

How to Use this Template

1. Make a copy [File → Make a copy...]
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Submission Instructions

1. After you’ve completed all the sections, download this document as a PDF [File → Download as PDF]
2. Create a new GitHub repo for the capstone. Name it “**Capstone Project**”
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[Description](#)

[Intended User](#)

[Features](#)

[User Interface Mocks](#)

[Screen 1](#)

[Screen 2](#)

[Key Considerations](#)

[How will your app handle data persistence?](#)

[Describe any corner cases in the UX.](#)

[Describe any libraries you’ll be using and share your reasoning for including them.](#)

[Next Steps: Required Tasks](#)

[Task 1: Project Setup](#)

[Task 2: Implement UI for Each Activity and Fragment](#)

[Task 3: Your Next Task](#)

[Task 4: Your Next Task](#)

[Task 5: Your Next Task](#)

GitHub Username: [ijcheung](#)

Karaokyo

Description

Karaokyo is a lyric overlay app. Now you can surf the net or play your Angry Birds and have your lyrics right there at the tips of your fingers.

Intended User

Music and karaoke enthusiasts, self described multitaskers.

Features

- Download lyrics
- Display lyrics
- Play audio files

User Interface Mocks

These can be created by hand (take a photo of your drawings and insert them in this flow), or using a program like Photoshop or Balsamiq.

Screen 1



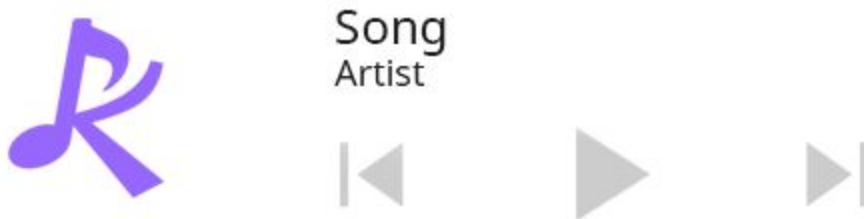
Now Playing Phone

Screen 2



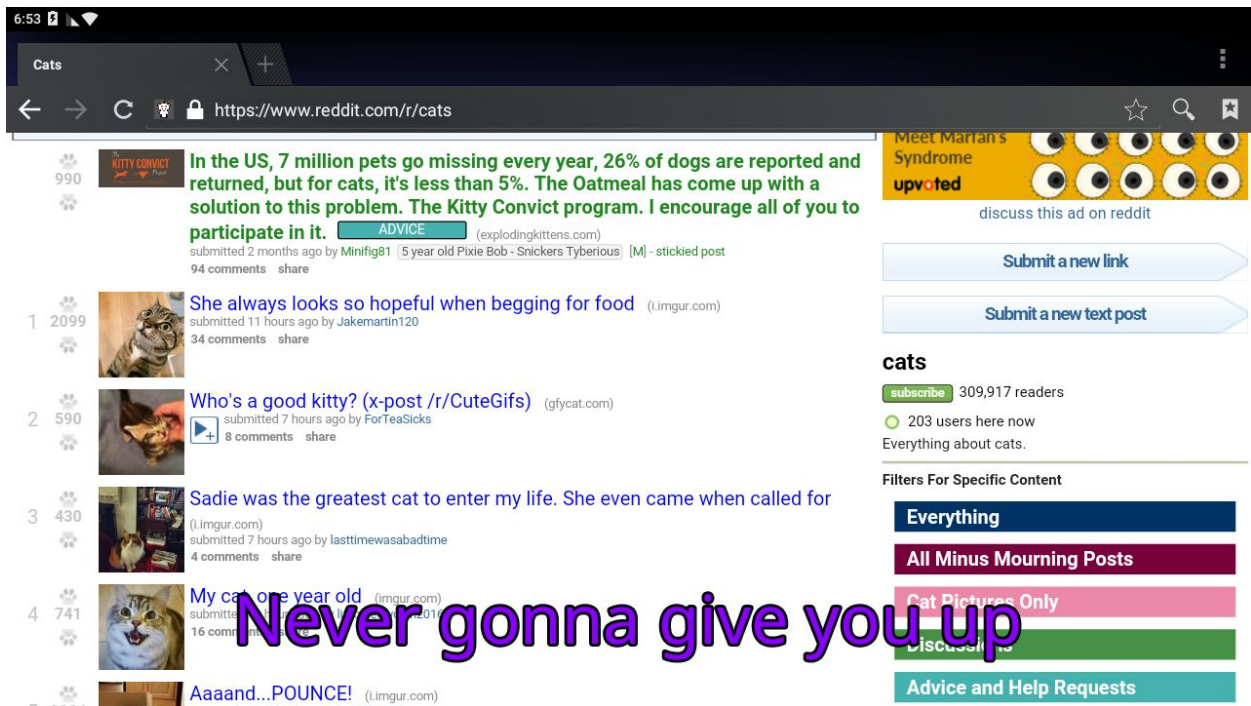
Now Playing Tablet

Screen 3



Widget

Screen 4



Lyric overlay on r/cats

Key Considerations

How will your app handle data persistence?

- Utilize system content provider for media files
- Store lyric files in external storage
- Store location of lyrics files in content provider
- Store playlists in internal storage
- Store current playlist in shared prefs
- Store text settings in shared prefs

Describe any corner cases in the UX.

Media playing logic will be contained in a foreground service. The app can be exited and killed and will update its UI based on information from the service.

Describe any libraries you'll be using and share your reasoning for including them.

Retrofit - ease of calling the backend lyric repository service

Design Library - retroactive material theme
Google Play Services, Ads - monetization
Google Play Services, Analytics - utilization statistics
Bypass - render Markdown
ambilwarna - color picker preference

Next Steps: Required Tasks

This is the section where you can take the main features of your app (declared above) and decompose them into tangible technical tasks that you can complete incrementally until you have a finished app.

Task 1: Project Setup

- Generate new project in Android Studio
- Add libraries to build.gradle and sync

Task 2: Implement UI for Each Activity and Fragment

- MainActivity
- SettingsActivity
- LyricService
- SettingsActivity
- LibraryFragment
- LyricsFragment
- PlaylistFragment
- NowPlayingFragment
- DownloadLyricsActivity
- ViewLyricsFragment
- AudioControllerNotification
- AudioControllerWidget

Task 3: MainActivity

- Generate DrawerLayout
- Configure logic for switching to fragments via drawer

Task 4: Implement Google Play Services

- Ads

- Create ad id
 - Add to UI
 - Ad retrieval code
- Analytics
 - Create analytics id
 - Setup in code

Task 5: Create Foreground Service

- Create lyrics layout
- Create notification
- Create audio playing logic
 - Accept broadcast intents to control playback
- Connect to necessary activity/fragments
- Create thread to update UI based on playback time

Task 6: Settings Activity

- Generate Settings Activity
- Create default values
 - text color
 - stroke color
 - text size
- Create ColorPickerPreference
- Create SliderPreference
- Add each item to SettingsActivity

Task 7: Databases

- Create databases for lyrics and playlists and corresponding:
 - loaders
 - helpers
 - contracts

Task 8: Connections

- Connect MainActivity to LyricService
 - expose methods to children fragments
- Connect respective fragments to content loader
- Create adapters to render data

Add as many tasks as you need to complete your app.

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