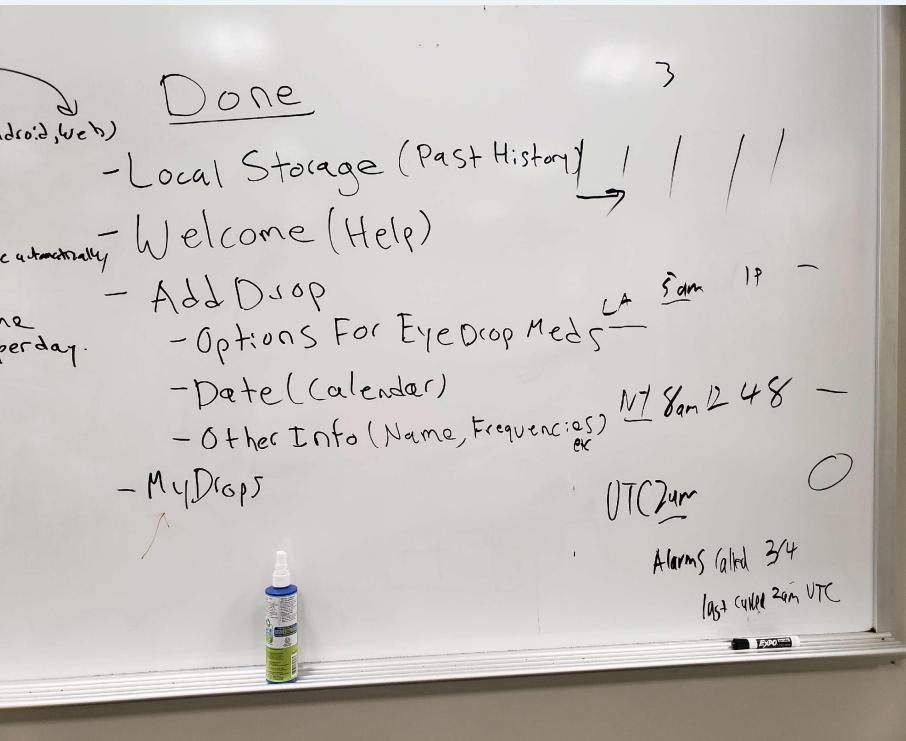
DESIGN OVERVIEW



DESIGN OVERVIEW



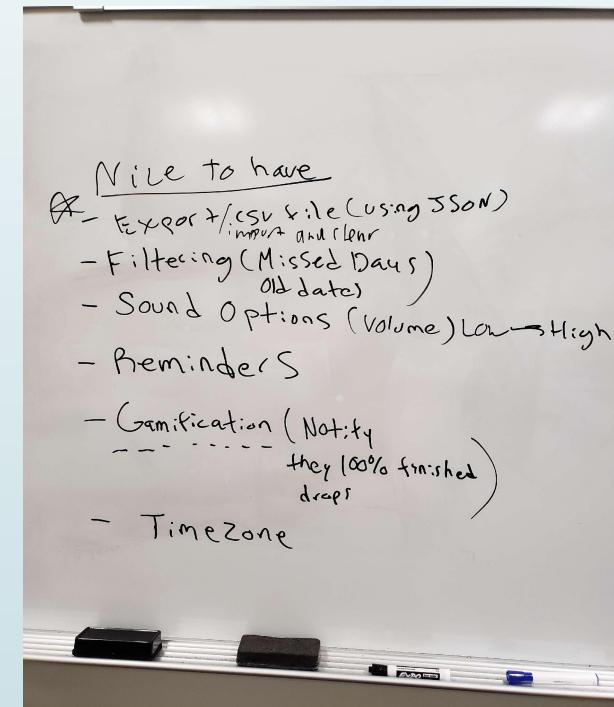
DESIGN OVERVIEW



DESIGN OVERVIEW(contd.)

