The background is a solid blue color with a variety of white and light blue icons scattered across it. These icons include a cloud with an infinity symbol, a document, a pencil, a gear, a computer monitor, a smartphone, a magnifying glass, an envelope, a line graph on a tablet, a padlock, a hard drive, and a speech bubble. Dashed white lines connect some of these icons, suggesting a network or flow. The word "ECHO" is prominently displayed in the center in a large, white, sans-serif font. The letter "O" is replaced by a white circle containing a blue soundwave graphic.

ECHO

Manaus Transez
3 MMP - NMD

Web App & REST API



React.js / Redux



Node.js / Express



MongoDB / Mongoose

Main features

Find and discuss music

Direct messaging

Create playlists

But more importantly...

Night Mode!

[Discussion](#) [Browse](#) [Messages](#)

manaus_t

I enjoy many kinds of music. My favourite genres are heavy metal and hip hop. Among my favourite albums are ...And Justice For All by Metallica and Rust In Peace by Megadeth.

21 Posts 1 Comments

[edit profile](#)

One
Metallica
by manaus_t • 7 days ago

Fade To Black (Remastered)
Metallica
by manaus_t • 7 days ago

Orion (Remastered)
Metallica
by manaus_t • 7 days ago

Countdown to Extinction (Deluxe Edition)
Megadeth
by manaus_t • 7 days ago

Beauty Behind The Madness
The Weeknd
by manaus_t • 7 days ago

My Beautiful Dark Twisted Fantasy
Kanye West

[Music](#)
[Profile](#)
[Playlists](#)
[Toggle Night Mode](#)
[Settings](#)
[Privacy Policy](#)
[Logout](#)

[Discussion](#) [Browse](#) [Messages](#)

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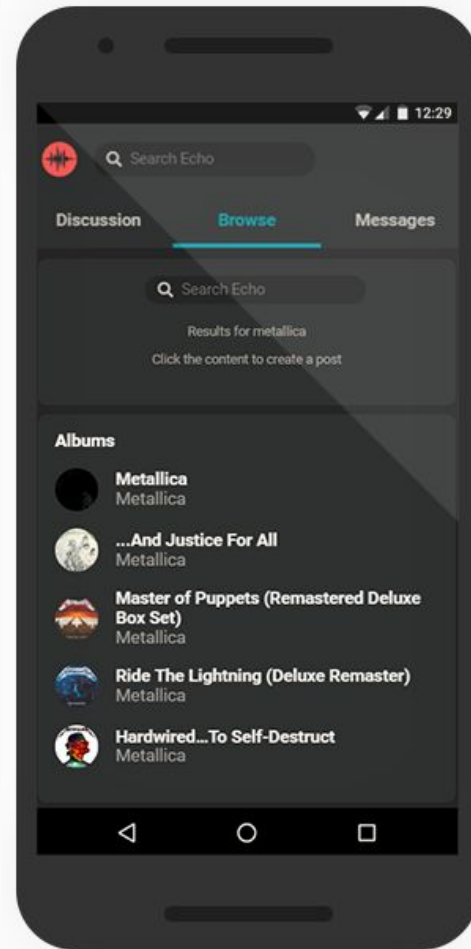
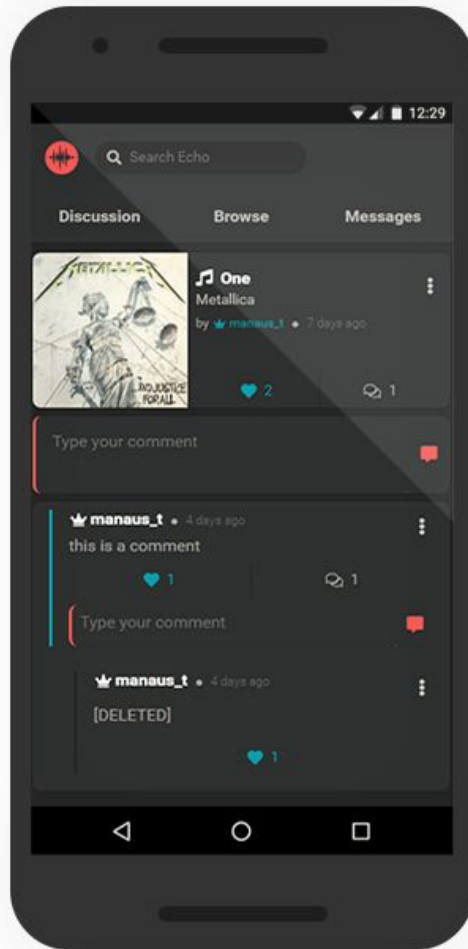
My Beautiful Dark Twisted Fantasy
Kanye West

