

Voice Chat

Native App Development

Time: 60 mins

Introduction

In this class, the student/s will learn to add the voice messaging feature for the chat room.

New Commands Introduced

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| • <code>Audio.setAudioModeAsync()</code> | Asks the user to grant permissions for an audio recording |
| • <code>Audio.setAudioModeAsync()</code> | Customizes the audio experience on iOS and Android |
| • <code>Audio.Recording.createAsync()</code> | Records the audio |
| • <code>.recording.stopAndUnloadAsync()</code> | Stops the recording and deallocates the recorder from memory |
| • <code>Object.sound()</code> | Allows to hear the sound |
| • <code>.playAsync</code> | Plays the audio |
| • <code>.loadAsync()</code> | Loads the audio |

Vocabulary

- **Voice messaging** is a form of instant communication technology that uses the sender's voice to deliver a message.
- **Expo-av** allows one to implement audio recording and playback in an app.
- A **binary large object (BLOB or blob)** is a collection of binary data stored as a single entity.

Learning Objectives

Student/s should be able to:

- **Recall** updating the states to set the recording values.
- **Demonstrate** how to start and stop the recording for voice messages.
- **Explain** how to play the voice messages.

Activities

1. **Class Narrative:** (2 mins)

- Explain that the patients and doctors can now chat but describing a medical condition is not always easy in words. Inform that BriskMed can be taken to the next level by adding a feature for voice messages.

2. **Concept Introduction Activity:** (5 mins)

- Let the student/s play the explore-activity and explore how the text and voice chat works on the BriskMed app
- Ask students to sign in with user credentials and send a voice message by clicking on the audio icon..
- Using the slides, explain that the student/s will learn:
 - Start Recording the Voice Message
 - Stop Recording the Voice Message
 - play the Voice Messages

3. **Activity 1: Start Recording the Voice Message :** (12 mins)

Teacher Activity: (6 mins)

- Explain to the students expo-av and permissions.
- Lead and explain to the students to define a function to start recording an audio message.

Student Activity: (6 mins)

- Guide the student/s to define a function to start recording an audio message by clicking on the audio icon.

4. **Activity 2: Stop Recording the Voice Message :** (12 mins)

Teacher Activity: (6 mins)

- Highlight that the voice message recording needs to be stopped, saved and sent to the chatroom.
- Explain how to add a condition to start or stop recording with the functions written for them and show their respective icons.

Student Activity: (6 mins)

- Guide the student/s to define a stopRecording() function to stop the recording and then display a button to start or stop a recording.

5. **Activity 3: Play the Voice Messages:** (8 mins)

Teacher Activity: (6 mins)

- Explain to the student/s that how the stored recording can be retrieved as sound, loaded and played in the app.

Student Activity: (8 mins)

- Guide the student/s to define a function to play the voice messages.

6. Introduce the Post class project: (2 min)

- Debug the code to start and stop recording the voice messages and add functionality to play the recording.

7. Test and Summarize the class learnings: (5 mins)

- Check for understanding through quizzes and summarize learning after respective missions.
- Summarize the overall class learning towards the end of the class.

8. Additional activities:

- Encourage the student/s to play the voice message before sending.
- Encourage the student/s to debug the code to play and pause the recording.

9. State the Next Class Objective: (1 min)

- We start using AI for applications based on computer vision.

U.S. Standards:

CSTA: 2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2-AP-19

Links Table		
Activity	Activity Name	Link
Class Presentation	Voice Chat	https://s3-whjr-curriculum-uploads.whjr.online/16375ad0-fea5-4916-a5e9-7e56a9ce6a8a.html
Explore Activity	BriskMed App	https://snack.expo.dev/@procodingclass/wad-402-c64-sa3-play-the-voice-messages-solution
Teacher Activity 1	Start Recording the Voice Message	https://snack.expo.dev/@procodingclass/wad-402-c64-ta1-start-recording-the-voice-message
Teacher Activity 1 Solution	Start Recording the Voice Message	https://snack.expo.dev/@procodingclass/wad-402-c64-ta1-start-recording-the-voice-message-solution
Student Activity 1	Start Recording the Voice Message	https://snack.expo.dev/@procodingclass/wad-402-c64-sa1-start-recording-the-voice-message
Teacher Reference: Student Activity 1 Solution	Start Recording the Voice Message	https://snack.expo.dev/@procodingclass/wad-402-c64-sa1-start-recording-the-voice-message-solution
Teacher Activity 2	Stop Recording the Voice Message	https://snack.expo.dev/@procodingclass/wad-402-c64-ta2-stop-recording-the-voice-message
Teacher Activity 2 Solution	Stop Recording the Voice Message	https://snack.expo.dev/@procodingclass/wad-402-c64-ta2-stop-recording-the-voice-message-solution

		class/wad-402-c64-ta2-stop-recording-the-voice-message-solution
Student Activity 2	Stop Recording the Voice Message	https://snack.expo.dev/@procodingclass/wad-402-c64-sa2-stop-recording-the-voice-message
Teacher Reference: Student Activity 2 Solution	Stop Recording the Voice Message	https://snack.expo.dev/@procodingclass/wad-402-c64-sa2-stop-recording-the-voice-message-solution
Teacher Activity 3	Play the Voice Messages	https://snack.expo.dev/@procodingclass/wad-402-c64-ta3-play-the-voice-messages
Teacher Activity 3 Solution	Play the Voice Messages	https://snack.expo.dev/@procodingclass/wad-402-c64-ta3-play-the-voice-messages-solution
Student Activity 3	Play the Voice Messages	https://snack.expo.dev/@procodingclass/wad-402-c64-sa3-play-the-voice-messages
Teacher Reference: Student Activity 3 Solution	Play the Voice Messages	https://snack.expo.dev/@procodingclass/wad-402-c64-sa3-play-the-voice-messages-solution
Student's Additional Activity 1	Play Recordings Before Sending	https://snack.expo.dev/@procodingclass/wad-402-c64-aa1-play-recordings-before-sending
Teacher Reference: Student's Additional Activity 1 Solution	Play Recordings Before Sending	https://snack.expo.dev/@procodingclass/wad-402-c64-aa1-play-recordings-before-sending---solution
Student's Additional Activity 2	Debug the Code	https://snack.expo.dev/@procodingclass/wad-402-c64-aa2-play-and-pause-recording
Teacher Reference: Student's Additional Activity 2 Solution	Debug the Code	https://snack.expo.dev/@vishalgaddam873/wad-402-c64-aa2-play-and-pause-recording---solution
Post Class Project	Record and Play Voice Recording	https://snack.expo.dev/@procodingclass/wad-402-c64-pcp-play-recordings-before-sending?platform=web
Teacher Reference: Post Class Project Solution	Record and Play Voice Recording	https://snack.expo.dev/@procodingclass/wad-402-c64-pcp-play-recordings-before-sending--solution?platform=web