□ TOOLS

- HTML/CSS
- JavaScript
- React Native
- Expo
- Redux
- I18n (Language Translator)
- VS Code (IDE)





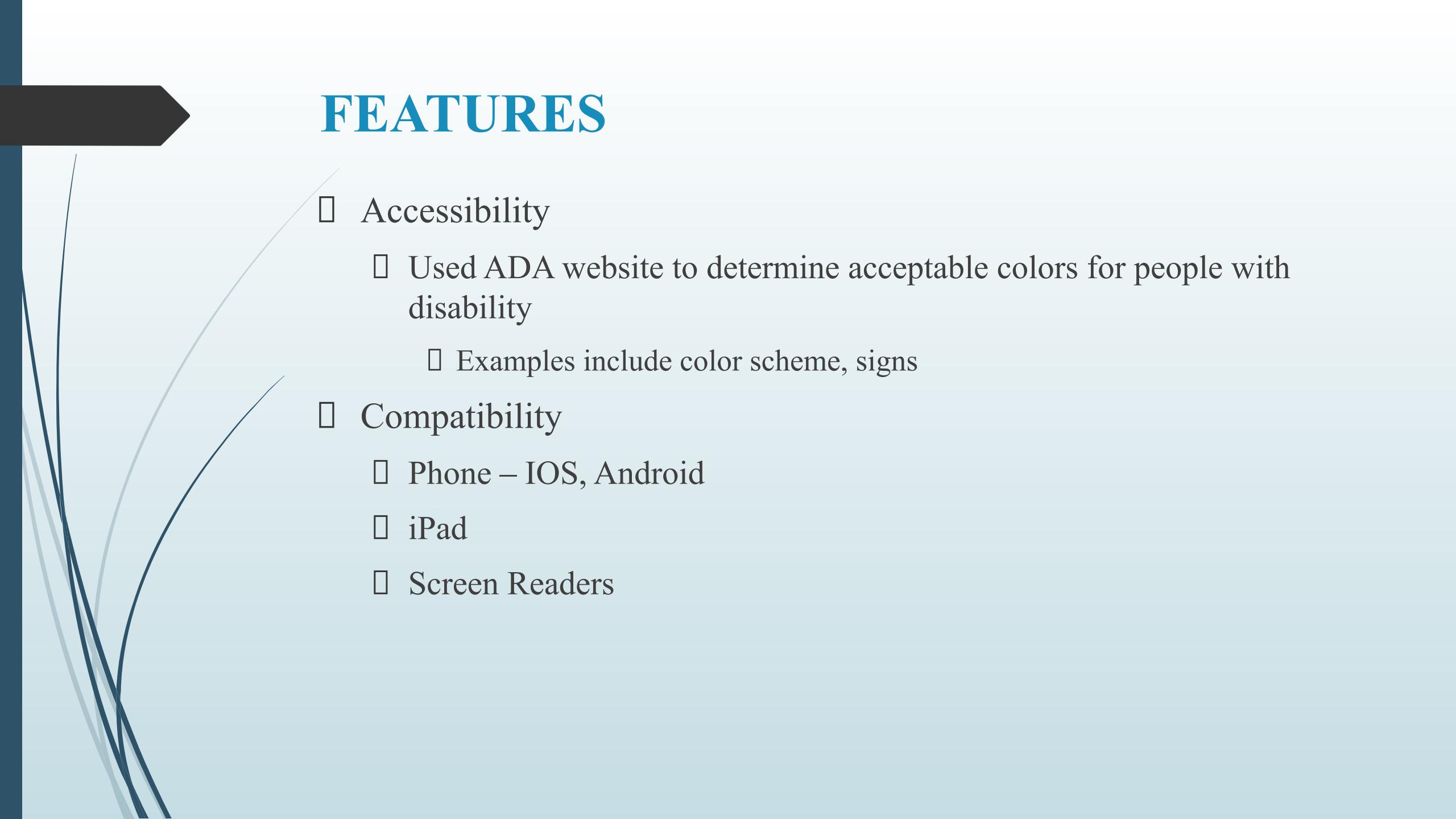
DESIGN OVERVIEW(contd.)