[Music](#)
[Profile](#)
[Playlists](#)
[Toggle Night Mode](#)
[Settings](#)
[Privacy Policy](#)
[Logout](#)

Screenshots

Post Detail

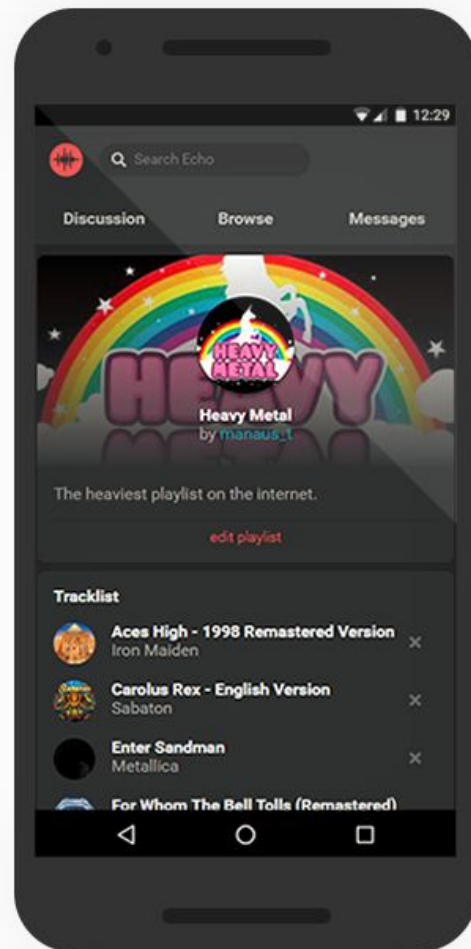
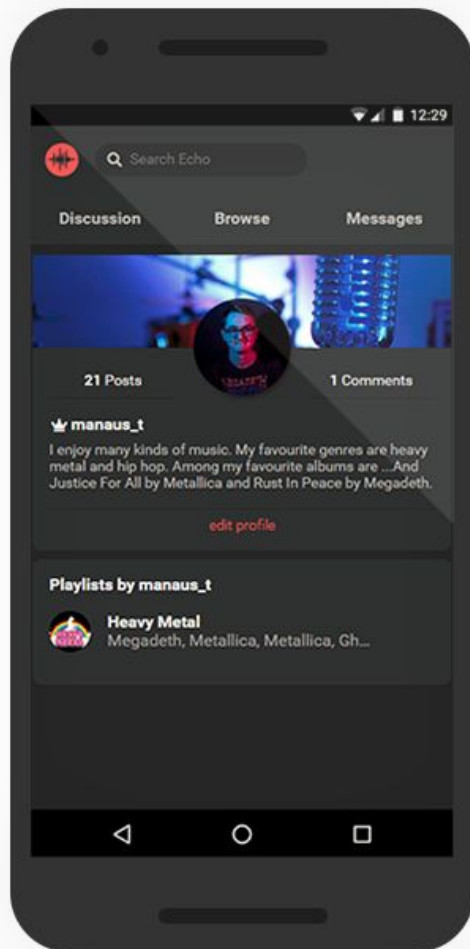
Browse Page



