

Testing Report

MusicBug

Client

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3/1/2012

MusicBug
Testing Report

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1. Introduction

Testing is a vital requirement for delivering a consistent and accurate product.

1.1 Purpose of This Document

This document is intended for system administrators, quality assurance teams, and other users interested in reviewing the test procedure used for the development of the first iteration of this product. This report will define and analyze the testing process and describe the results.

1.2 References

Use cases from the System Requirements Specification (SRS) documentation.

2. Testing Process

2.1 Description

The use cases described in the SRS documentation influenced each spiral's testing procedure. Team members were tasked with satisfying specific test conditions derived from the original use cases. Driving project development through satisfying these test conditions was a major goal accomplished during each spiral.

Further testing not described in this document, beyond the planned test conditions, also took place. This included basic unit testing and the execution of the project through multiple usage scenarios. Once the use cases were tested, a desired iteration of the final product for the second spiral was verified.

2.2 Testing Sessions

Date	Location	Time Started	Time Ended	Performed By	Use Cases
3/4/2012	Home	4:30pm	7:30pm	Joe DiMarino	Searching / Viewing Meta-Data
3/31/2012	School	3:00pm	7:30pm	Joe DiMarino	Logging in
4/1/2012	Home	2:00pm	4:30pm	Joe DiMarino	Favorite Items
4/2/2012	Home	7:00pm	11:00pm	Joe DiMarino	Commenting / Viewing Profile

4/3/2012	School	1:30pm	3:30pm	Joe DiMarino	Viewing Individual Tracks / Viewing / Submitting Reviews
4/3/2012	School	5:30pm	7:30pm	Joe DiMarino	Ratings

2.2 Impressions of the Process

A testing procedure focused on checking whether the use cases were satisfied worked well with verifying the base functionality of the web application. Through the use of test conditions derived from the use cases, necessary requirements were tested accurately. These use cases created a guideline to follow throughout project development, helped separate workload, and acted as a proper tool for testing once the spiral iteration was completed.

The strongest component of the second spiral is the implementation of meta data retrieval. Through the use of simple SQL statements, the web application has access to a large local database of music meta data. Django's ability to communicate with databases is vital for testing the search condition. Comparing the results of SQL queries and web searches helped simplify testing the implementation of the use cases.

See Code Inspection report for details of areas of code unlikely and likely to contain flaws.

3. Test Results

Testing was broken down into equivalence partitions where boundary condition segments and common segments were tested. Boundary conditions for search results include no result pages for artists, albums and tracks. Common search segments occurred when search results existed for the search string. Boundary conditions for rating and reviewing occur when no ratings or reviews exist and common rating and reviewing segments occurred when multiple ratings or reviews existed. In addition the profile page, rating, and reviewing depend on whether the user is currently logged into the system. If logged in user favorites, ratings and reviews appear on the profile page, as well as a user's current rating appearing on an Album or Track Details Page.

3.1 Testing Suite

The description of how testing was partitioned and implemented is outlined below.

Use Case	Searching / Viewing Music Meta-data
Valid SQL Statement	select name from artist_name where id=1;

Equivalent Valid Web Search	Searching for “Barsotti, Marcel” on the search page, http://127.0.0.1:8000/search/ . Then selecting the artist from the results to view artist’s meta-data, specifically their list of albums.
Invalid SQL Statements	1. select name from artist_name where id=""; 2. select name from artist_name where id="-1";
Equivalent Invalid Web Searches	1. Searching for an empty string on the search page, http://127.0.0.1:8000/search/ 2. Searching for ‘-1’ on the search page, http://127.0.0.1:8000/search/
Purpose	To test the searching and viewing of meta-data with valid and invalid search strings. The searching implementation should be able to correctly parse not only valid artist names, but empty strings and invalid artists names must be parsed correctly as well.
Expected Results for Valid Web Search	A web page displayed with the closest relevant artist names. Once the correct artist is selected, a page displaying their list of works should be retrieved.
Expected Results for Invalid Web Searches	1. Blank search page should be displayed. 2. ‘No Results’ should be displayed for all three search categories; Artists, Albums, and Tracks.
Boundary Conditions	1. No artist results showed “No results” message 2. No album results “No results” message 3. No track results “No results” message

Use Case	Logging In
Valid Situation	User clicks Log In button and is prompted to enter Facebook credentials. If already logged iogged into Facebook, the user is prompted to “Log in with Facebook.”
Invalid Situation	User clicks Log in button and is prompted to enter Facebook credentials. The user enters invalid credentials.
Purpose	To test the ability to log into Facebook.
Expected Results for Valid Situation	The user is greeted with a Welcome message.
Expected Results for Invalid Situation	Facebook displays an error message and re-prompts user to retry entering their Facebook credentials.
Boundary Conditions	Invalid log in credentials results in error message.

Use Case	Favorite Items
Valid Situation	Correctly narrowing down to a valid artist/album. Selecting the favorite button.
Invalid Situation	Attempting to favorite items while not logged in to Facebook.
Purpose	To test the ability to favorite an artist.
Expected Results for Valid Situation	Following the intended steps to narrow down to a valid artist/album and clicking the favorite button should send the user a message stating that the user successfully added the artist to their favorites.
Expected Results for Invalid Situation	Message prompting the user to log into Facebook is displayed.
Boundary Conditions	Error message displayed when attempting to favorite items while not logged in.

Use Case	Viewing Profile
Valid Situation	User is logged in and selects opens their Profile page.
Purpose	To test the ability to view user profiles.
Expected Results for Valid Situation	User's profile page lists all the user's favorite albums, tracks, and artists, ratings, and reviews.
Expected Results for Invalid Situation	If logged off a message prompts the user to log into Facebook in order to view their profile page.
Boundary Conditions	Message prompting user to log into Facebook when viewing the profile page while logged off.

Use Case	Commenting
Valid Situation	User correctly narrows down to a specific Artist, Album, or Track page through the searching implementation. User types in their intended message in the comments box, while logged into their Facebook account, and clicks the Comment button.
Invalid Situation	<ol style="list-style-type: none"> 1. User attempts to submit an empty comment. 2. User attempts to comment while not logged in.
Purpose	To test the integration of Facebook's commenting system on MusicBug.
Expected Results for Valid Situation	The user's submitted comment is displayed.
Expected Results for Invalid Situation	<ol style="list-style-type: none"> 1. Comment is not submitted. 2. Facebook log in window prompts the user to log in before commenting.
Boundary Conditions	<ol style="list-style-type: none"> 1. Attempting to submit an empty comment does not alter user's view of the comment box. 2. The commenting box displays a generic Facebook profile picture until the user logs in.

