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# Teleprompter

## Description

The app is a professional teleprompter system for android phones and tablet. It prompts speakers to read text from it as if they are actually saying it offhand.

## Language

App is written solely in the Java Programming Language

## Libraries

App utilizes stable release versions of all libraries, Gradle, and Android Studio.

Android Studio Version: 3.2
Gradle version: 4.6
Android gradle plugin: 3.2.1

Other Libraries Versions:

```
appCompatVersion = '1.0.2'
supportVersion = '1.0.0'
recyclerViewVersion = '1.0.0'
vectorDrawableVersion = '1.0.1'
materialVersion = '1.0.0'
cardViewVersion = '1.0.0'
dagger2Version = '2.18'
rxjava2Version = '2.1.9'
rxandroidVersion = '2.0.2'
timberVersion = '4.6.0'
lifecycleVersion = '2.0.0'
roomVersion = '2.0.0'
butterKnifeVersion = '9.0.0’
navVersion = '1.0.0'
espressoVersion = '3.1.0'
androidTestVersion = '1.1.1'

playServicesVersion = '16.0.0'
```

## Accessibility

Accessibility for right to left languages will be handled with the android start/end attributes so that views align accordingly.
All texts are kept in string.xml to allow internationalization

## Resources

Resources like strings, colors, themes are stored in xml files in values resource directory

## Intended User

This app is for news casters or speakers at any gathering.

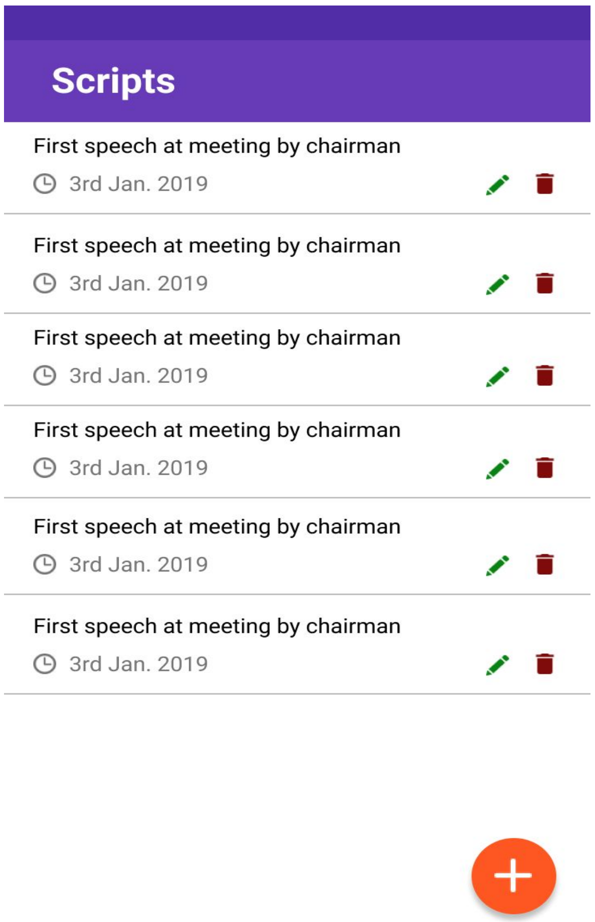
## Features

Main features of the app are as follows:

- Saves scripts to be read
- Allow importing of text files as script
- Prompts the script to be read to the speaker.
- Allows control over the speed at which the text being prompted is scrolling.
- Ads for free version