Screenshots

Profile Detail

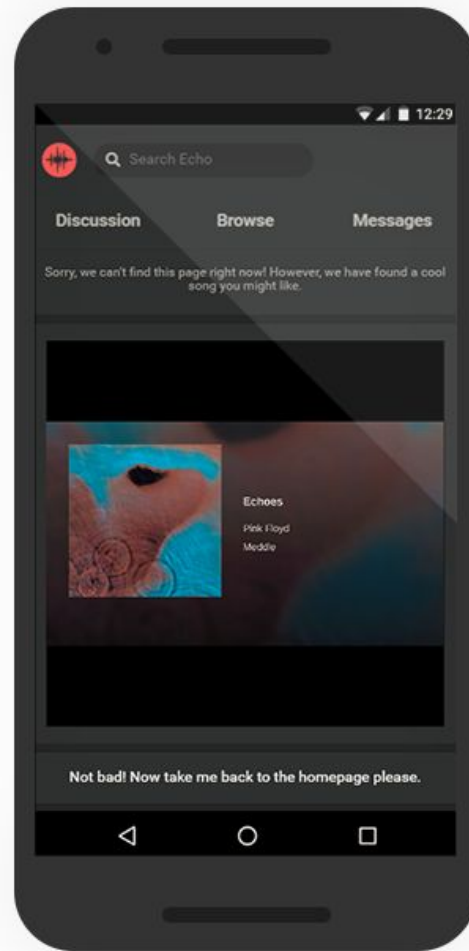
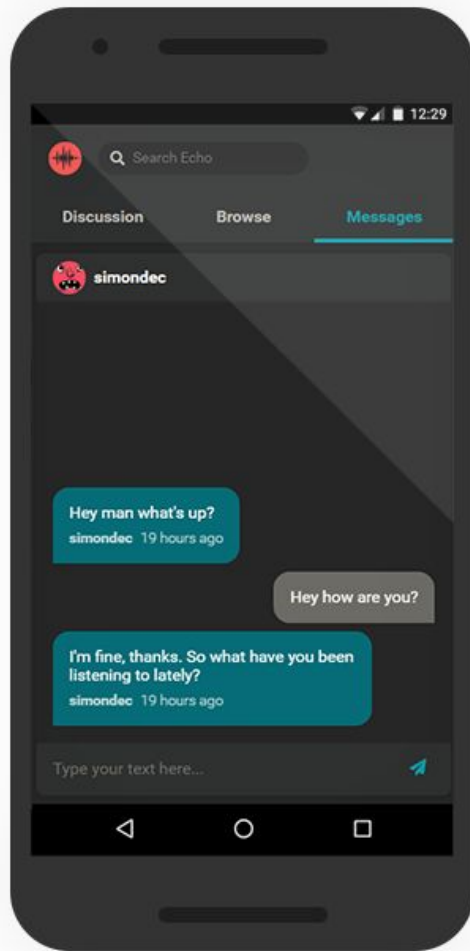
Playlist Detail



Screenshots

Message Detail

404 Error Page



Deliverables

Datamodel

1 - 1 relation

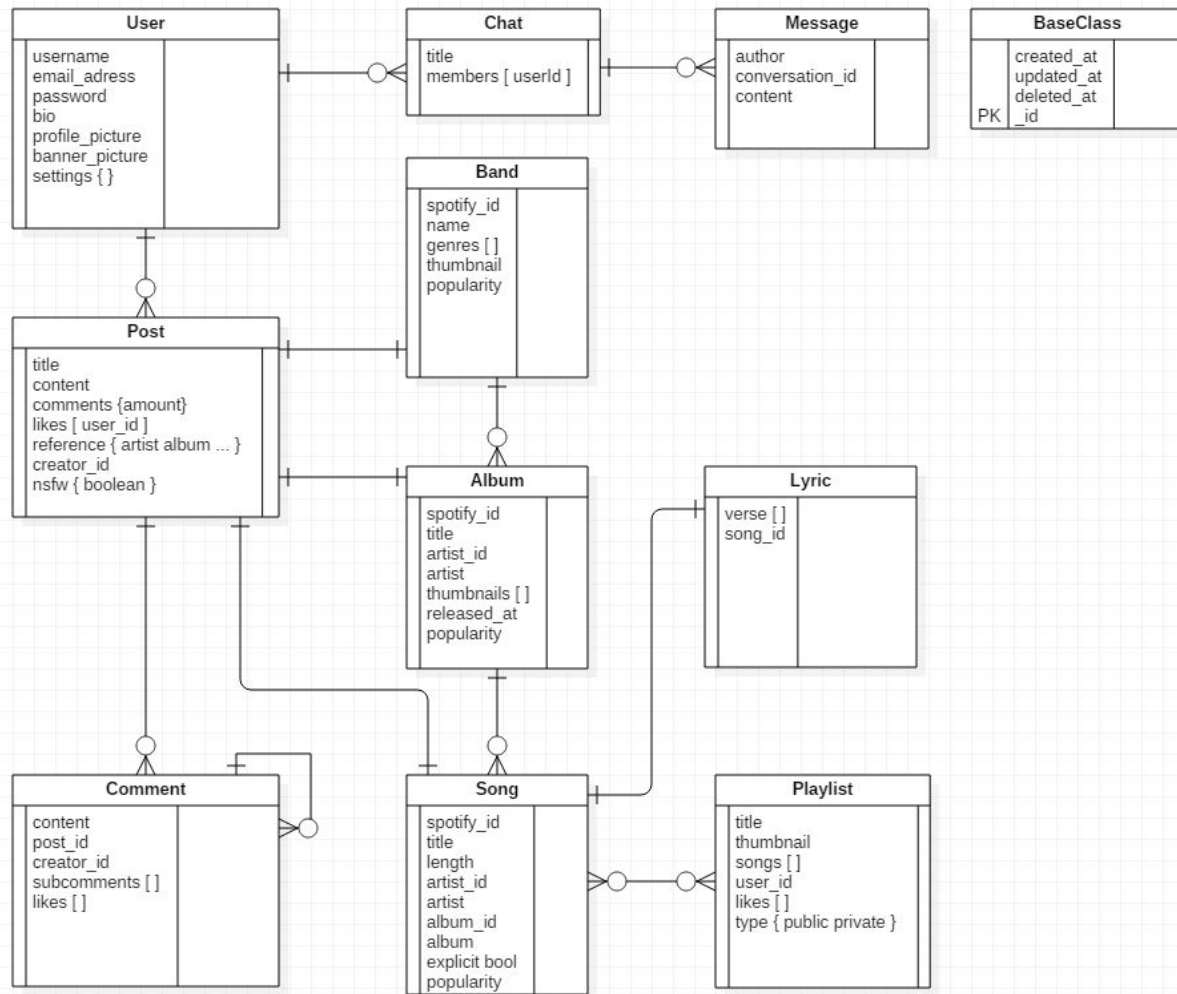
Post refers to one album, album can only have one post