- Accessibility
 - Gradual increase in sound volume
 - Color scheme to meet ADA standard
- Security
 - Local Storage
 - No time limit
 - Estimated storage usage approximately 7.7 KB 5 drops per day for a year
 - Firebase
 - Google Authentication



FEATURES

- Patient can see past history
- Add Drops
- Languages
 - Options to switch between English, Spanish and Hindi
 - Can be expanded
- Compatible with Screen Reader(verified)
- Add/ List View
- Local storage



FEATURES

- Accessibility
 - Used ADA website to determine acceptable colors for people with disability
 - Examples include color scheme, signs
- Compatibility
 - Phone – IOS, Android
 - iPad
 - Screen Readers

FEATURES – iOS VIEW

Add New Drop
Triancinalone

Which Eye?
Both Left | Both | Right

Start Date?
Jan 22, 2023

Cap Color
Beige

Number of Days?
1 days

How Often?
1 times a day

1
2
3

Done

Tapper Drops?
1 drops every 1 days

Save
Cancel

Add New Drop
i.e. Tryamcinalone

Which Eye?
Both Left | Both | Right

Start Date?
Jan 22, 2023

Cap Color

Number of Days?

How Often?

Tapper Drops?

January 2023 < >

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Cancel

Add New Drop
i.e. Tryamcinalone

Which Eye?
Both Left | Both | Right

Start Date?
Jan 22, 2023

Cap Color
Beige

Number of Days?
1 days

How Often?
1 times a day

Tapper Drops?
1 drops every 1 days

Save
Cancel



FEATURES – iOS VIEW



My Drops

Acular LS
14 days
Left eye
Start Date: Wednesday December 22 2022
1 times a day
Taper: 0
of Alarms: 1
Red cap color

Alcaftadine
7 days
Both eyes
Start Date: Friday December 24 2022
1 times a day
Taper: 0
of Alarms: 1
Blue cap color

Lodoxamide
30 days
Left eye
Start Date: Monday December 28 2022
1 times a day
Taper: 0
of Alarms: 1

[Add New Drop](#)

My Drops Schedule Settings

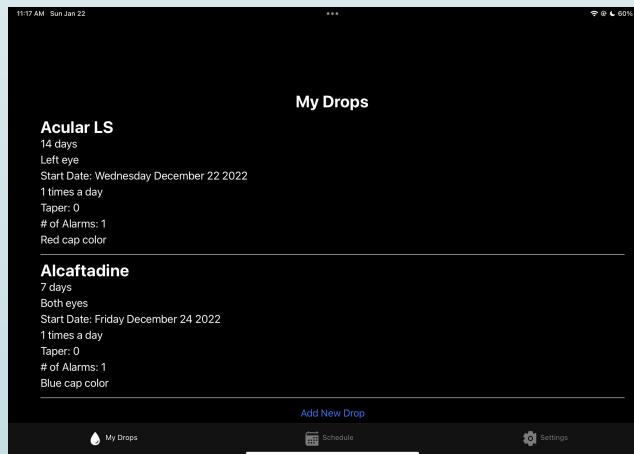
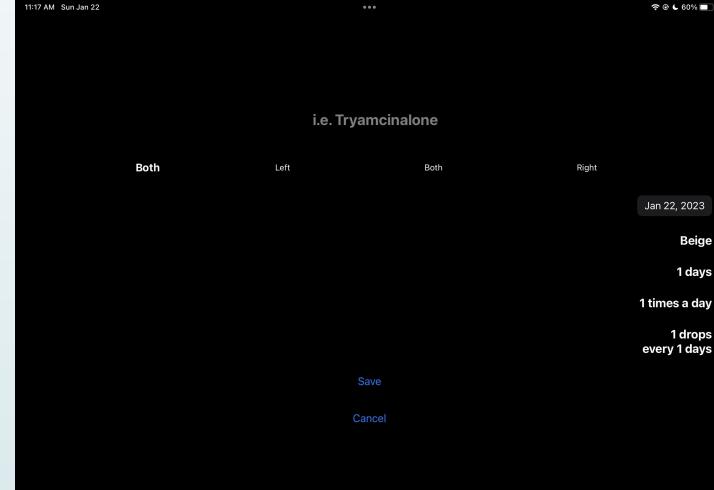
Select Language

