Spring 2023 ITS Demo Swift App (Frontend Team)

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Presentation Overview - Sakshi

- 1. Initial Problem Space
- 2. Project Overview
- 3. App Feature Contributions
- 4. Tasks for Next Semester
- 5. Q&A



Project Overview - Sakshi



Initial Problem:

Existing ITS tools are not targeted for IOS devices and on-the-go studying

Existing app created to fix this was the Android Application but it was not supported by IOS devices



Project Overview - Sam



Semester Goals:

- Enhance the existing iOS application by adding new features and fixing existing bugs
 - Add new features such as a navigation bar, and flash card flip, settings page etc.
 - \circ Improve the look of the app overall and enhance usability and have a complete front-end UI

Future Goals:

- Work with the ChatGPT team to help students with questions they are struggling With
- Combine the front-end and the backend so that the app is complete



Restructure Code Base - Varun

- All code was written in one file (LogIn.swfit)
- Had to restructure and refractor all code to create separate files
- Reduce coupling and have high cohesion



Updated App UI - Sakshi





Splash Screen - Varun

- Edited android manifest and intent to create start screen
- Coded 2 second timer for initial screen
- Spawns on every instance of the app



Login Screen -Varun

- Edited password so that the textfield is kept hidden
- Worked with cleartext fields to make them encrypted fields.



Welcome to TutorBot



Change Username/ Change Password - Sahana

- Before no functionality for change username and change password
- Steps:
 - User enters new username or password
 - Goes back to login page
 - Password and username are checked
 - If it passes, then the user goes back to the menu page
- Future goal
 - Two-factor authentication system

2:42	2:42	2:43
< Back	< Back	
Settings	✓ Settings	
Change Username	Change Password	
VIP Save	•••••• (Password) ••••• (Sahana) Save	Welcome to QuizApp VP Sahana Login Register
	<pre>if username.lowercased() == fromUser() { wrongUsername = 0 if password.lowercased() == fromD() { wrongPassword = 0 showingLoginScreen = true } else { wrongPassword = 2 } } else { wrongUsername = 2 }</pre>	



Menu Page Functionality/ UI - Sanjit, Varun

• The Menu page was created in order to be able to jump around to the

different features offered

- Some buttons of the menu page were non-functional
- Redesigned the layout of the menu page
- Added functionality so that it centers all the values for the menu bar
- Adaptive to any device size





Info Page - Sahana

- The info page was created this semester for the user to have a personalized account on QuizApp
- Incorporated:
 - Name
 - Account Username
 - Phone Number
 - Email
 - Password
- Will Incorporate:
 - A point system
 - Current Level :
 - Bronze
 - Silver
 - Gold





Navigation Bar - Sahana

Once the user clicks on one of the options on "Menu", it goes to the page that was clicked, and on the bottom there is a navigation bar that follows through every page

Before the user had to click the back button to navigate to another page

With the option of having a navigation bar, the user is now able to get to specific pages in an efficient manner





Updated Flashcard Question Screen - Sanjit

- This is the front of the Flashcard
- Clicking it will flip it to the back
- Several issues with old design
 - Was not able to flip over properly
 - Did not look like a flashcard
 - Too large
 - Background color made text hard to read
- Next button
- Star button





Search Page - Sam

The user can start by searching

Can be Question or whole set

A desk icon represents Set

A pencil icon represents Question

Autocomplete feature enabled

Still need to be able to redirect to flashcard

	11:00		Γ	
.€	et's Study			Q
2	Search			
	Creating New Software	r F		
	Data Structures	Ę		
	Ece 2035 Test 1	Ē		
	Ece 2035 Test 2	Ē		
	Heap Management	Ę		
	Software Performance & Reliability	ŧ		
	Supporting Data Abstraction	Ē		
	New Final Test	Ē		

11:01	
Sol	Cance
Creating New Software	Ħ
Software Performance & Reliability	F
A Complex Number Can Also Be Drawn As A Vector Whose Tail Is At The Origin Where?	/
How Many Solutions Does The Previous Equation Have?	/
The Solution Must Be Expressed As What?	/
What Are Complex Numbers Necessary To Solve?	/
What Are Numbers Needed To Solve For The Two Roots Of A Quadratic Equation?	/



ChatGpt Functionality-Sam

The user can input question into the search page as is and expect a output from ChatGpt

This is a very basic functionality that pulls form GPT-4 API

Still need to limit it to only be able to ask questions relating to topic

 11:21

 Q
 ⊗ Cancel

Q: What makes the frequency domain accessible numerically?

A: The frequency domain is accessible numerically because it allows signals to be represented in terms of their frequency content, which can be analyzed and manipulated using mathematical tools such as the Fourier transform.

The Fourier transform is a mathematical technique that decomposes a signal into a sum of sinusoidal components, each with its own frequency, phase, and amplitude. This allows complex signals to be analyzed and manipulated in terms of their constituent frequencies, which can be much simpler to work with than the original time-domain signal.

Once a signal has been transformed into the frequency domain, it can be analyzed using a variety of numerical methods. For example, spectral analysis can be used to determine the power spectrum of a signal, which describes the distribution of power across different frequencies. This can be useful for identifying the dominant frequencies in a signal and for detecting patterns or anomalies in the data.

In addition, many numerical algorithms and techniques have been developed specifically for working with signals in the frequency domain, such as digital filters, which can be used to remove noise or unwanted frequencies from a signal, and spectral analysis methods, which can be used to analyze the frequency content of a signal.

Overall, the ability to represent signals in the frequency domain and analyze them numerically has proven to be a powerful tool in many fields, including signal processing, communications, and control engineering, among others.



Updated Quizzes Question Screen - Sanjit

• Previously, the Quizzes Question Screen did not

function properly

- No Functionality
- Correct answers highlighted in green
- Wrong answers highlighted in red
- Next button





see if they know the content well.

Saved/Incorrect Questions Tab - Sanjit

- There was no functionality for this page before
 - Study Mode Saved questions led to nothing
 - Quiz Mode Saved question led to nothing
- Functionality
 - Star button on flashcards
 - Flag button on quizzes
 - Saves the questions into lists
 - Displays into a text box on this field





New Settings Page/Dark Mode -Varun

- I was able to add buttons to make it nicer
- Was able to be consistent with rest of the UI
- Learnt about system dynamics to code dark mode
- Able to keep dark mode consistent in app
- Dark mode stays on even when user exits app





Quizzes Progress Feature - Varun

- Created progress for quizzes
- Allow user to see how many questions they use
- Working on saving question feature with Sanjit
 - Goal for next semester is to finish this

12:48 🕈 🗖		12:48	🗢 🗔
K Back Quizzes	<	Back	Progress
a block-diagram view of the time-invarian property is given in what?	ce	Q	uiz Summary (9 answered)
Fig.~*			
a finite range			
Using the result where is any integer			
terms involving			
Save Next			

Privacy/Version/About Page - Sakshi



Tasks for Next Semester: - Sam/Sakshi

- Work with ChatGPT team to see if we can integrate their functionality in a more thorough manner
- Try to merge the code from the backend to the front end
- Make sure that the progress screen is working and the backend works by saving the users progress
- Saving user progress so that it does not disappear every time you login

Questions?