Use Case	Viewing Individual Tracks
Situation	Narrowing down to a specific track page.
Purpose	To test the retrieval of specific track pages.

Expected Results	Retrieved page displays the track's name, artist, and album. The track's current reviews, length, lyrics, and user comments.
Boundary Condition	1. Unpopulated Lyrics displays nothing under the "Current Lyrics" header. 2. If lyrics are not located on ChartLyrics, 'unknown' is displayed under the "Lyrics" header.

Use Case	Viewing / Submitting Reviews
Valid Situation	User submits a review
Invalid Situation	1. Guest attempts to submit a review. 2. User attempts to submit a blank review
Purpose	To test the implementation of viewing and submitting reviews.
Expected Results for Valid Situation	User's review is displayed in list of current reviews.
Expected Results for Invalid Situation	1. No resulting action. 2. No resulting action.

Use Case	Ratings
Valid Situation	User selects an artist, album, or track to rate.
Invalid Situation	Guest attempts to rate an item.
Purpose	To test the rating functionality.
Expected Results for Valid Situation	User's rating is averaged into item's current rating and displayed on the item's page.
Expected Results for Invalid Situation	User is prompted to log into Facebook
Boundary Conditions	No resulting action is taken place if user is logged off.

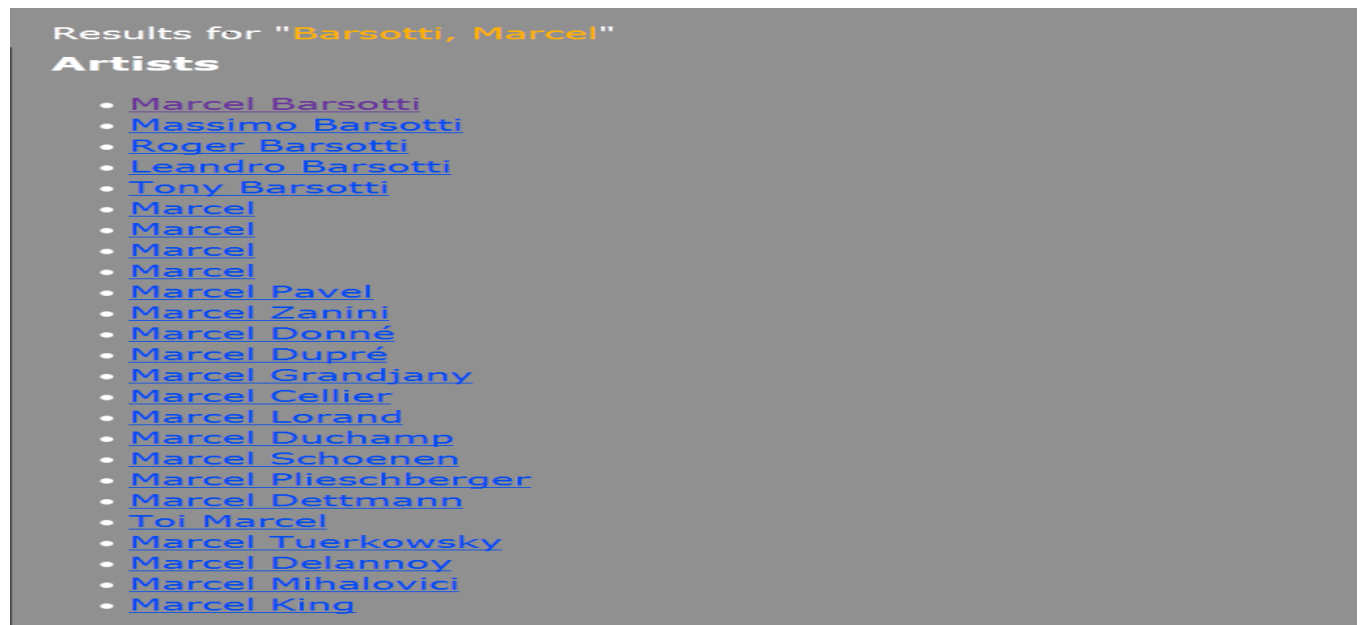
3.2 Test Results

The results from testing are outlined in the tables below.

3.2.1 Use Case: Searching / Viewing Music Meta-data

Conducted by: Joe DiMarino

Valid Web Search Results:



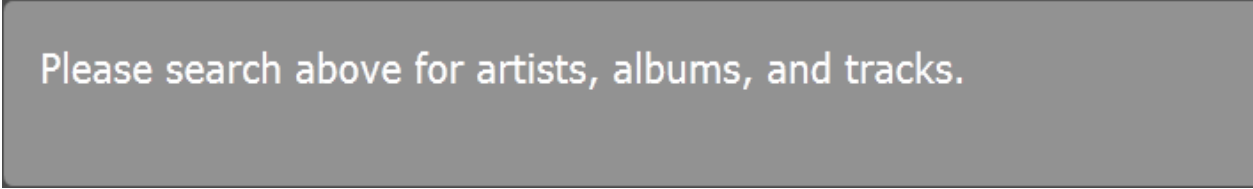
Web Page displaying correct search results



Web Page displaying correct artist Meta-data

Valid Web Search Results:

1.



Please search above for artists, albums, and tracks.

2.

Results from a blank search, returns to default search page.



Results for "-1"

Artists

- No Results

Albums

- No Results

Tracks

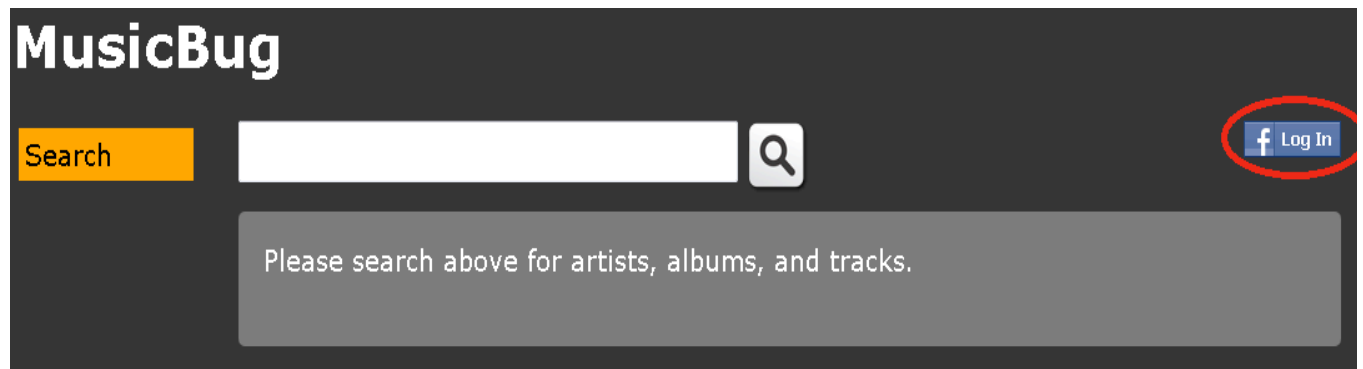
- No Results

Results from searching "-1"

