



Android based Multimedia Player

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ABSTRACT :

With rapidly expanding network and technology, multimedia technology is used in media players.

Nowadays Android devices are very popular among people and almost every person uses Android applications .

In the existing system, playing audio and video isn't a good experience due to limitations and there is no background support.

We have chosen to construct a desktop-like media player by employing a software development and media framework approach after taking into account the problems mentioned above.

This app will allow users to download and play YouTube videos using the YouTube API. With the help of this app users can watch videos without leaving the app.

The player is meant to provide high performance, simplified operations, and to work on Android-based mobile devices. In this report we have introduced a plan to create a media player that users can install and use instead of the original youtube app. This app includes various features like blocking ads, blocking channels, downloading videos offline into your device, changing playback speed of live videos therefore this app is a must for people who use youtube frequently.

Keywords — Java, AndroidSDK, ExoPlayer , Youtube Data API , Retrofit , Material Design Components , Room Persistence Library , Gradle , Media player.

I. INTRODUCTION

Mobile phones are no longer merely a means of communication; they are now platforms with numerous functional and multimedia features.

Google introduced the Android operating system for mobile devices in November 2007. Open Handset Alliance (OHA) created the Android operating system, an open source mobile operating system that is largely used for touchscreen gadgets like smartphones and tablets. Android uses its own virtual machine called the DVM (Dalvik Virtual computer) to run its applications.

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The video blocker feature (**Fig1**) is one of the standout features of this app, allowing users to tailor their YouTube experience to their preferences. With the ability to blacklist or whitelist channels, users can filter out unwanted content, ensuring that their subscription feed only shows videos from their favourite creators.

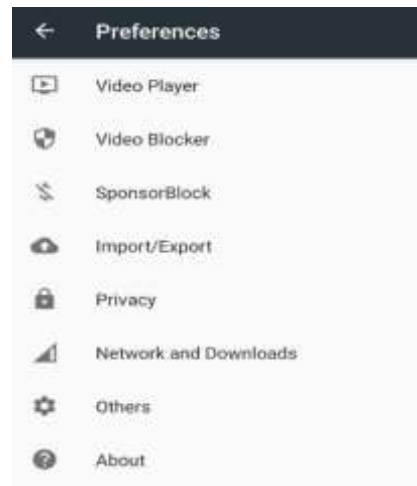


Fig 1: Video Blocker

Another great feature of the app is the ability to mark watched or partially watched videos, making it easy to keep track of which videos have been viewed. Users can also view and download(Fig 2) video thumbnails, providing easy access to high-quality images for use in other projects.

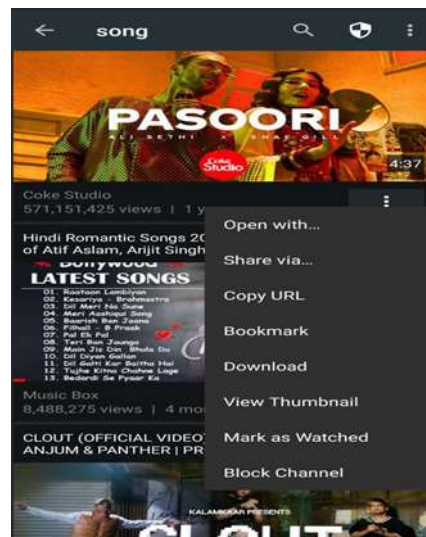


Fig 2: Download

The addition of SponsorBlock to skip advertisement segments is also a welcome addition, further improving the user experience.

Perhaps one of the most appreciated features of the app is the absence of advertisements when browsing or playing videos. Overall, this app offers an impressive range of features that cater to a wide range of users, from casual viewers to power users. With innovative features like video blocking and video swipe controls, as well as traditional features like video playback and subscriptions, this app is a must-have for anyone who uses YouTube on a regular basis.