## User Interface Mocks

### Scripts list



Scripts

First speech at meeting by chairman
3rd Jan. 2019

First speech at meeting by chairman
3rd Jan. 2019

First speech at meeting by chairman
3rd Jan. 2019

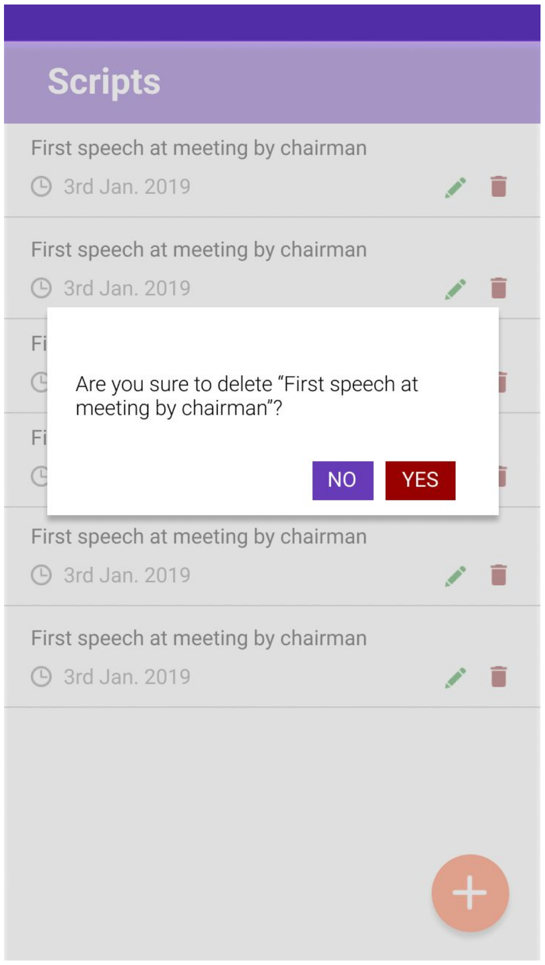
First speech at meeting by chairman
3rd Jan. 2019

First speech at meeting by chairman
3rd Jan. 2019

First speech at meeting by chairman
3rd Jan. 2019

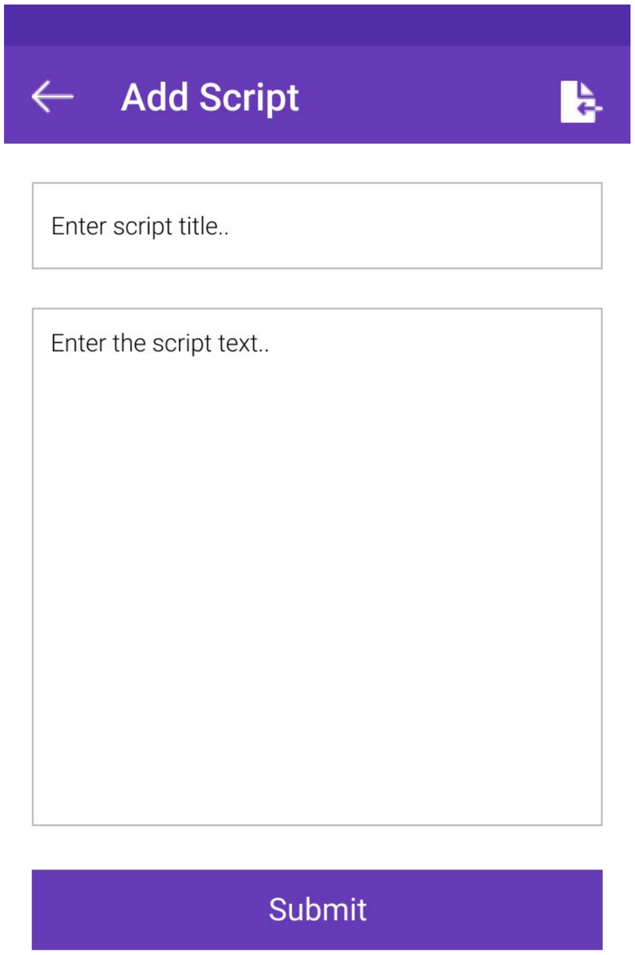
The first screen of the app which shows list of scripts added by user and allows navigating to create script screen. Clicking on the list item starts the teleprompting screen for the item clicked

### Delete Script


Scripts
First speech at meeting by chairman
3rd Jan. 2019
First speech at meeting by chairman
3rd Jan. 2019
Are you sure to delete “First speech at meeting by chairman”?
NO
YES
First speech at meeting by chairman
3rd Jan. 2019
First speech at meeting by chairman
3rd Jan. 2019