Select an option.

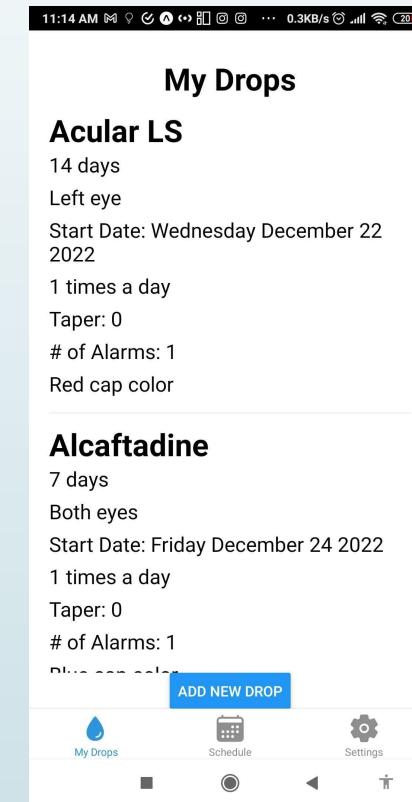
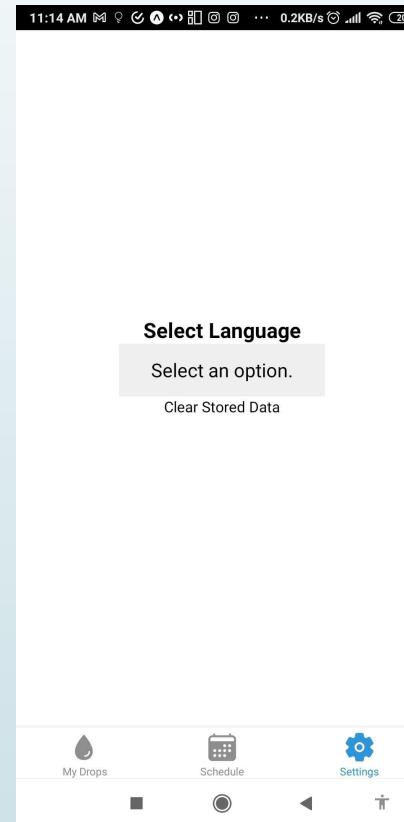
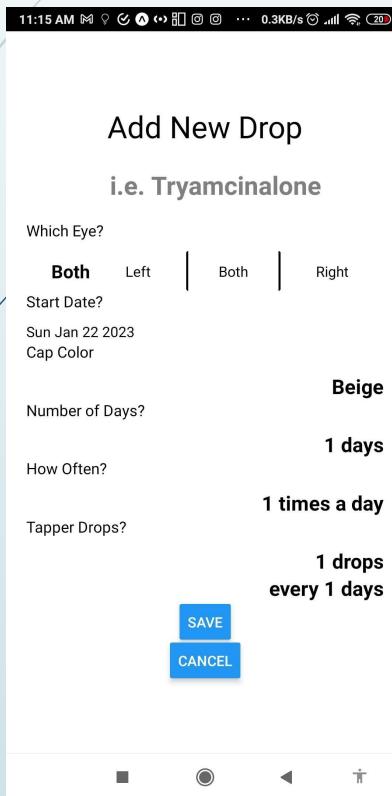
Clear Stored Data