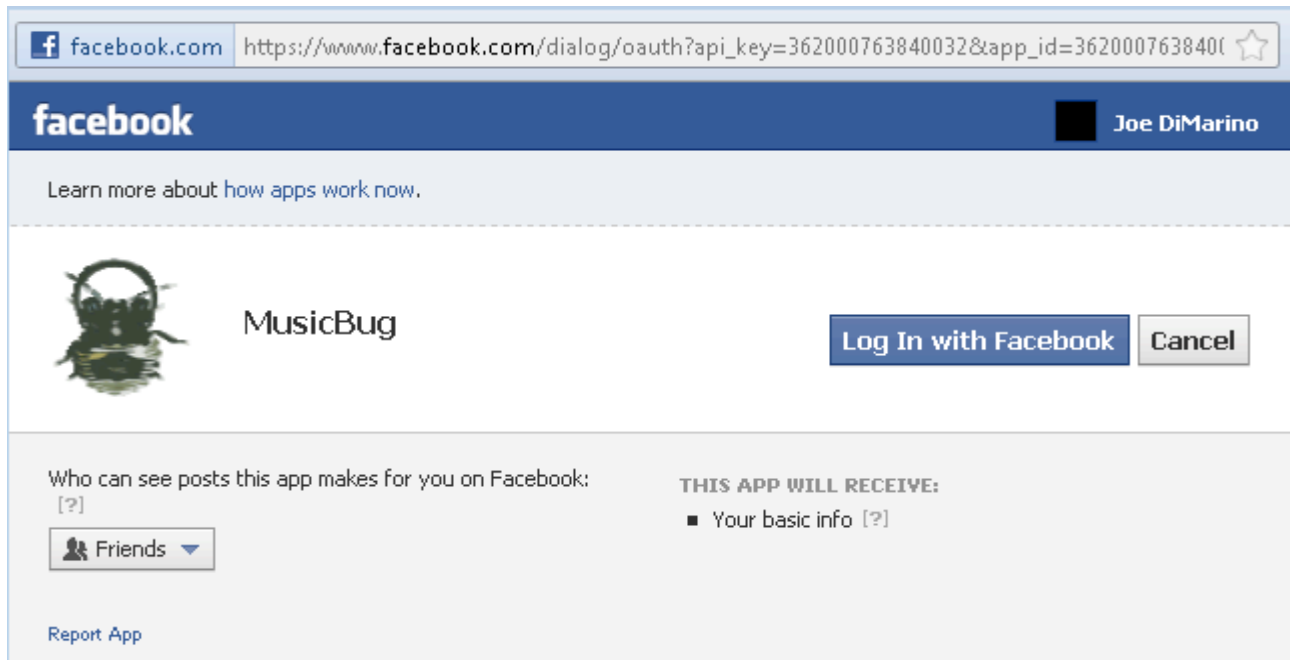
3.2.2 Use Case: Logging In

Conducted by: Joe DiMarino

Valid Situation:

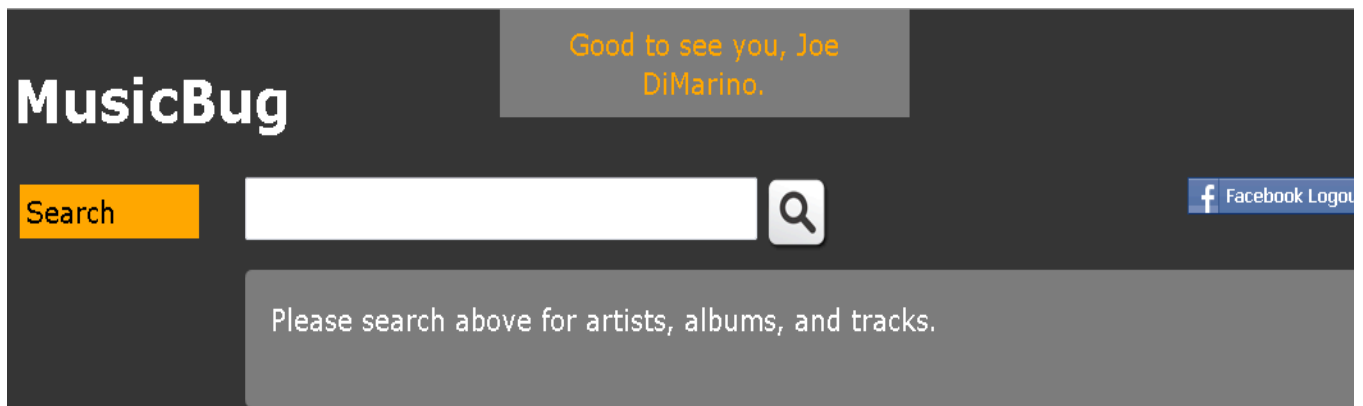


Web Page displaying the Log In button



The screenshot shows a Facebook login dialog for the MusicBug app. At the top, the browser address bar shows the URL: https://www.facebook.com/dialog/oauth?api_key=362000763840032&app_id=362000763840032. The Facebook logo and the name "Joe DiMarino" are visible in the top right. Below the header, there is a link to "Learn more about how apps work now." The main content area features the MusicBug logo (a green bug with headphones) and the app name "MusicBug". To the right of the logo are two buttons: "Log In with Facebook" and "Cancel". Below the logo and name, there is a section for privacy settings. It asks "Who can see posts this app makes for you on Facebook:" with a dropdown menu set to "Friends". To the right, it says "THIS APP WILL RECEIVE:" followed by a list item "Your basic info [?]". At the bottom left, there is a "Report App" link.

Web Page displaying correct artist Meta-data



The screenshot shows the MusicBug app interface after a successful login. The app name "MusicBug" is prominently displayed in white on a dark background. In the top right corner, a grey box contains the personalized greeting "Good to see you, Joe DiMarino." in orange text. Below the app name, there is a search bar with a yellow "Search" button on the left and a magnifying glass icon on the right. To the right of the search bar, there is a "Facebook Login" button. Below the search bar, a grey box contains the instruction "Please search above for artists, albums, and tracks."