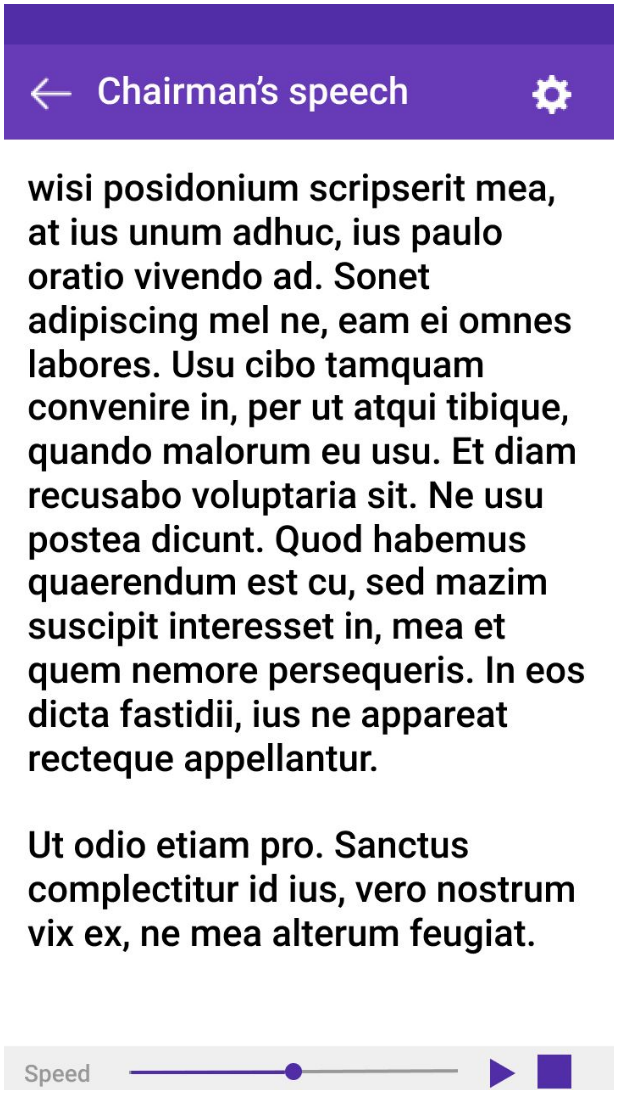
Delete script popup confirmation screen

## Add/Edit Script Screen



The screen that is used for adding or editing a script detail, it also allows importing of a text file when user clicks on the import icon in options menu

## Teleprompting Screen

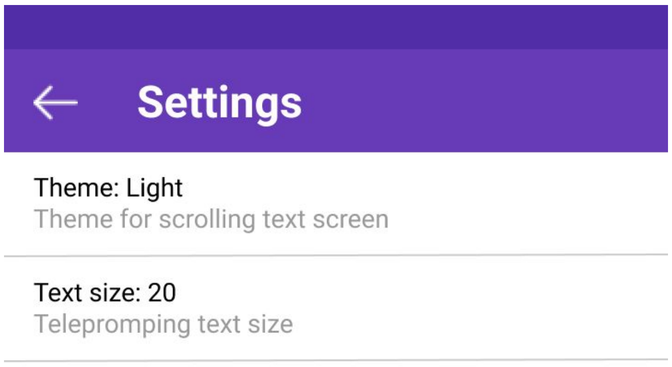


wisi posidonium scripserit mea, at ius unum adhuc, ius paulo oratio vivendo ad. Sonet adipiscing mel ne, eam ei omnes labores. Usu cibo tamquam convenire in, per ut atqui tibique, quando malorum eu usu. Et diam recusabo voluptaria sit. Ne usu postea dicunt. Quod habemus quaerendum est cu, sed mazim suscipit interesset in, mea et quem nemore persequeris. In eos dicta fastidii, ius ne appareat recteque appellantur.

Ut odio etiam pro. Sanctus complectitur id ius, vero nostrum vix ex, ne mea alterum feugiat.

Teleprompting screen that shows the scrolling text to user, with controls to play, pause, stop and to change the scroll speed of text. It also allows navigation to teleprompting settings screen.