My Drops Schedule Settings

FEATURES – iPAD VIEW



FEATURES – Android View



CHALLENGES & SOLUTIONS

Familiarity with React Native

A screenshot of a ChatGPT conversation. The user (N) asks, "hi can you help convert code from html to REACT Native". ChatGPT responds, "Sure, I can help with converting HTML code to React Native. However, it's important to note that React Native uses a different set of components than HTML and the conversion process may involve significant changes to the original code. Can you please provide me with the HTML code you would like to convert, and any specific requirements or constraints you have for the React Native version?" The user then provides an HTML file for the "Welcome Page for EyeDropAlarm Application". The HTML code includes doctype, head, style, and body sections. A "Regenerate response" button is visible at the bottom.

```
<!DOCTYPE html>
<!- -Welcome Page for EyeDropAlarm Application-->

<html>
  <head>
    <meta charset = "utf-8">
    <!- -Embedded Style Sheets-->
    <style type = "text/css">
      em {font-weight: bold; color: black;gray; }
      h1 {font-family: Cambria, Cochin, Georgia, Times, 'Times New Roman', serif; color: black; font-size:xx-large;}
      p {font-size: 18pt; font-family: Georgia, 'Times New Roman', Times, serif; color: black; font-size: larger; text-align: center;}
      a:hover {text-decoration: underline;}
      body {background-color: #e0e0e0; margin: 0; padding: 0; border: none; border-width: 0px;}
```

ChatGPT Jan 9 Version. Free Research Preview. Our goal is to make AI systems more natural and safe to interact with. Your feedback will help us improve.

ChatGPT Translation

A screenshot of a ChatGPT conversation showing a large block of CSS code. The code defines styles for various elements including margins, text alignment, fonts, colors, and font sizes. It includes rules for headings, paragraphs, strong text, and em text.

```
marginBottom: 10,
textAlign: 'center'
},
greeting: {
  fontFamily: 'Cambria',
  color: 'black',
  fontSize: 20,
  marginBottom: 20,
  textAlign: 'center'
},
paragraph: {
  fontSize: 18,
  fontFamily: 'Georgia',
  color: 'black',
  textAlign: 'center',
  marginBottom: 10
},
strong: {
  fontWeight: 'bold'
},
em: {
  fontWeight: 'bold',
  color: 'black'
```



CHALLENGES & SOLUTIONS(contd.)

- Time constraints limiting design scope
 - Limited design to desired needs and features that is not current on the app
- Calculating Time Zone changes
- Schedule View
- Notifications



FUTURE WORK

- Export CSV file(using JSON)
- Filtering / Schedule View
 - Account for missed time/days
- Sound options
 - Volume range
- Reminders
 - Early reminders e.g. 10mins reminder before eye drop is administered



FUTUTURE WORK

- Desktop application
 - Braille application
- Gamification
 - Message for completing desired dosage
- Time Zone
 - Notification irrespective of time zone
- Languages
- Notifications
- Other devices
 - Wearable devices – AppleWatch, Galaxy watches



