Kaltura Android SDK — Reference Application

Implementation Guide

Version: Eagle

Kaltura
open source video

Kaltura Business Headquarters

200 Park Avenue South, New York, NY. 10003, USA

Tel.: +1 800 871 5224

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Preface

This preface contains the following topics:

- About this Manual
- Audience
- Document Conventions
- Related Documentation

About this Guide

This document describes how the Kaltura Android Software Development Kit (SDK) Reference Application is implemented and provides code descriptions that illustrate specific aspects of the implementation.

This document applies to Kaltura API version 3 and later, and Kaltura server version Eagle and later.

This document is *not* a detailed technical design document and does *not* explain all of the Reference Application code.

NOTE: Please refer to the official and latest product release notes for last-minute updates. Technical support may be obtained directly from: Kaltura Support.

Contact Us:

Please send your documentation-related comments and feedback or report mistakes to knowledge@kaltura.com.

We are committed to improving our documentation and your feedback is important to us.

Audience

This guide is intended for Kaltura partners, community members, and customers using the Kaltura Android SDK.

Document Conventions

Kaltura uses the following admonitions:

- Note
- Workflow

NOTE: Identifies important information that contains helpful suggestions.

Workflow: Provides workflow information.

1. Step 1
2. Step 2

Related Documentation

In addition to this guide, the following product documentation is available:

- Kaltura API Documentation Set

NOTE: Please remember to review all product release notes for known issues and limitations.

SECTION 1

Understanding the Kaltura Android SDK Reference Application

The Kaltura Android SDK Reference Application demonstrates how to use the Kaltura Android SDK with native Android applications.

Use the Reference Application to:

- Browse existing videos
- Group videos in categories
- Upload videos using a webcam or from a gallery

Video is uploaded as a series of content chunks. If an error occurs during upload (such as connection or network issues), the affected chunk can be uploaded again.

The Reference Application can receive content as:

- Unfiltered categories
- Category entries listed in a specific order
- Category entries filtered by specific criteria

Understanding the Kaltura Android SDK Reference Application Data Flow

A typical data flow of the Kaltura Android SDK Reference Application consists of the following steps.

Workflow:

1. The application is loaded.

   (Optional) The application is loaded with a predefined entry ID.
2. After the application is launched, an API call is sent to Kaltura to open a new session.
3. Using the session key and the Kaltura API, the application is ready to receive content.

Downloading the Kaltura Android SDK Reference Application

You can download the Kaltura Android SDK Reference Application from Kaltura API SDK - Native Client Libraries (Java). To use the Kaltura Android SDK, you need an active Kaltura account with valid credentials.

SECTION 2

Kaltura Android SDK Reference Application Files

This section describes classes that the Kaltura Android SDK Reference Application uses.

com.kaltura.activity/*

Classes of the package /activity display the user interface.

com.kaltura.activity/Info

The Info class:

- Converts a markup /res/layout/info.xml into graphic form
- Processes events generated by the user
- Displays detailed information about a video
- Shares data with Facebook, Twitter, and email

com.kaltura.activity/Main

The Main class:

- Converts a markup /res/layout/ main.xml into graphic form
- Processes events generated by the user
- Displays the application's main menu

com.solvegen.activity/MostPopular

The MostPopular class:

- Converts a markup /res/layout/MostPopular.xml into graphic form
- Processes events generated by the user
- Displays a list of the most viewed videos
  The list is sorted in descending order in the *players* field.

com.kaltura.activity/Player

The Player class:

- Converts a markup /res/layout/player.xml into graphic form
- Processes events generated by the user
- Displays a component for video playback

com.kaltura.activity/Settings

The Settings class:

- Converts a markup /res/layout/settings.xml into graphic form
- Processes events generated by the user
- Enables a new authorization for the user

com.kaltura.activity/SuccessUpload

The SuccessUpload class:

