

YourTunes File System

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1 Introduction

The **YourTunes File System** is a FUSE-based implementation of a filesystem tailored towards music files. It is built on top of a remote backend server, which stores file data and metadata on a database server with a RESTful web server frontend. The client is responsible for transparently querying the remote server for resident files and constructing a metadata-based abstraction based on the parsed server response.

1.1 Directory structure

The directory structure on the local filesystem is based on audio metadata - specifically, the **Album**, **Title**, **Track**, and **Year** ID3 fields.



Each song is placed as a leaf in two separate directory trees: one based on albums directly, and one based on albums categorized by the decade that they were released in (parsed from the **Year** field). In the case of missing metadata, a song is placed in a "Unknown" folder for both cases (`/albums/Unknown/file`, `/decades/Unknown/Unknown/file`). Files with no metadata are also put into these buckets.

In both hierarchies, the file at the leaf is a pointer to the same data, and a user can access the same file through either one (directly through the album name, or through albums organized by year).

2 Setup

3 Server