



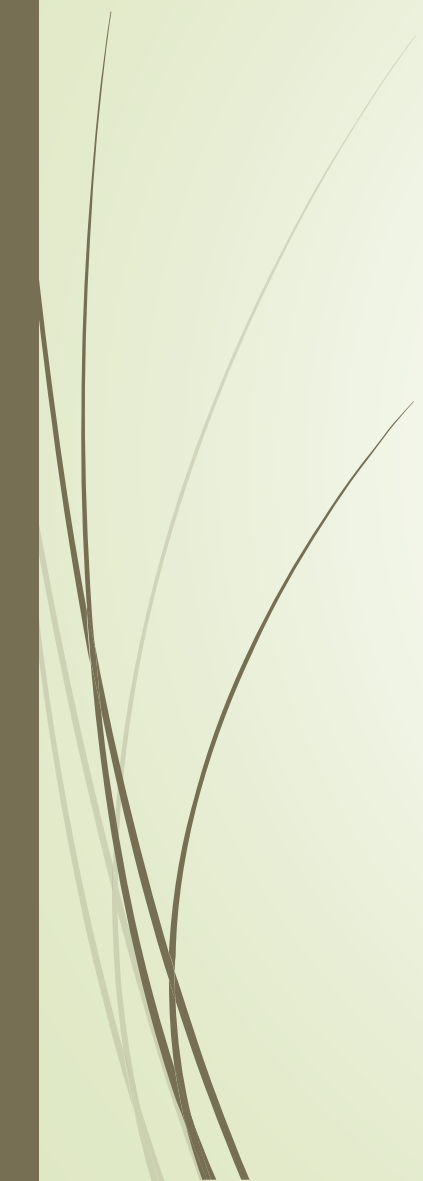
CollabTunes

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Purpose and Target Audience

- View and share music
 - Community of artists
 - Anyone with an interest in music
- 



Features



- User accounts and roles
- Upload and download MP3/M4A files
- Bidirectional collaboration
- Comments
- Activity/Event Feed
- Twitter Feed
- Chrome Browser Extension adds YouTube to MP3 conversion



Application and Extension Demo

Architecture - Frontend

BBootstrap

 **jQuery**

HTML



JS



CSS



Frontend Example

▼ views

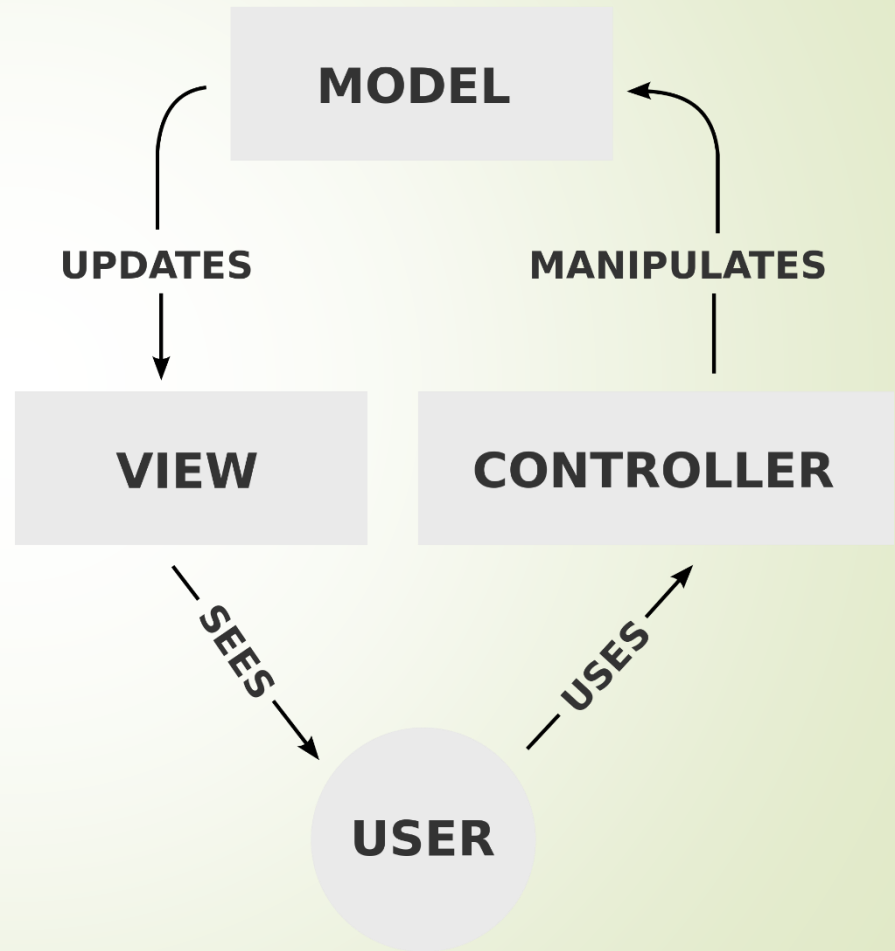
- 404.html
- 500.html
- album.html
- collabs.html
- featured.html
- featured_logged_in.html
- header.html
- index.html
- profile.html
- viewHelpers.php

▼ javascript

- album.js
- audioSetup.js
- comment.js
- functions.js
- track.js
- user.js

```
<?php if (sizeof($tweets) > 0) { ?>
  <h3 style="text-align: left;">Collaborator Twitter Feed</h3>
  <ul class="tweets">
    <?php foreach($tweets as $tweet) { ?>
      <div class="event">
        <?php echo $tweet ?>
      </div>
    <?php } ?>
  </ul>
<?php } ?>
```