1 - X relation

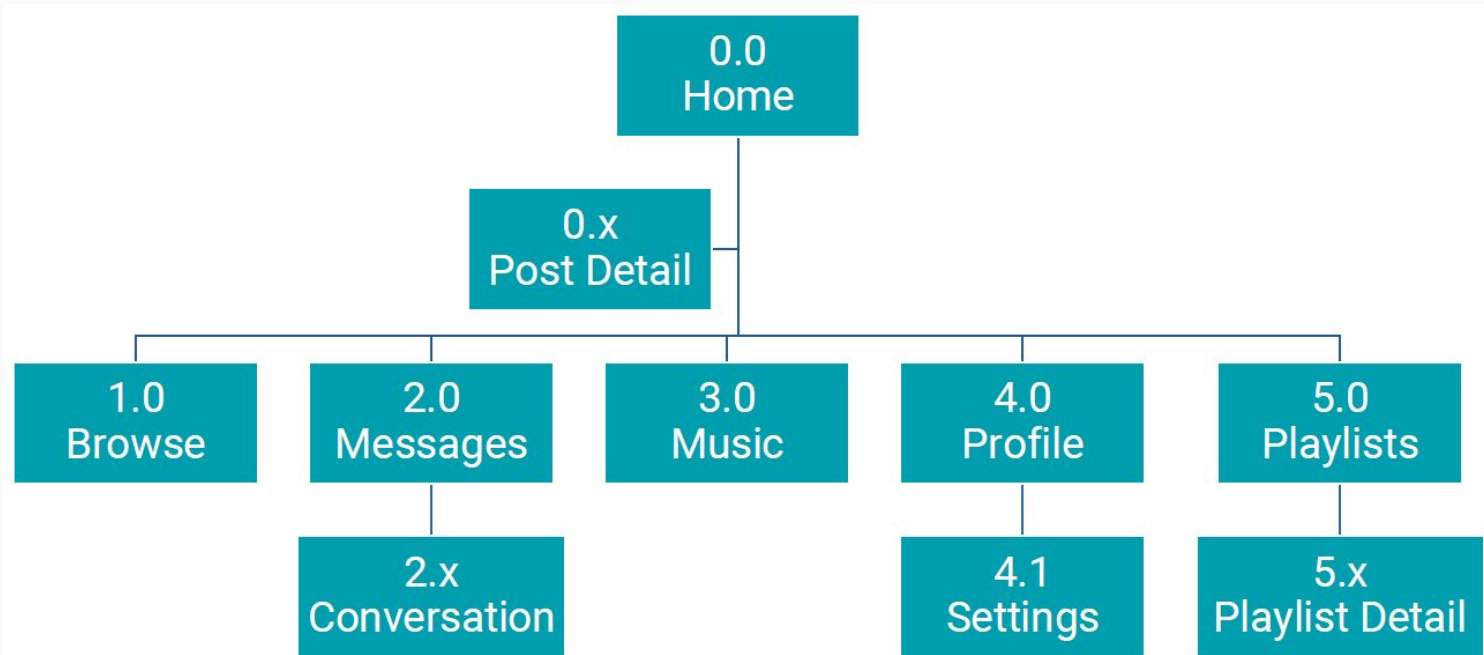
Album has many songs, song can belong to only one album