- Converts a markup /res/layout/success_upload.xml into graphic form
- Processes events generated by the user
- Displays a form when a file is successfully added to the server

com.kaltura.activity/Upload

The Upload class:

- Converts a markup /res/layout/upload.xml into graphic form
- Processes events generated by the user
- Displays a form with the following buttons: *Record a Video* and *Pick from Gallery*

com.kaltura.activity/Uploading

The Uploading class:

- Converts a markup /res/layout/uploading.xml into graphic form
- Processes events generated by the user
- Displays the progress of data that is being uploaded to the server

com.kaltura.activity/VideoInfo

The VideoInfo class:

- Converts a markup /res/layout/video_info.xml into graphic form
- Processes events generated by the user
- Enables fields for the user to enter data about a video uploaded to the server

com.kaltura.activity/VideoCategories

The VideoCategories class:

- Converts a markup /res/layout/ video_categories.xml into graphic form
- Processes events generated by the user
- Displays the video categories list and the search field for the categories list

com.kaltura.activity/VideoCategory

The VideoCategory class:

- Converts a markup /res/layout/ VideoCategory.xml into graphic form
- Processes events generated by the user

- Displays a list of all videos in a specific category
  The list is sorted in descending order.

com.kaltura.bar/ActionBar

The ActionBar class is a template that includes properties and methods to manage the ActionBar component.

com.kaltura.boxAdapter/*

All classes of the boxAdapter package expand the BoxAdapter user classes.

BoxAdapter user classes connect data with a ListView component.

The ListView component displays data on the screen.

com.kaltura.mediatorActivity/ActivityMediator

The ActivityMediator class defines an interface for data exchange with objects of the Colleague class.

com.kaltura.mediatorActivity/TemplateActivity

The Colleague class is aware of its object manager mediator. The TemplateActivityMediator class exchanges data only with a mediator to avoid the need for colleague objects to communicate directly among themselves.

com.kaltura.mediatorActivity/TemplateActivityMediator

The TemplateActivityMediator class:

- Is an exact mediator
- Implements cooperative behavior to coordinate the activities of colleague objects
- Possesses and calculates information about its colleagues

com.kaltura.player/Player

The Player class:

- Implements the operational logic of the video player
- Analyses the current state of the video player
- Processes failures
- Generates current messages
- Defines a resource (such as address and video location) using setDataSource and sets the properties:
  onPrepared — Defines a player to use when the video is ready for viewing
  setStart — Starts a playback
  setStop — Pauses a playback
  setVolume — Defines the playback volume level
  seekTo — Starts video playback from a selected position
  selectBitrate — Changes the bitrate during a playback

com.kaltura.player/ViewPlayer

The ViewPlayer class:

- Controls the panel of a video player
- Processes user activation of the player's controls
- Sends current messages to the player's object

com.kaltura.services/*

Classes of the package /services use a Kaltura API library and format client requests.

com.kaltura.services/AdminUser

The AdminUser class authorizes a user in the system. After the user is successfully authorized, AdminUser returns a session.

com.kaltura.services/Category

The Category class operates with categories.

com.kaltura.services/FlavorAsset

The FlavorAsset class displays all existing bitrates that are available for a selected video and displays a link for the selected bitrate.

com.kaltura.services/Media

The Media class:

- Displays all available videos
- Displays all videos of a defined category
- Displays a video's ID
- Uploads a new video

com.kaltura.services/UploadToken

The UploadToken class adds a specified file to the server. The file is uploaded in 1 Mb chunks.

com.kaltura.utils/Utils

The Utils class is used for auxiliary functions:

- checkInternetConnection — Tests communication with the external network
- durationInSecondsToString — Converts time in seconds into the hh:mm:ss format
- roundBitrate — Rounds available bitrates for the entry

com.kaltura.utils/Sort

The Sort class is responsible for data sorting.

com.kaltura.utils/SearchText

The SearchText class searches a string that a user enters from a specified data list.