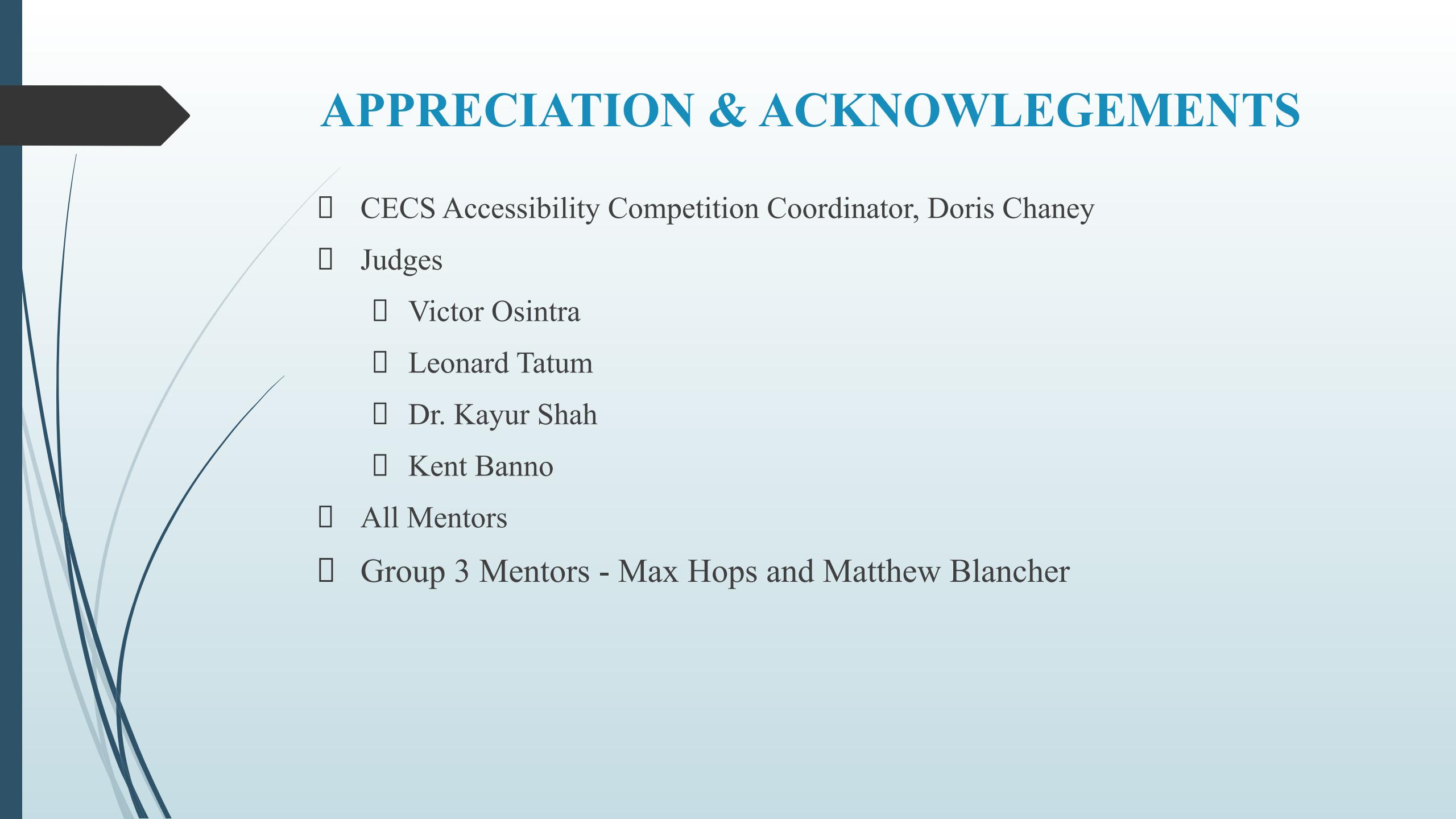
CONCLUSIONS

- App development requires lots of moving parts
- Using other applications such as ChatGPT to assist in ‘coding’
- Learning

APPRECIATION & ACKNOWLEDGEMENTS

□ SPONSORS

- Northrup Grumman
- Boston Scientific
- Teradyne
- Tatum Games
- First America
- JPL
- Facey Medical Group
- City of Los Angeles



APPRECIATION & ACKNOWLEDGEMENTS

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- All Mentors
- Group 3 Mentors - Max Hops and Matthew Blancher



QUESTIONS



THANK YOU



REFERENCES

- Americans with Disabilities (ADA) website : <https://www.ada.gov/>
- Chat Generative Pre-Trained Transformer (ChatGPT AI Machine) -
<https://openai.com/blog/chatgpt/>