Architecture - Backend



MVC Application Structure

▼ views

- 404.html
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▼ model

- Album.php
- Collaborator.php
- Comment.php
- Db.php
- Event.php
- Track.php
- User.php

▼ controller

- AlbumController.php
- CommentController.php
- ExtensionController.php
- OAuth.php
- TrackController.php
- TwitterFeedController.php
- twitteroauth.php
- UserController.php

Backend Example

▼ views

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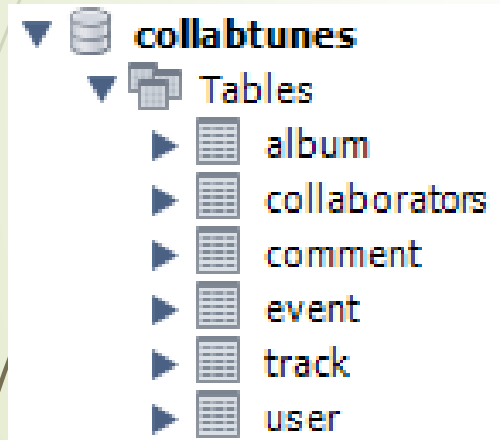
```
function collabs() {
    require_once '../global.php';
    $pageName = 'Collaborators';

    // Get all the collaborators for the specified user.
    $collabs = Collaborator::getCollaborators($_SESSION['username'], 2);


    if(isset($_SESSION['username'])) {
        $tweets = twitterData();
    }

    require_once '../views/header.html';
    require_once '../views/collabs.html';
}
```

Database



- Album contains album metadata
- Collaborators contains bidirectional association between users
- Comment contains all comment metadata for a user
- Event contains all event types for a user
- Track contains information about uploaded songs
- User contains user profile and permissions



Architecture – Twitter API

- Utilize the REST APIs of Twitter
 - <https://dev.twitter.com/rest/public>
- Needed OAuth to communicate with API
- <https://github.com/abraham/twitteroauth>
- First OAuth library in PHP
- Easy implementation of code
 - GET <https://api.twitter.com/1.1/search/tweets.json>
 - POST <https://api.twitter.com/1.1/lists/members/create.json>

Dynamically Updating Twitter Feed

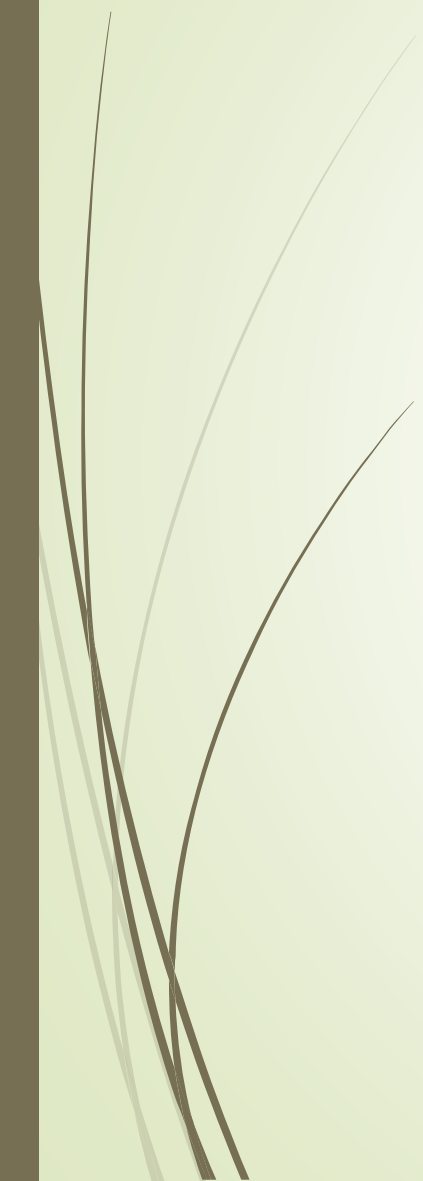
```
<script>
  setInterval(function() {
    $.post("./twitterfeed", function (data) {
      data = JSON.parse(data);
      var html = "";
      for (var i = 0; i < data.length; i++) {
        html += '<div class="event">' + data[i] + '</div>';
      }
      if (html.length > 0) {
        $(".tweets").html(html);
      }
    });

  }, 10000);

</script>
```



Architecture - Extension

- Chrome Extension
 - youtubeinmp3.com API
 - JQuery and Bootstrap
 - JQuery Post and Get
- 

Browser Extension API Implementation

```
$('#btnDownload').click(function(e) {
    e.preventDefault(); // don't submit form
    setErrorMessage(''); // clear any error messages

    var url = $('#btnDownload').val();

    //Download the file with the given URL
    chrome.downloads.download({url: 'http://youtubeinmp3.com/fetch/?video=' + url}, function(id) {
        chrome.downloads.search({id: id}, function(itemArr) {
            var item = itemArr[0];
            //If file type is of html, that means the video hasn't been converted on youtubeinmp3's database.
            if (item.mime.indexOf("html") > -1) {
                chrome.downloads.cancel(item.id); //Cancel the download
                //Change tab to the conversion page
                chrome.tabs.update(null, {url: 'http://youtubeinmp3.com/download/?video=' + url}, null);
                //Show an alert to redirect the user to the conversion website
                alert("Convert video to MP3 using this website.");
            }
        });
    });
});
```



Questions?