Successfully Logged In

Invalid Situation:

The screenshot shows a web browser window with the address bar containing 'facebook.com' and a URL for the login page. The page title is 'Facebook Login'. Below the title, there is a message: 'Log in to use your Facebook account with MusicBug.' A red-bordered box contains the error message: 'Incorrect username'. The text inside the box explains that the entered username is invalid and provides instructions on how to clear browser cache and cookies. It also mentions that users can login with email, username, or mobile phone number. Below the error message, there are input fields for 'Email' (containing 'INVALID') and 'Password' (containing masked characters). There is a checkbox for 'Keep me logged in' and a link for 'Forgot your password?'. At the bottom of the page, there are buttons for 'Sign up for Facebook', 'Log In', and 'Cancel'.

facebook.com https://www.facebook.com/login.php?login_attempt=1&popup=1&fbconnect=1&display ☆

Facebook Login

Log in to use your Facebook account with MusicBug.

Incorrect username

The username you entered does not belong to any account. You may try clearing your browser's cache and cookies by following [these instructions](#).

You can login using any email, username or mobile phone number associated with your account. Make sure that it is typed correctly.

Email: INVALID

Password: ●●●●●●

Keep me logged in

[Forgot your password?](#)

[Sign up for Facebook](#)

Facebook returns error message and requests user to re-enter credentials (Boundary Condition)

3.2.3 Use Case: Favorite Items

Conducted by: Joe DiMarino

Valid

Situation:

Favorited artist
10150696275083820

Facebook Logo

Search
Favorites

Opeth

Favorite

Albums

Title	Status	Quality	Release Date	Type
Apostle in Triumph		normal	1993	
Blackwater Park	Official	normal	2001-03-13	
Blackwater Park	Official	normal	2002-07-23	
Blackwater Park	Official	normal	2001-03-12	
Deliverance	Official	normal	2002-11-12	
Deliverance	Official	normal	2002-11-04	
Morningrise	Official	normal	1996	
Morningrise	Official	normal	2000-01-01	
Morningrise	Official	normal	2000-10-02	
Morningrise	Official	normal	1997-06-24	
Morningrise	Official	normal	1996-06-24	

Favorite an artist

Favorited album
10150696278143820

Facebook Logo

Search
Favorites

Blackwater Park by Opeth

Release Date: 2002-07-23

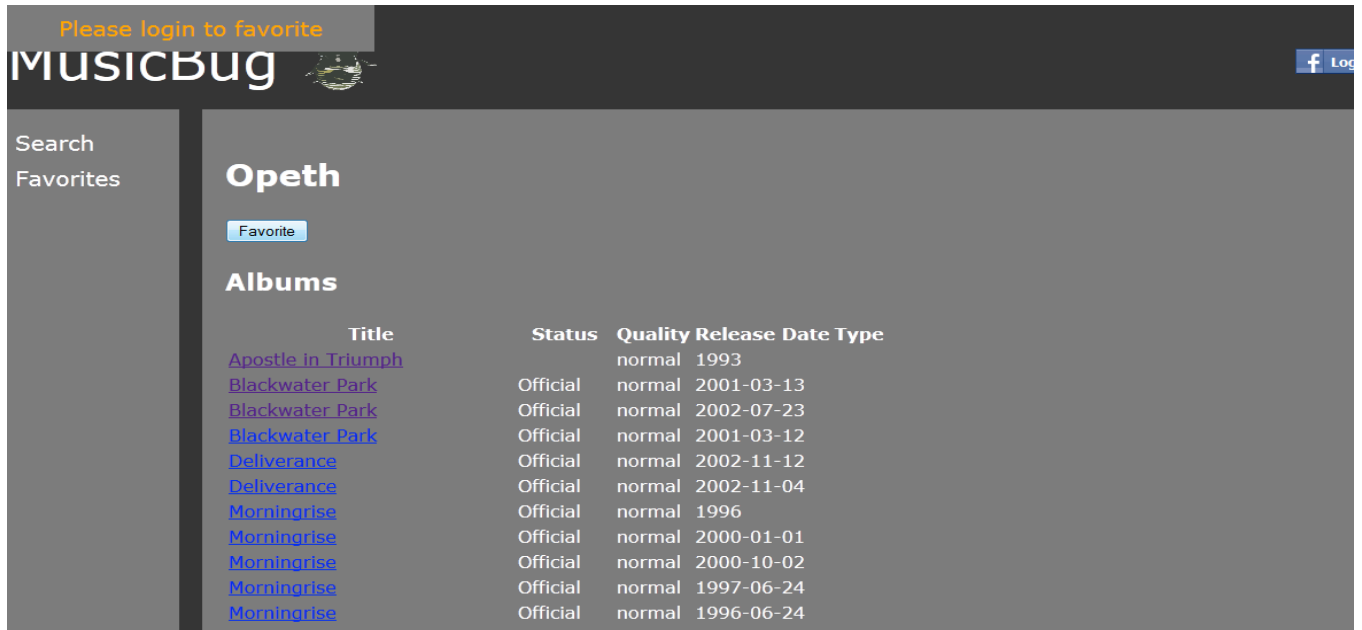
Favorite

Tracks

Title	Length (minutes)
Patterns in the Ivy II	0:04:11.920000
Harvest	0:06:01.466000
Blackwater Park	0:12:08.333000
Still Day Beneath the Sun	0:04:34.160000
The Drapery Falls	0:10:53.866000
Patterns in the Ivy	0:01:52.400000
Dirge for November	0:07:53.666000
The Leper Affinity	0:10:23.493000
The Funeral Portrait	0:08:44.533000
Bleak	0:09:15.933000

Favorite an album

Invalid Situation:



Please login to favorite

MUSICBUG

Search
Favorites

Opeth

Favorite

Albums

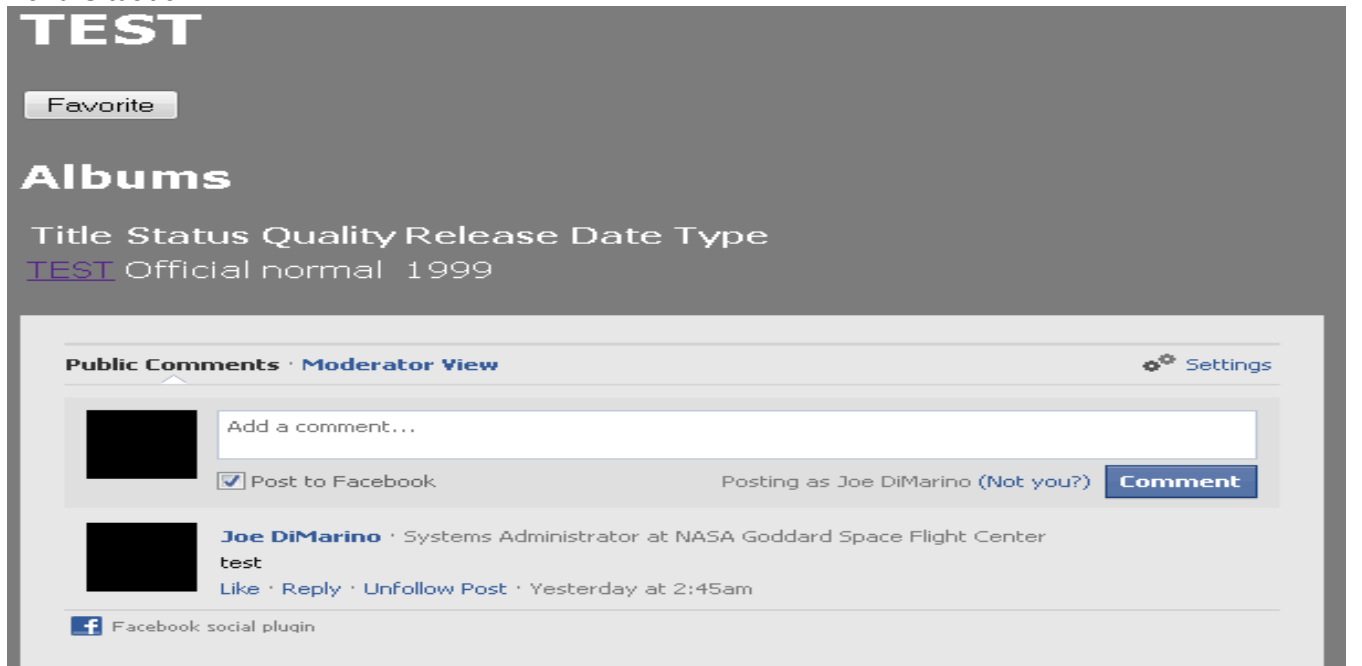
Title	Status	Quality	Release Date	Type
Apostle in Triumph		normal	1993	
Blackwater Park	Official	normal	2001-03-13	
Blackwater Park	Official	normal	2002-07-23	
Blackwater Park	Official	normal	2001-03-12	
Deliverance	Official	normal	2002-11-12	
Deliverance	Official	normal	2002-11-04	
Morningrise	Official	normal	1996	
Morningrise	Official	normal	2000-01-01	
Morningrise	Official	normal	2000-10-02	
Morningrise	Official	normal	1997-06-24	
Morningrise	Official	normal	1996-06-24	

User prompted to login in order to favorite items. (Boundary Condition)

3.2.4 Use Case: Commenting

Conducted by: Joe DiMarino

Valid Situation:



TEST

Favorite

Albums

Title	Status	Quality	Release Date	Type
TEST	Official	normal	1999	

Public Comments · Moderator View Settings

Add a comment...

Post to Facebook Posting as Joe DiMarino (Not you?) Comment

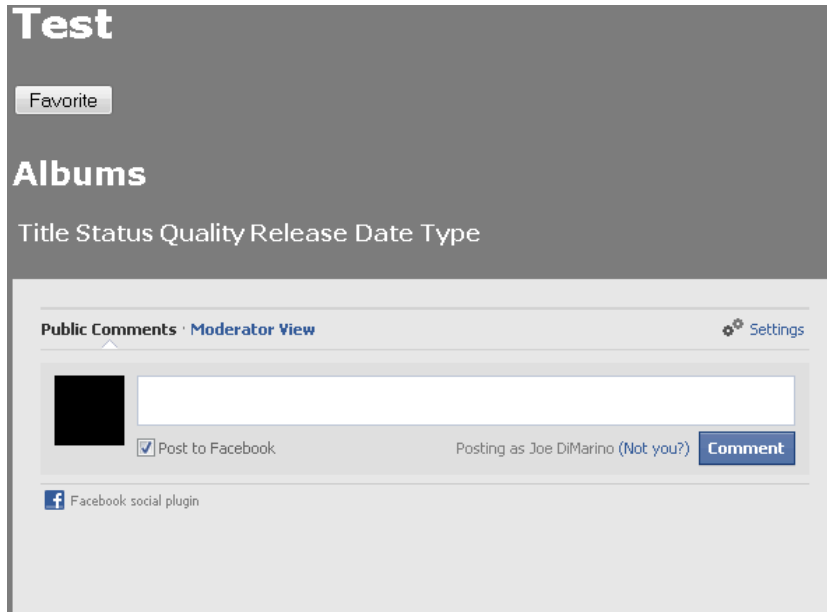
Joe DiMarino · Systems Administrator at NASA Goddard Space Flight Center
test
Like · Reply · Unfollow Post · Yesterday at 2:45am

Facebook social plugin

Successfully posting a comment on an album page while logged into Facebook

Invalid Situation

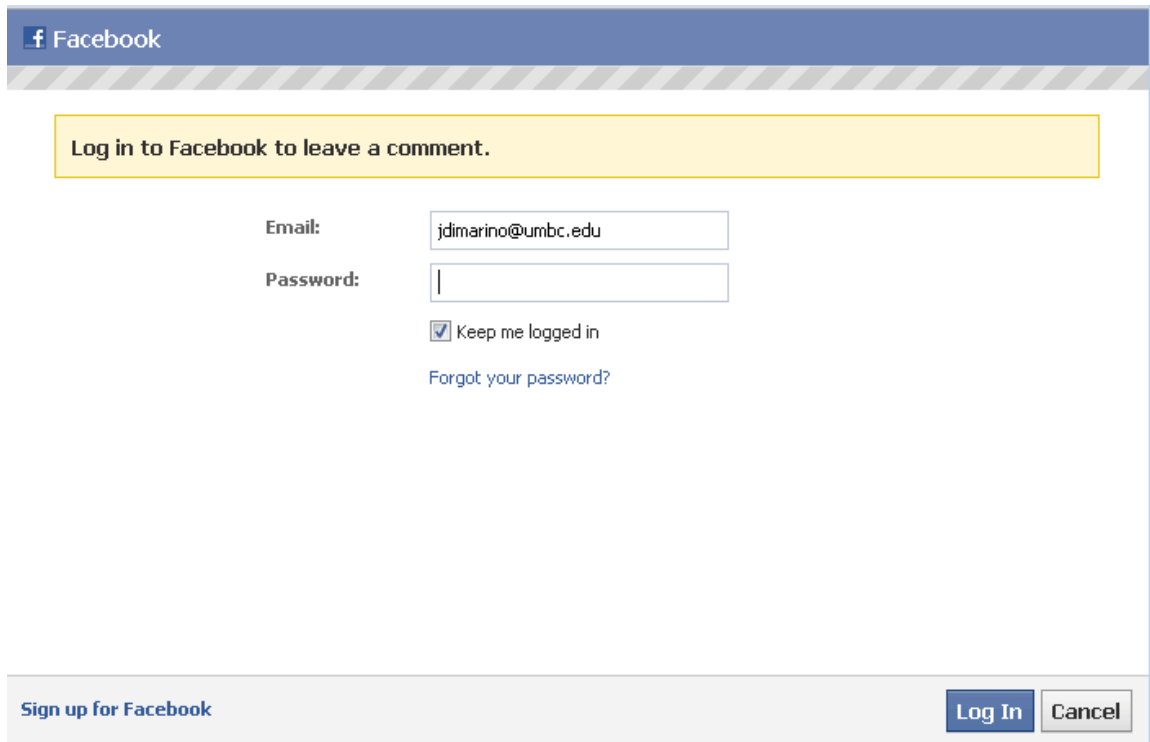
1.