X - X relation

Playlist has many songs, song can belong to many playlists

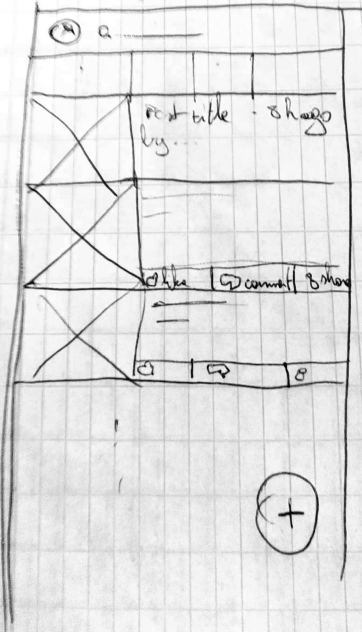


Sitemap

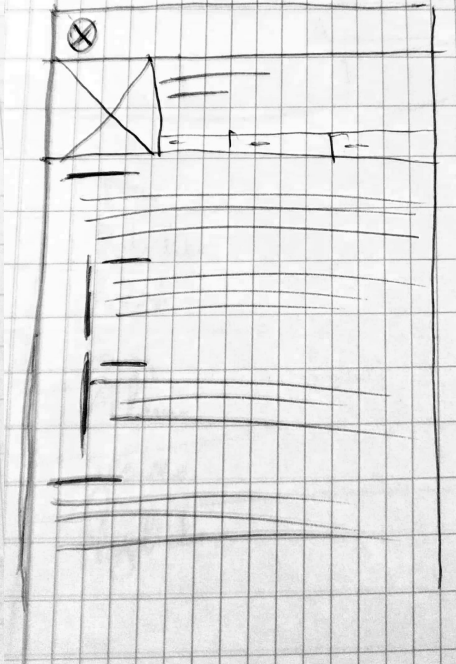


Wireframes

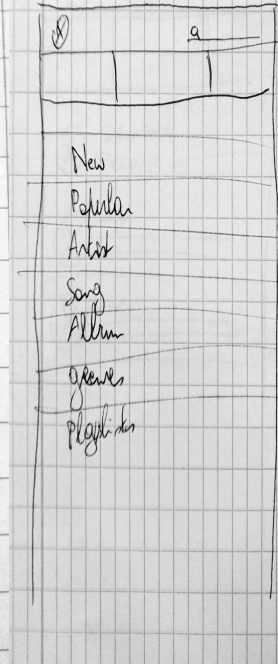
0.0 Homepage



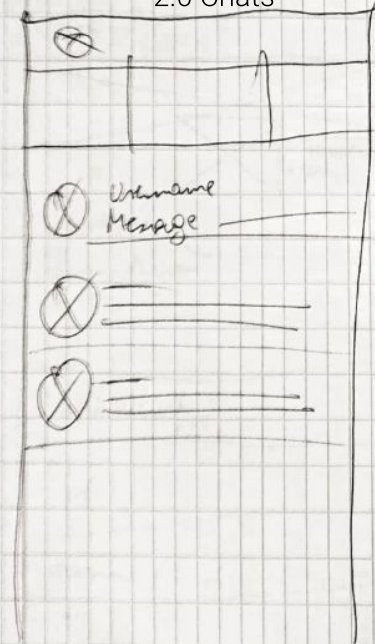
0.x Post Detail



1.0 Browse



2.0 Chats

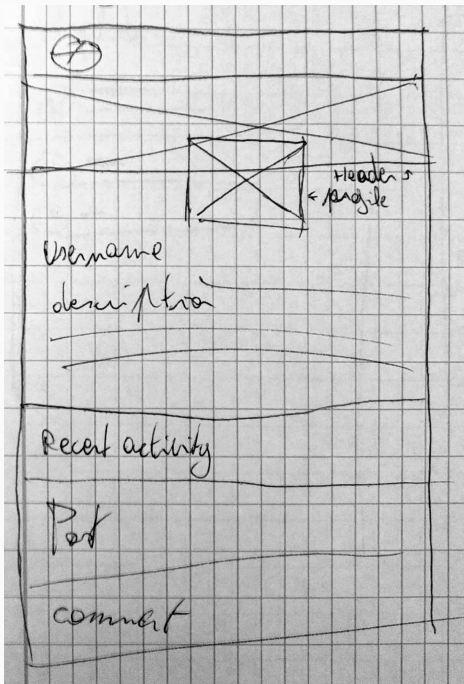


2.x Chat Detail

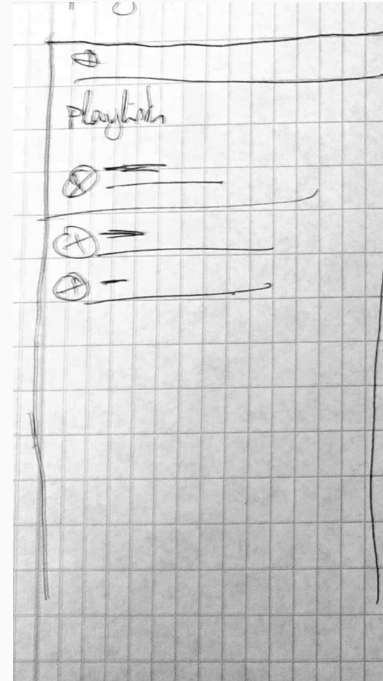


Wireframes

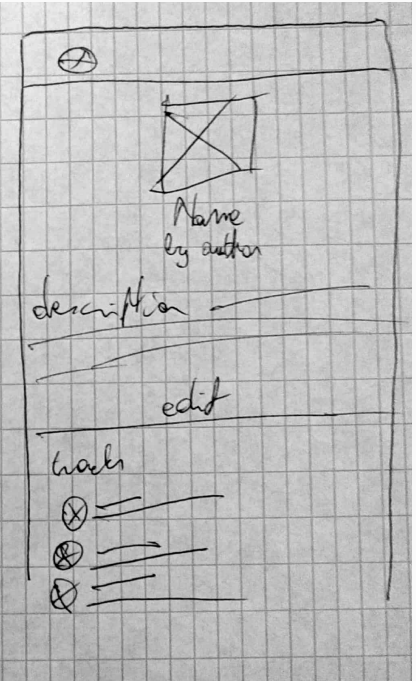
4.0 Profile



5.0 Playlists

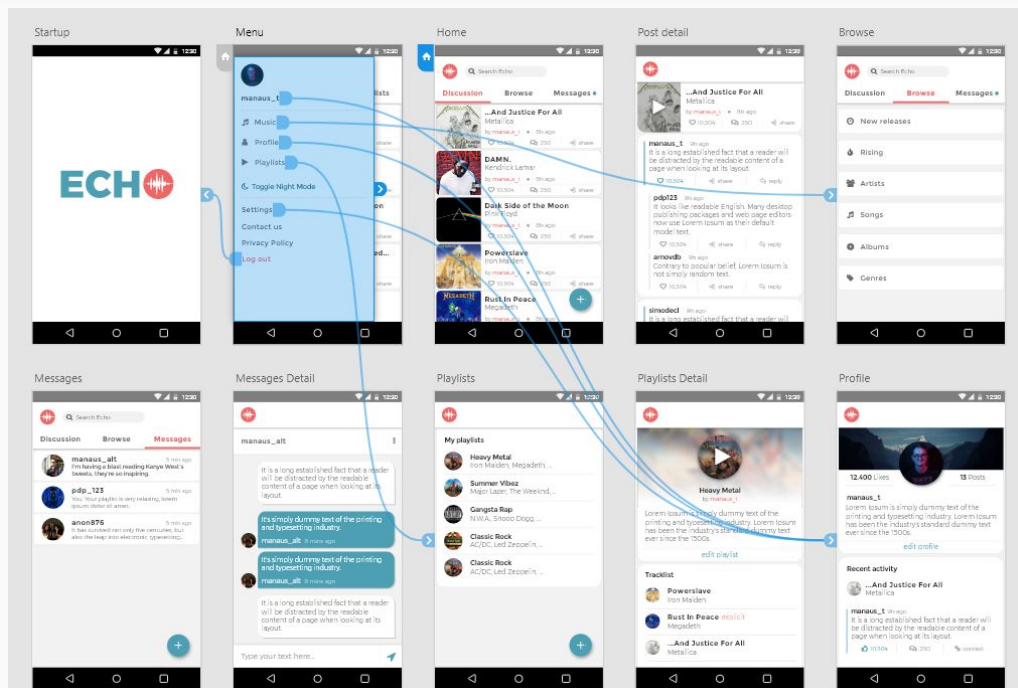


5.x Playlist Detail



Wireflow

Wireflow preview



Academic Poster

Mobile Development II
Academic Year 2017-18
Manaus Transez

New Media Development
Bachelor of Graphical and Digital Media
Artevelde University College



ECHO

Let It Resonate

ECHO is a community-driven platform designed for music lovers. The application offers a hub for people who enjoy discussion and exploring their musical taste. No matter what genres you like, everyone is free to speak their mind and expand their musical horizon.

- Explore** new music, find new playlists created by other users
- Expand** your musical horizon, discover new genres and artists
