KZSC Radio Application

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ABSTRACT

This paper will describe the ideas behind creating an improved version of an already existing KZSC radio application. We will expand upon existing features that have bugs and add new functionality that does not currently reside within the app. Development will consist of eight weeks. Each phase of development will be assigned a specific number of weeks where we will strategically build upon each previous phase.

Introduction

The KZSC app is for streaming what is currently playing on the KZSC airwaves. The app also provides the programming schedule, information on the music currently playing on KZSC, as well as the music previously played. The app is also intended to provide a communication channel between the listeners and the current DJ via a chatroom to make comments as well as possibly request songs. The app also provides a link to the KZSC website where information about the radio station is available, as well as means to donate to the station via the KZSC online store. The Following is KZSCs mission statement from its website:

"KZSC is dedicated to this definition of 'public interest.' KZSC is dedicated to producing the best radio our various personnel and facilities will permit, serving the UCSC campus and our larger listening audience with news, public affairs, music, entertainment and spoken word programming as well as broadcasts and information about various UCSC campus events and issues."

Purpose

The KZSC app provides an interface for streaming for android devices. The app will provide an interface where the listeners can view the program schedule within the app itself, contact the DJ and view the most recent tracks that were played. It also provides a link to donate to KZSC and

provide feedback for the developers. The existing app redirects the user to the webpage when accessing the program schedule, previous broadcasts and donate buttons. We intend to recreate the mobile app so the interface is more user friendly and visually appealing, for example, the current app does not display the song that is currently playing, we intend to make this happen. Additionally, instead of redirecting the listeners to a link on their local browser, we intend to have the program schedule and previous broadcasts displayed in-app. Another feature we plan to add is a chatroom where the users can make comments and request songs.

Problems with existing systems

The current KZSC mobile radio application is both in Android and iOS. Some of the features it includes are a radio player, program schedule, call/text DJ option, and a previous broadcasts feature. Although a lot of these features are very useful to have within a radio application, many of them have quite a few bugs. Not only that but the current user interface that the KZSC mobile application maintains has a layout that causes usability problems. There are many inconsistencies within the design that do not make the visual elements of the app look coherent.

User interface

Focusing on the user interface of the application, the overall design is clustered with feature buttons on the first screen. Over one third of the screen is a KZSC header which takes away a large amount of space that could be used in other ways. The feature buttons the app has are in two completely different sides of the screen, which creates an inconsistency since the functions are not grouped together. The spacing throughout the screen is very small from line to line/feature to feature. This causes problems because it makes it harder to click on different elements of the app. (Image of the current KZSC User Interface at end of document)

Embedding

Another problem that the current mobile application holds is that most of the pages it has are not embedded within the actual application. For example the "Program Schedule" button does not send the user to a screen from within the app with the program schedule but instead links the user to a URL. This means the app exists and brings the user upon a browser with a web page that holds the program schedule. The donate button does the same as well.

Radio player

Additionally, the current mobile applications radio stops playing whenever a user exits out of the app. For example whenever a user decides to navigate from the KZSC app to a social media app like Facebook, the radio instantly stops. The radio also stops playing when a user stays within the app but turns off the phone screen. This may become very problematic because almost all music applications that exist today have the feature that continues playing media while the user does not have the application physically open on the main screen. This drains battery by requiring users to maintain a screen to be on and may push away users from actually keeping the KZSC app.

Target Users

The target users for this app will be students from the University of California, Santa Cruz (UCSC). This app will be a simple way for students to listen in on the KZSC radio station whenever they would like. This app is intended for students, but anyone with an internet connection can tune in with the app, especially since KZSC is broadcasted in Monterey county, San Benito, and Santa Cruz.

General Timeline

Week 1	Class Intro
Week 2	Creating Group/ Project Idea Proposal
Week 3	Home Screen (Basic UI / functionality)
Week 4	Home Screen (Radio Player)
Week 5	
Week 6.5	Chat Features
Week 7	
Week 8	Miscellaneous: Program Schedule, Donate Page, About KZSC
Week 9	Cleaning up application / extra features
Week 10	Cleaning up application / extra features

Components

Home Screen (Basic UI/Functionality)

We want to start with the most basic functionality first before adding more complicated features. We will dedicate one week on developing the home screen and providing a basic user interface. The home screen will consist of an activity which is partitioned into three parts. The header will consist of the KZSC logo and the footer will consist of navigation buttons to other features of the app. The rest of screen will display what is currently playing along with an album cover / radio image and a description of the media being played. There will also be a button used to start/stop the streaming of music. Additionally, while being on this screen, a swipe to the left will display a compact version of the program schedule.

Home Screen (Radio Player)

After the basic functionality has been implemented for the home screen, we will shift our focus towards implementing the streaming feature of the app. We will dedicate two and a half weeks of development time for this feature, along with having the app continue after closing while also adding the "now playing" notification on the users phone while streaming.

Chat Screen

The next most important feature consists of the communication between the listeners and the DJ playing the music on the radio. We will implement an anonymous chat where users can request songs to be played. To avoid trolling, we will (attempt) to implement a profanity filter. We want to dedicate one and a half weeks of development for this feature, where we will need to understand how to utilize a backend to maintain the messaging system.

Miscellaneous

We will then want to dedicate one week implementing the rest of other features the app provides. These features include an embedded schedule of all the music that is to be played, along with a donate link which redirects the user to a donation URL, and an about screen which provides details about the app.

Summary

If we follow this timetable, we will have about two weeks to clean up bugs or add extra features not listed previously. This timeline is subject to change and is not concrete.