## Settings Screen



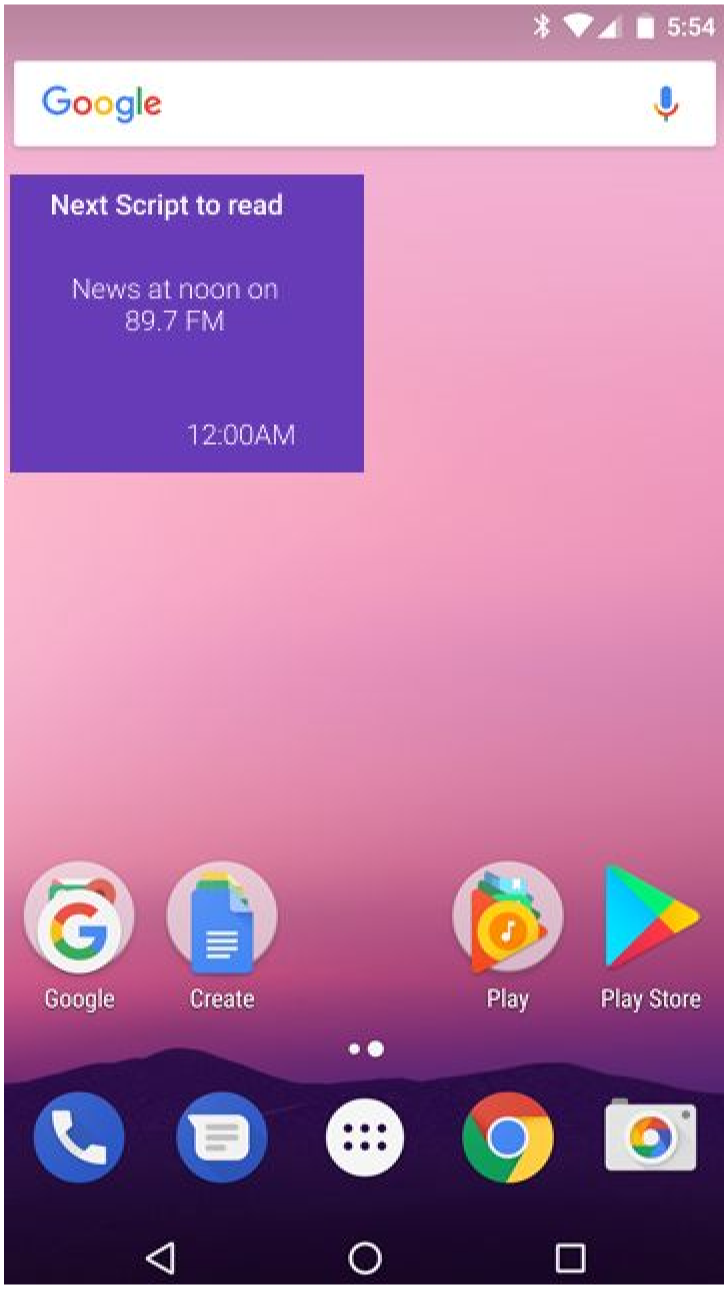
Settings

Theme: Light
Theme for scrolling text screen

Text size: 20
Telepromping text size

Teleprompting settings screen

## Next Script widget screen



Next Script to read

News at noon on 89.7 FM

12:00AM

Widget screen that show the next script to be read by a reader, it shows the title of the script with the time at which it wi to be read.

## Key Considerations

### How will your app handle data persistence?

Data will be saved in sqlite database and operations on the database will be carried on with the help of the Room ORM

### Describe any edge or corner cases in the UX.

Opening the teleprompting screen of the app continues the scrolling of the script text from where it stopped the last time it was opened, except the reading was completed where it restarts teleprompting. To take care of this, the last scroll position of each scripts are being saved in the database in the onDestroyed() callback of the Fragment displaying it.
Another edge case is handling of screen rotation while a script is being teleprompted, this is handled by saving the scroll position in onSavedInstance bundle and resuming the text scroll at exact position.

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

Room ORM for handling database transactions.
Butterknife for  binding views.
Dagger for dependency injection.
Timber for logging.

### Describe how you will implement Google Play Services or other external services.

Google play service will be used for showing adverts on free version of the app

## Required Tasks

Tasks to build the app is divided into 5 sub tasks below:

### Task 1: Project Setup

Steps to setup project:
- Create a new Android Studio project
- Setup libraries and their respective versions

- Create keystore and setup gradle to run release version of the app from android studio
- Setup google ads services
- Setup gradle for free and paid version

## Task 2: Set up dependency injection with dagger

DI sub-tasks:

- Create dagger app and integrate with AppComponent
- Setup activity injection module
- Setup injection of viewmodels with viewmodel factory

## Task 3: Set up data module

DI sub-tasks:

- Setup database
- Create data repository module to communicate with data access objects
- Integrate data setup with dependency injection

## Task 4: Implement UI for Each Activity and Fragment

UI sub-tasks:

- Build UI for for script list screen
- Build UI for adding new script
- Build UI for editing script
- Build UI for teleprompting scripts
- Build UI for teleprompter settings
- Integrate google ads with Scripts screen for free app version

## Task 5: Connect UI to data module using viewmodels

Implement viewmodels and make them bridge between data and screens

Sub-tasks:

- Create viewmodels and inject them into respective activities/fragments
- Implement data synchronization with viewmodel livedata
- Observe livedata from viewmodels in the activities/fragments and bind data to ui

## Task 6: Implement widget

Sub-tasks:

- Implement the widget that shows the info of next to read script at home screen

- Implement and schedule an intent service to update the information on widget in case current script on widget get outdated