The screenshot shows a Facebook album page titled "Test". At the top left, there is a "Favorite" button. Below the title, the word "Albums" is displayed. Underneath, there are columns for "Title", "Status", "Quality", "Release Date", and "Type". The main content area is titled "Public Comments · Moderator View" and includes a "Settings" gear icon. A comment form is visible, featuring a black profile picture placeholder, a text input field, and a "Comment" button. The form includes a checked checkbox for "Post to Facebook" and text indicating the user is "Posting as Joe DiMarino (Not you?)". A "Facebook social plugin" logo is located at the bottom left of the comment area.

Submitting a blank comment yields no result. (Boundary Condition #1)

2.



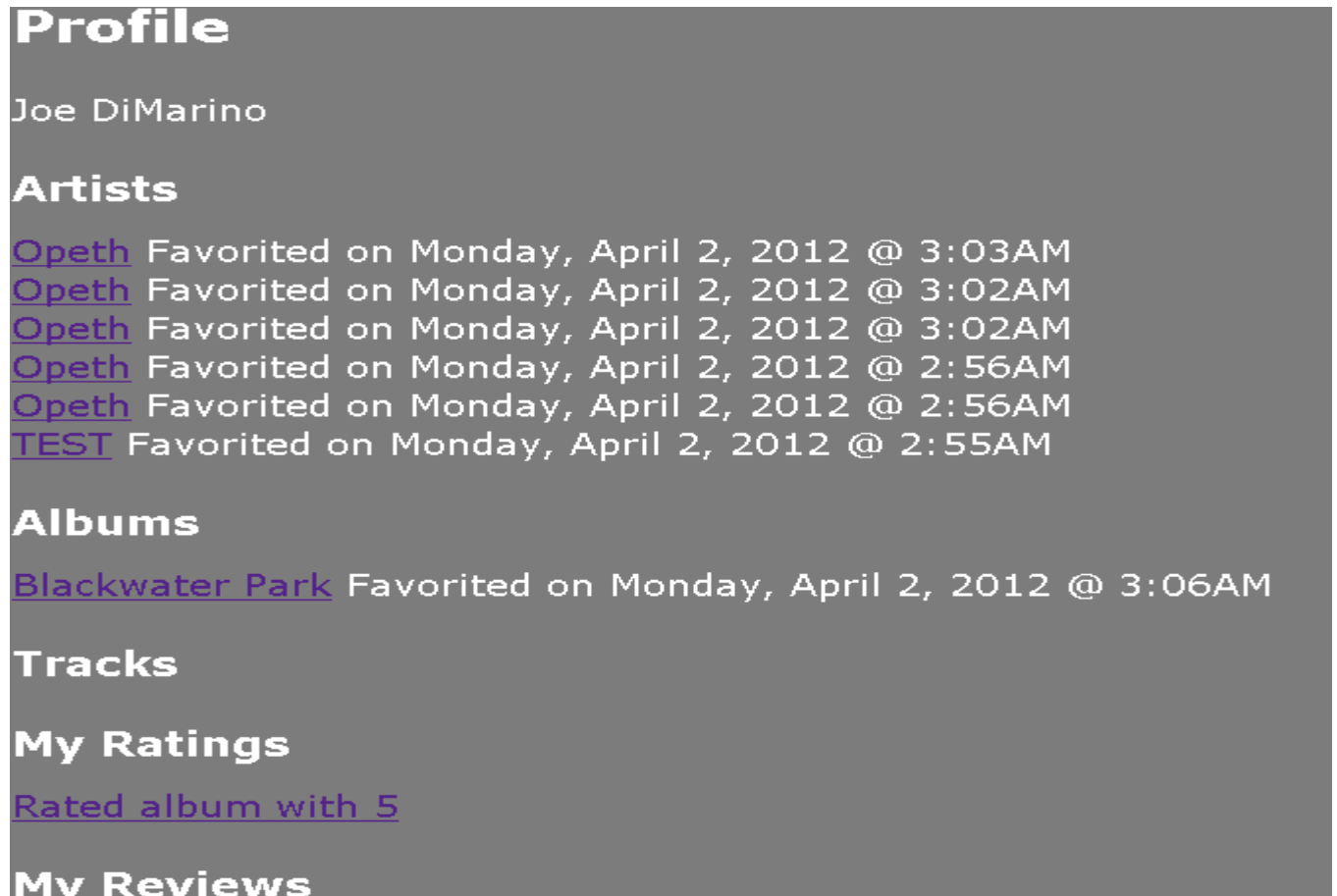
The screenshot shows a Facebook login prompt dialog box. At the top, it features the Facebook logo and the word "Facebook". A yellow box contains the text "Log in to Facebook to leave a comment.". Below this, there are input fields for "Email:" (containing "jdimarino@umbc.edu") and "Password:". A checked checkbox labeled "Keep me logged in" is present, along with a link for "Forgot your password?". At the bottom left, there is a "Sign up for Facebook" link. At the bottom right, there are "Log In" and "Cancel" buttons.

Commenting while logged out of Facebook, window opens prompting the user to login (Boundary Condition #2)

3.2.5 Use Case: Viewing Profile Page

Conducted by: Joe DiMarino

Valid Situation:



Profile

Joe DiMarino

Artists

- [Opeth](#) Favorited on Monday, April 2, 2012 @ 3:03AM
- [Opeth](#) Favorited on Monday, April 2, 2012 @ 3:02AM
- [Opeth](#) Favorited on Monday, April 2, 2012 @ 3:02AM
- [Opeth](#) Favorited on Monday, April 2, 2012 @ 2:56AM
- [Opeth](#) Favorited on Monday, April 2, 2012 @ 2:56AM
- [TEST](#) Favorited on Monday, April 2, 2012 @ 2:55AM

Albums

- [Blackwater Park](#) Favorited on Monday, April 2, 2012 @ 3:06AM

Tracks

My Ratings

- [Rated album with 5](#)

My Reviews

Viewing profile page while logged into Facebook.