- Express** your opinion and engage in a respectful discussion with like-minded people
- Export** your playlists to Spotify to enjoy anywhere

Technologies used:

- JS
- Node.js server
- MongoDB database
- React.js client



UI Style Guide

Typography

Montserrat Bold
Montserrat Regular
Montserrat Light

Icon



standard alternate

Color



primary
#4D9FB4



dark grey
#333333



secondary
#F16667



grey
#6D6D6D



primary alt
#376F7F



light grey
#CCCCCC

Logo



Components



light post



dark post

Icons

fontawesome




```
1 const mongoose = require('mongoose');
2 const Schema = mongoose.Schema;
3
4 const AlbumSchema = new Schema(
5   {
6     spotify_id: { type: String, required: true, max: 128, unique: true },
7     title: { type: String, required: true, max: 128 },
8     artist: { type: String, required: true, max: 128 },
9     artist_name: { type: String, required: true, max: 128 },
10    images: [{
11      height: { type: Number },
12      width: { type: Number },
13      url: { type: String, max: 128 }
14    }],
15    release_date: { type: String },
16    created_at: { type: Date, default: Date.now },
17    updated_at: { type: Date, default: Date.now },
18    deleted_at: { type: Date, required: false }
19  },
20  {
21    toJSON: { virtuals: true },
22    toObject: { virtuals: true }
23  }
24 );
25
26 AlbumSchema.virtual('id').get(() => this._id);
27
28 module.exports = mongoose.model('Album', AlbumSchema);
```

```
1 const mongoose = require('mongoose');
2 const Schema = mongoose.Schema;
3
4 const CommentSchema = new Schema(
5   {
6     post_id: { type: mongoose.Schema.Types.ObjectId, ref: 'Post', required: true },
7     author: { type: mongoose.Schema.Types.ObjectId, ref: 'User', required: true },
8     content: { type: String, max: 512, required: true },
9     likes: [{ type: mongoose.Schema.Types.ObjectId, ref: 'User' }],
10    created_at: { type: Date, default: Date.now },
11    updated_at: { type: Date, default: Date.now },
12    deleted_at: { type: Date, required: false },
13    published_at: { type: Date, required: false }
14  },
15  {
16    toJSON: { virtuals: true },
17    toObject: { virtuals: true }
18  }
19 );
20
21 CommentSchema.virtual('id').get(() => this._id);
22 CommentSchema.virtual('subcomments', {
23   ref: 'Subcomment',
24   localField: '_id',
25   foreignField: 'parent_id'
26 })
27
28 module.exports = mongoose.model('Comment', CommentSchema);
```

