

## Deliverable 1

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Project Name: Phonograph

Link: <https://github.com/kabouzeid/Phonograph>

Link to forked repo: <https://github.com/mariabelenvivanco/Phonograph>

Creator: Karim Abou Zeid

Description: A material designed local music player for Android that plays local music from your phone.

Statistics:

- 1489 commits
- 210 issues
- 34 contributors
- 11,000+ lines
- 1,000,000+ installs on Play store

Possible changes

1. Search using speech recognition using Google's Cloud Speech-to-Text API
  - a. For example, if I want to listen to Shake it Off by Mariah Carey, I would say "Shake it off" and show me the results of the queries matching that
    - How to change:
      - Implementing a button on the search bar to activate speech recognition
      - Permissions to allow to use microphone (i don't know if android does it on its own)
      - Cloud Speech to text API: click on the microphone button and speak (new activity)
      - Show words that it recognizing
      - Search queries using input produced by speech API
      - Extra:
        - Have user confirm (button to submit, activate query)
    - Reasoning:
      - Faster to use speak than typing
      - Makes it accessible to people who have trouble typing or can't type in the moment, when its cold out
      - Im interested in speech recognition :)

Possible issues:

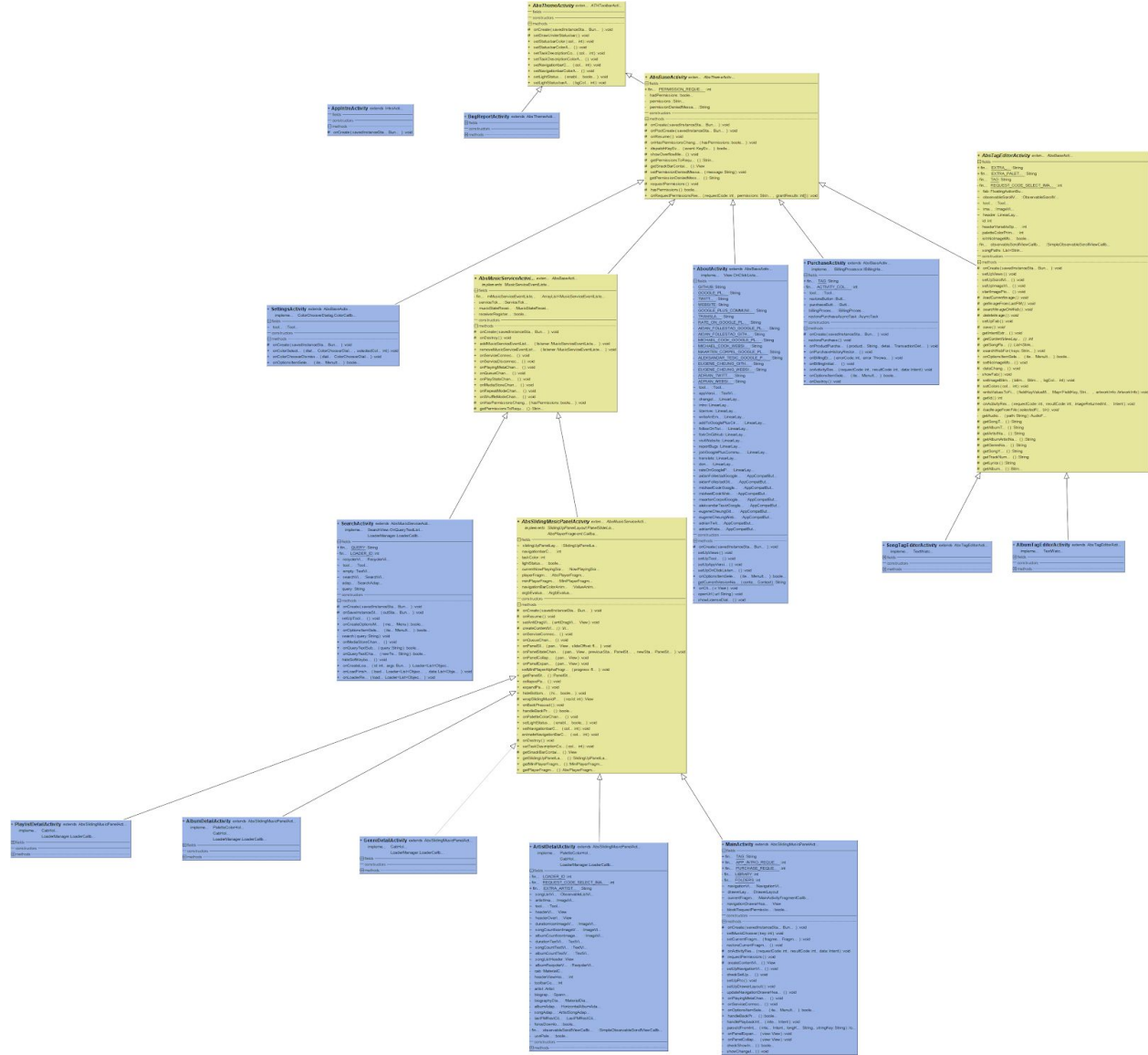
- Instances where people say songs and artists : "shake it off by mariah carey" -> parse "shake it off" and "mariah carey" -> how will it know what to parse?
  - This is a case that is done by many people, but given the implementation of the app thus right now, the search is done by finding the exact input in the files, so if i search "shake it off by mariah carey" in the app as of now, it will not return any results because of the extra "by". This was a stylistic choice by the creator.

#### Testing:

- First see how the search is implemented
- Must have to run on real phone with downloads to be able to implement search - will find out how to do this via android studio
- Will find out if i can simulate a fake phone with downloads and be able to record?
- Tests for api: getting correct input
- Tests for my implementation: does the input search
- Test for the button: does it activate the activity?

#### Contacting Author:

- Posting on the issues section of the repo
- Messaging them directly: Email provided on personal website



To do/ More Description:

- I. Goal: To implement voice search query for search activity to make app more accessible
- II. Main Tasks:
  - Get permissions to record audio/use microphone data
    - **AbsMusicServiceActivity**: *abstract* activity class implemented by Search Activity and extended by abstract class AbsSlidingActivity (extended by other activities such as Setting Activity, Main Activity)
      - onCreate(Bundle)

- Sets permission denied message for external storage
- **Will need to set a message for microphone permission**
- **MainActivity:**
  - Extends AbsSlidingMusicPanelActivity
  - Checks if needs to request permissions using (haspermissions() from **AbsBaseActivity**)
    - check if permissions have been allowed
    - If not: Requests permissions using requestPermissions();
- Have a voice activation button on search bar to activate voice search
- Get voice input: speech to text
  - **SearchActivity:**
    - extends **AbsMusicServiceActivity**
    - Create Intent
      - RecognizerSpeechIntent when button clicked
      -
    - If Intent recognized: activate voice search
    - After: update query variable from SearchActivity class
- Search using the text query

Additional Notes

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Permissions:

- Ask for permission
  - If they accept: Great!
  - If they dont >:( : need to check for permission change

AbsBaseActivity:

- hasPermissions () - goes through permission array to see if any of them are not granted
- getPermissionstoRequest() - abstract method implemented in AbsMusicServiceActivity
  - Description: list of permissions needed for the app

R file : button

Strings.xml:

- Permissions

Flow of App:

Intro Activity -> MainActivity -> (checks for permissions) -> search bar clicked -> search activity  
(permissions already checked)