Invalid

Situation



Profile

Please login to view your profile

My Ratings

My Reviews

Message prompting user to login while accessing profile page as a guest. (Boundary Condition)

3.2.6 Use Case: Viewing Specific Tracks

Conducted by: Joe DiMarino

The screenshot shows a music track page for "Yellow" by Coldplay. The track is from the album "Absolute Acoustic Rock". The page includes a "Review track" section with a text input field and a "Submit" button. Below this is the "Current Reviews" section, which is currently empty. The "Track Length" is listed as 0:04:29.200000. The "Lyrics" section contains the following text: "Look at the stars Look how they shine for you And everything you do Yeah, they were all yellow I came along I wrote a song for you And all the things you do And it was called Yellow So then I took my turn Oh what a thing to've done And it was all yellow Your skin Oh yeah your skin and bones Turn it into something beautiful And you know You know I love you so You know I love you so I swam across I jumped across for you Oh what a thing to do 'Cause you were all yellow I drew a line I drew a line for you Oh what a thing to do And it was all yellow Your skin Oh yeah your skin and bones Turn into something beautiful And you know For you I'd bleed myself dry For you I'd bleed myself dry It's true Look how they shine for you Look how they shine for you Look how they shine for you Look how they shine for you Look how they shine for you Look at the stars Look how they shine for you And all the things that you do". At the bottom, there is a comment section with a text input field labeled "Add a comment...", a "Comment using..." dropdown menu, and a "Facebook embed plugin" logo.

Yellow

by [Coldplay](#) on Album [Absolute Acoustic Rock](#)

0 Ratings
None
out of 5

★★★★★

Favorite

Review track

Submit

Current Reviews

Track Length

0:04:29.200000

Lyrics

Look at the stars Look how they shine for you And everything you do Yeah, they were all yellow I came along I wrote a song for you And all the things you do And it was called Yellow So then I took my turn Oh what a thing to've done And it was all yellow Your skin Oh yeah your skin and bones Turn it into something beautiful And you know You know I love you so You know I love you so I swam across I jumped across for you Oh what a thing to do 'Cause you were all yellow I drew a line I drew a line for you Oh what a thing to do And it was all yellow Your skin Oh yeah your skin and bones Turn into something beautiful And you know For you I'd bleed myself dry For you I'd bleed myself dry It's true Look how they shine for you Look how they shine for you Look how they shine for you Look how they shine for you Look how they shine for you Look at the stars Look how they shine for you And all the things that you do

Add a comment...

Comment using...

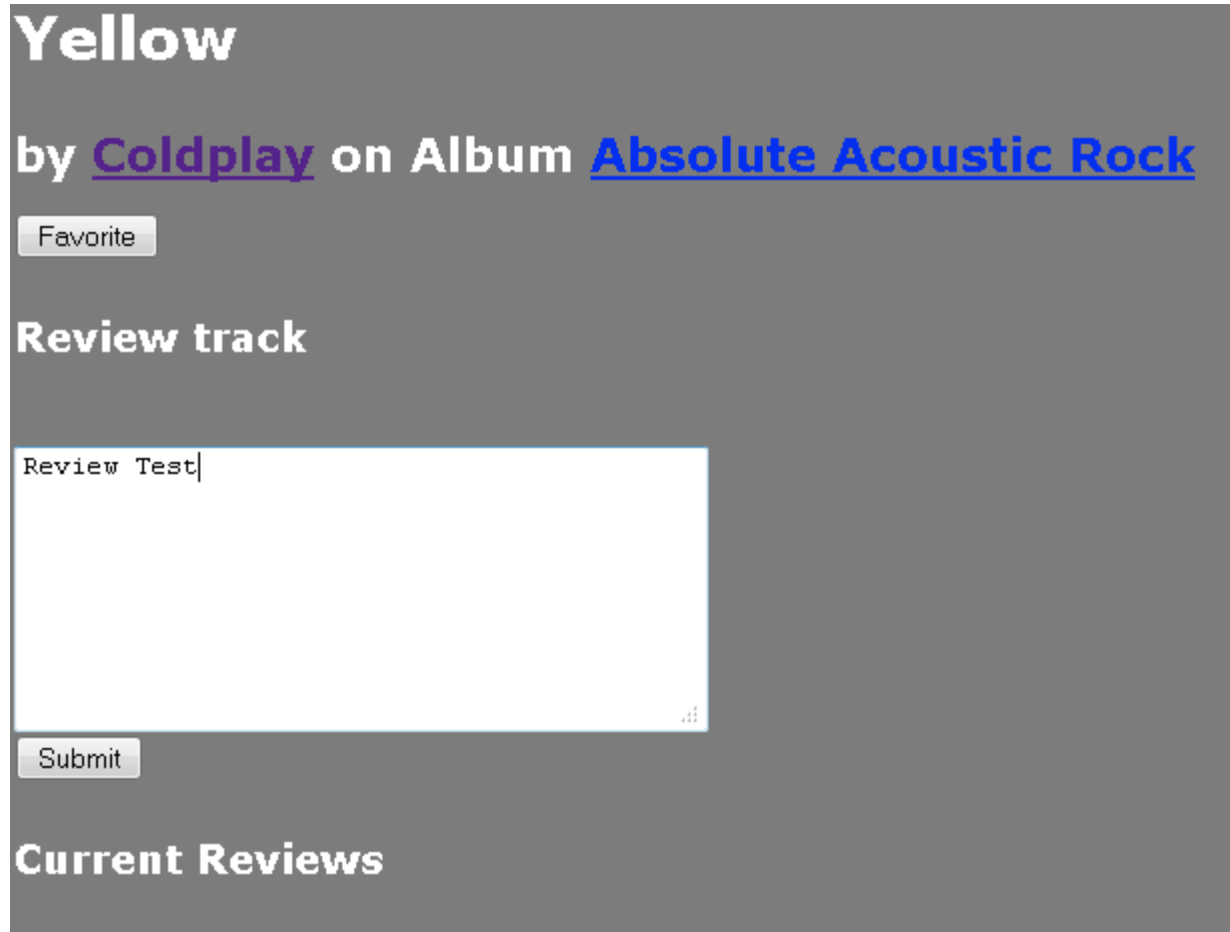
Facebook embed plugin

Track page displaying all of the attributes of a track.

