

Kids Magazine

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Introduction

- ▶ The project work was to develop an app named “Kid’s Magazine” which focuses mainly on transliteration (to Roman script) and text-to-speech for Bengali and Kannada languages.
- ▶ Motivation for this work comes from the fact that many people in India migrates from their home states to different states and thus their children may not know how to read and write their mother tongue.
- ▶ This app uses various short stories for the purpose of transliteration and TTS.
- ▶ These stories also help children to inculcate moral values.

Main Features of the App

- ▶ This app uses Firebase for authentication purpose.
 - ▶ Users can Sign-In through their Google account.
 - ▶ Sign-In has been implemented using the feature of Firebase.
- ▶ This app uses Firebase Realtime Database
 - ▶ Firebase Realtime Database is a database hosted by Cloud.
 - ▶ Used for fetching content of the stories at runtime.
 - ▶ Used for the storage of the stories.
 - ▶ Users can upload their stories in '.txt' format.

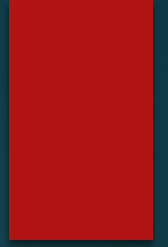
Main Features (Contd.)

- ▶ Using Firebase ML-kit for translation.
 - ▶ Content is stored in English in Firebase Realtime Database.
 - ▶ For displaying the content in Bengali/Kannada, the content is retrieved from the database and is translated using Firebase ML-kit.
 - ▶ Implementation is done using pre-defined classes.
- ▶ Using Google Translate for transliteration.
 - ▶ Database stores an instance of the story in English as well as its transliteration in Bengali/Kannada.
 - ▶ This is handled on the developer-end using Google Translate.

Main Features (Contd.)

- ▶ Using Google Text-to-Speech Engine
 - ▶ Android allows us to convert our text into our voice.
 - ▶ It allows us to let our device speak in various languages.
 - ▶ Implemented TTS for Bengali and Kannada languages.
 - ▶ Pitch and Speech rate can be modified at runtime.

Brief Details of Activities



- ▶ Splash Activity
 - ▶ It consists of a TextView field and a ProgressBar field.
 - ▶ TextView contains the title of the application.
 - ▶ ProgressBar indicates that the application is loading.
- ▶ Main Activity
 - ▶ It is the Sign-In activity of the application.
 - ▶ Contains a TextView field and Inbuilt Google Sign-In button.
 - ▶ Sign-In button launches an intent asking for user credential when clicked.

Brief Details of Activities (Contd.)

- ▶ Profile Activity
 - ▶ Launched after Sign-In.
 - ▶ Contains an ImageView, two TextViews and a Button.
 - ▶ Profile Picture of user is loaded into the image view.
 - ▶ One text view contains name of the user and the other one contains their email-id.
 - ▶ Button lets the user to the next activity when clicked.

Brief Details of Activities (Contd.)

- ▶ Language Selection Activity
 - ▶ Launched after Profile Activity.
 - ▶ Contains two Buttons.
 - ▶ One button is for Bengali and the other is for Kannada.
 - ▶ Selection of the preferred language is done by clicking any one of the buttons.
- ▶ Home Activity
 - ▶ Launched after Language Selection Activity.
 - ▶ It consists of a Navigation View.
 - ▶ Navigation View is extended by a Navigation Drawer.
 - ▶ Header layout contains information about header of NavigationView.

Brief Details of Activities (Contd.)

- ▶ Home Activity (Contd.)

- ▶ RecyclerView widget is added to the Header layout.
- ▶ NavigationView contains list of stories.
- ▶ The Drawer layout contains profile details of the user.
- ▶ Drawer layout also contains “Upload Your Story” as a main menu item.
- ▶ The user can either click on a story or upload their own story.

- ▶ Details Activity

- ▶ Launched when a user clicks on a story in the Home Activity.
- ▶ Most important activity of our application.

Brief Details of Activities (Contd.)

- ▶ Details Activity (Contd.)
 - ▶ Contains a button (either “Speak Bengali” or “Speak Kannada”).
 - ▶ Button enables users to make Google TTS speak in one of the languages.
 - ▶ Toggle Button is implemented for viewing the transliteration of the text.
 - ▶ Contains two dynamically sized TextViews.
 - ▶ Upper TextView contains translated text while the lower one contains transliterated text.
 - ▶ Contains two seek bars; one for the pitch and the other for the speed of the voice.
 - ▶ Contains back button for moving to the previous activity.

Brief Details of Activities (Contd.)

- ▶ Upload Activity
 - ▶ Launched when users click on “Upload Your Story” menu-item in the Drawer layout of the Home Activity.
 - ▶ Contains two buttons Choose and Upload.
 - ▶ Users can choose ‘.txt.’ file after clicking Choose button.
 - ▶ File Explorer will be launched on clicking choose button.
 - ▶ Upload button enables the users to upload their story to the Database.



Thank You