II. DEVELOPING ENVIRONMENT OF ANDROID

The following are the installation and configuration requirements for the Android environment . :

The programme needed to create an Android environment

- Operating systems: Mac, Linux, and Windows XP or later
- Software: ADT and the Android SDK.
- JDK: The Java Runtime Environment Virtual Machine, often known as the Java Development Kit.
- IDE Environment: Eclipse IDE and ADT Eclipse3 or above.

Installing the Android Development Environment: Steps

- Install at least version 6 of the JDK (Java Virtual Machine).
- Installing the Eclipse tools.
- Install the Android Software Development Kit.
- Launch Eclipse, select Help from the menu, then select Install New Software and Add after installing the ADT plug-in.
- After putting the SDK path in the location, click OK.
- The setup has been completed successfully.

III. SYSTEM REQUIREMENT ANALYSIS**A. Analysis of Feasibility**

The section explains how web video and audio can be streamed to an Android smartphone.

B. Financial Viability

Android developers can make apps for free thanks to the creation of the Android mobile phone multimedia player.

C. Technical Suitability

One needs to have a solid understanding of Java, Eclipse Development Tools, Android Architecture, application frameworks, and other technical skills in order to develop a multimedia player that fits the core requirements.

IV. ESSENTIAL FEATURES OF THE PROPOSED SOFTWARE DESIGN**1. Dependability**

Testing of the software's dependability is necessary. A piece of software is dependable if it runs the system without mistakes and fixes issues as they arise.

B. Reusability

Find duplicate codes and create a new, rational, abstract technique by looking for them.

C. A Basic Programme

To solve challenging code issues, good programmers keep their codes simple and uncomplicated.

D. Comprehensibility

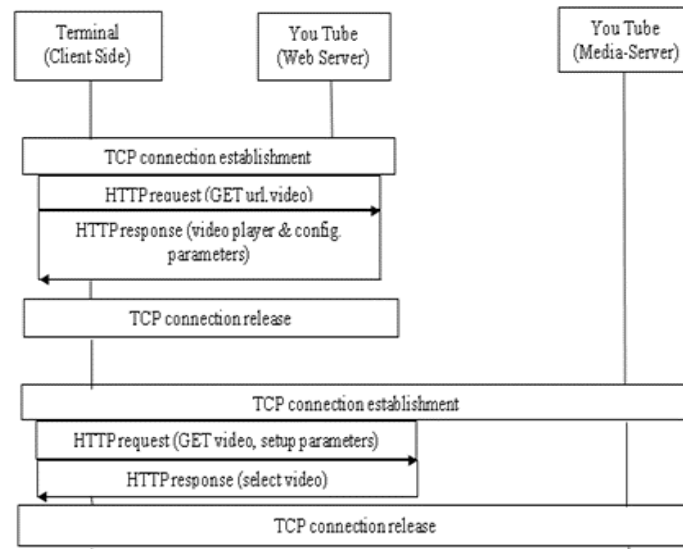
Software is understandable when the documentation is clear and readable and includes the software structure.

E. Testability

Testability is the property of software that has the necessary data set to undertake thorough system testing.

V. MULTIMEDIA PLAYER

The Android platform's media layer structure, operating system, and customizable XML user interface are all studied in this study. A scanned file may be included in the list of media files by the content provider.



File parsing, the SurfaceFlinger user interface, and the media player class. Following all of this, we may create a mobile multimedia player based on Android. the implementation of a media library, a video player, the opening of audio and video files, various displays, and other features. This image displays the system flow diagram.

VI. CONCLUSION

In this research paper we have tried to explain our idea of an app that can be used in place of the original youtube app.

This app is a must for anyone who uses youtube on a regular basis. This app includes various features like blocking ads, blocking channels, downloading videos offline into your device, changing playback speed of live videos and users can also download video thumbnails.

Playlists, menus, the play screen, the user interface, security, and streaming make up the majority of the multimedia player. The media player considers enhancing user interface functionality and format support by including codecs. Enhancements to the user experience include background video playback, dual audio support, and support for all formats of subtitles. Single application for audio as well as videos. The design requires multimedia player framework, for technical support of the Android-based system, Eclipse and Java are used.

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