3.2.7 Use Case: Viewing / Submitting Reviews

Conducted by: Joe DiMarino

Valid Situation:



Preparing review for submittal

Yellow

by [Coldplay](#) on Album [Absolute Acoustic Rock](#)

Favorite

Review track



Submit

Current Reviews

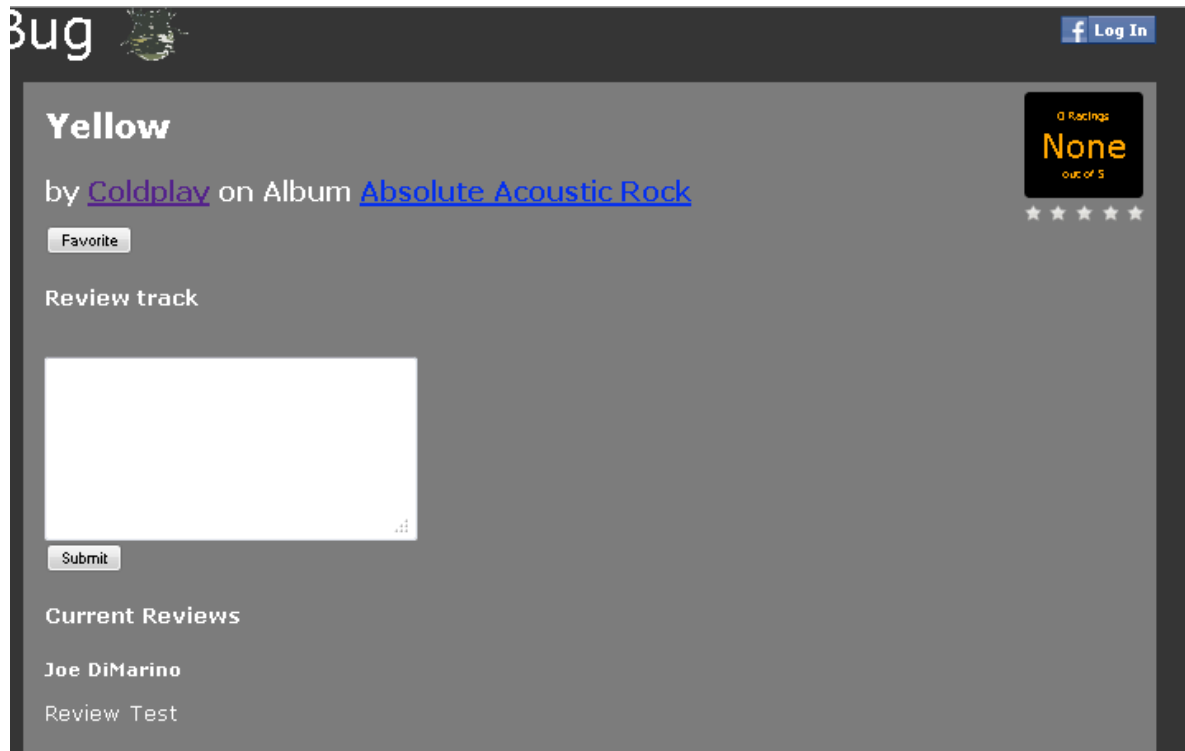
Joe DiMarino

Review Test

Review successfully submitted.

Invalid Situation:

1 and 2:

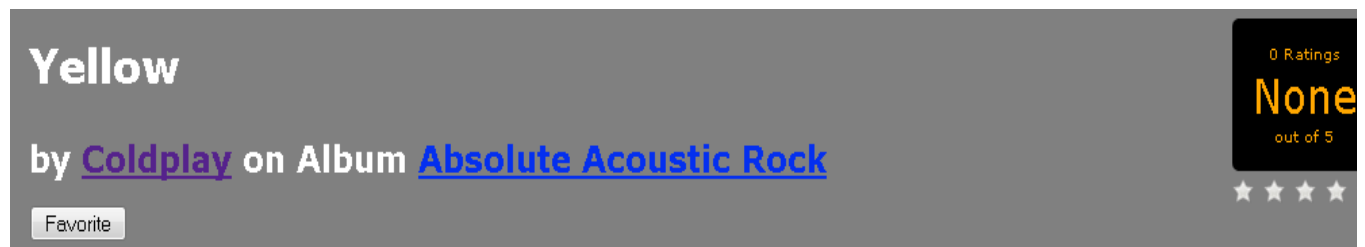


Submitting a blank review as guest results in no action.

3.2.8 Use Case: Ratings

Conducted by: Joe DiMarino

Valid Situation:



Before user submits rating for track.

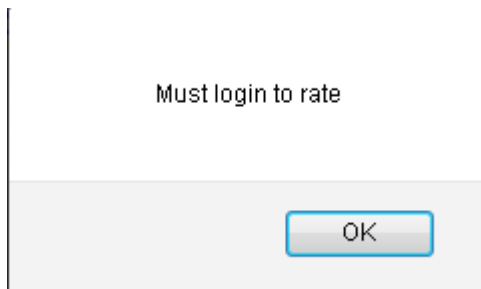


The screenshot shows a music track interface. At the top left, the track name "Yellow" is displayed in a large white font. Below it, the text "by Coldplay on Album Absolute Acoustic Rock" is shown in a smaller white font. To the right of the track name, there is a rating box with a black background, white text, and a yellow border. It contains the text "1 Ratings", a large yellow "5.0", and "out of 5". Below the rating box are five yellow stars. On the left side, there is a "Favorite" button with a white background and a grey border. Below the track name, the text "Review track" is displayed in a white font.

After user submits rating for track.

Invalid

Situation:



User prompted to login to rate, no resulting action. (Boundary Condition)

Improvements:

- Implement a drop down box when browsing artists that gives the option to change the number of displayed artists per page.
 - Artist wasn't located until page 286 of artists whose name begins with B
- Differentiation of artists with the same name through additional filters.
 - Adding other meta-data columns to browse results.
- Proper algorithm that inherits and artist's rating based on their respective album and track ratings.
 - Albums and tracks are rated by user's. An artist's rating is inherited by these ratings.

4. Appendix A – Team Review Sign-off

This document has been collaboratively written by all members the team. Additionally, all team members have reviewed this document and agree on both the content and the format. Any disagreements or concerns are addressed in team comments below.

Team

Name _____ Date

Print

Name _____ Date

Signature

Comments

—

Name _____ Date

Print

Name _____ Date

Signature

Comments

—

Name _____ Date

Print

Name _____ Date

Signature

Comments

—

Name _____ Date

Print

Name _____ Date

Signature

Comments

Name _____ Date

Print

Name _____ Date

Signature

Comments

Name _____ Date

Print

Name _____ Date

Signature

Comments

5. Appendix B – Document Contributions

Joe DiMarino documented and completed the testing for MusicBug. He is the key owner of this document completing 100%. Michael Cohen edited the document and assisted in document formatting and appendices.