Code Snippets - Controllers

postController.js
songController.js

```
246  /*
247  Like a post
248  */
249  exports.post_like_post = function (req, res, next) {
250    User.findById(req.user.id).then(profile => {
251      console.log(req.params.postId)
252      Post.findOne({_id: req.params.postId})
253        .then(post => {
254          if (post.likes.filter(like => like.toString() === req.user.id).length > 0) {
255            // Get remove index
256            const removeIndex = post.likes
257              .map(item => item.toString())
258              .indexOf(req.user.id);
259
260            // Splice out of array
261            post.likes.splice(removeIndex, 1);
262            // Save
263            post.save().then(post => res.json(post));
264          } else {
265            // Add user id to likes array
266            post.likes.unshift(req.user.id);
267            post.save().then(post => res.json(post));
268          }
269        })
270      .catch(err => res.status(404).json({ postnotfound: 'No post found' }));
271    })
272    .catch(err => res.status(404).json({ usernotfound: 'No user found' }));
273  }
```

```
55  Get a certain song
56  */
57  exports.get_song = function (req, res, next) {
58    const id = req.params.songId;
59    const query = Song.aggregate([
60      { $match: { 'spotify_id': id } },
61      {
62        $project: {
63          "spotify_id": "$spotify_id",
64          "title": "$title",
65          "album": "$album",
66          "artist": "$artist",
67          "artist_name": "$artist_name",
68          "explicit": "$explicit",
69          "duration": "$duration",
70          "popularity": "$popularity",
71          "created_at": "$created_at",
72          "updated_at": "$updated_at",
73          "deleted_at": "$deleted_at"
74        }
75      },
76      { $lookup: { from: 'albums', localField: 'album', foreignField: 'spotify_id', as: 'album' } },
77      {
78        $project: {
79          "spotify_id": 1,
80          "title": 1,
81          "artist": 1,
82          "artist_name": 1,
83          "explicit": 1,
84          "duration": 1,
85          "popularity": 1,
86          album: { $arrayElemAt: ['$album', 0] },
87          "created_at": 1,
88          "updated_at": 1,
89          "deleted_at": 1
90        }
91      }
92    ])
93    query.exec((err, song) => {
94      if (err) return errorHandler.handleAPIError(500, 'Could not get the song with id: ${id}', next);
95      if (!song) {
96        return errorHandler.handleAPIError(404, 'Song not found with id: ${id}', next);
97      }
98      return res.json(song[0]);
99    });
100  }
```

```
import { TOGGLE_NIGHTMODE, ADD_NIGHTMODE, REMOVE_NIGHTMODE } from '../constants';

const body = document.querySelector('html');

export const toggleNightmode = () => dispatch => {
  body.classList.toggle('dark')
  let nightmode = JSON.parse(localStorage.getItem('nightmode'))
  localStorage.setItem('nightmode', JSON.stringify(!nightmode))
  return { type: TOGGLE_NIGHTMODE }
}

export const addNightmode = () => dispatch => {
  body.classList.add('dark')
  localStorage.setItem('nightmode', 'true')
  return { type: ADD_NIGHTMODE }
}

export const removeNightmode = () => dispatch => {
  body.classList.remove('dark')
  localStorage.setItem('nightmode', 'false')
  return { type: REMOVE_NIGHTMODE }
}
```

```
const initialState = {
  nightmode: false
}

function nightmodeReducer(state = initialState, action) {
  switch (action.type) {
    case TOGGLE_NIGHTMODE:
      return {
        ...state,
        nightmode: !state.nightmode
      };
    case ADD_NIGHTMODE:
      return {
        ...state,
        nightmode: true
      };
    case REMOVE_NIGHTMODE:
      return {
        ...state,
        nightmode: false
      };
    default:
      return state;
  }
}

export default nightmodeReducer;
```

```
class PostsList extends Component {
  constructor(props) {
    super(props);

    this.state = {
      comments: []
    }
  }

  componentWillMount() {
    this.props.fetchPosts();
  }

  componentDidMount() {
    let scrollTop = document.getElementById('scroll-top')
    if (scrollTop) {
      scrollTop.addEventListener('click', (e) => {
        e.preventDefault();
        window.scrollTo({ top: 0, left: 0, behavior: 'smooth' })
      })
    }
  }
}
```

```
<section className="card playlists">
  <h2>Playlists by {this.state.profile.username}</h2>
  {(this.state.playlists.length > 0)
    ? this.state.playlists.map((playlist, i) => (
      <a href={` /playlist/${playlist._id}`} key={playlist._id}>
        <div className="playlist-item" >
          <img src={playlist.image} alt="Thumbnail" />
          <div>
            <h3>{playlist.title}</h3>
            <p>
              {playlist.songs.map((song, i) => <React.Fragment key={i}>
                {!!i && ", "}
                {song.artist_name}
              </React.Fragment>)}
            </p>
          </div>
        </div>
      </a>
    ))
    : <p>No playlists yet!</p>
  }
</section>
```

Live preview

<https://echo-mobdev.herokuapp.com/>

Screencast

<https://vimeo.com/272941834>

Thanks!

A presentation by:

Manaus Transez

Feel free to ask questions.

