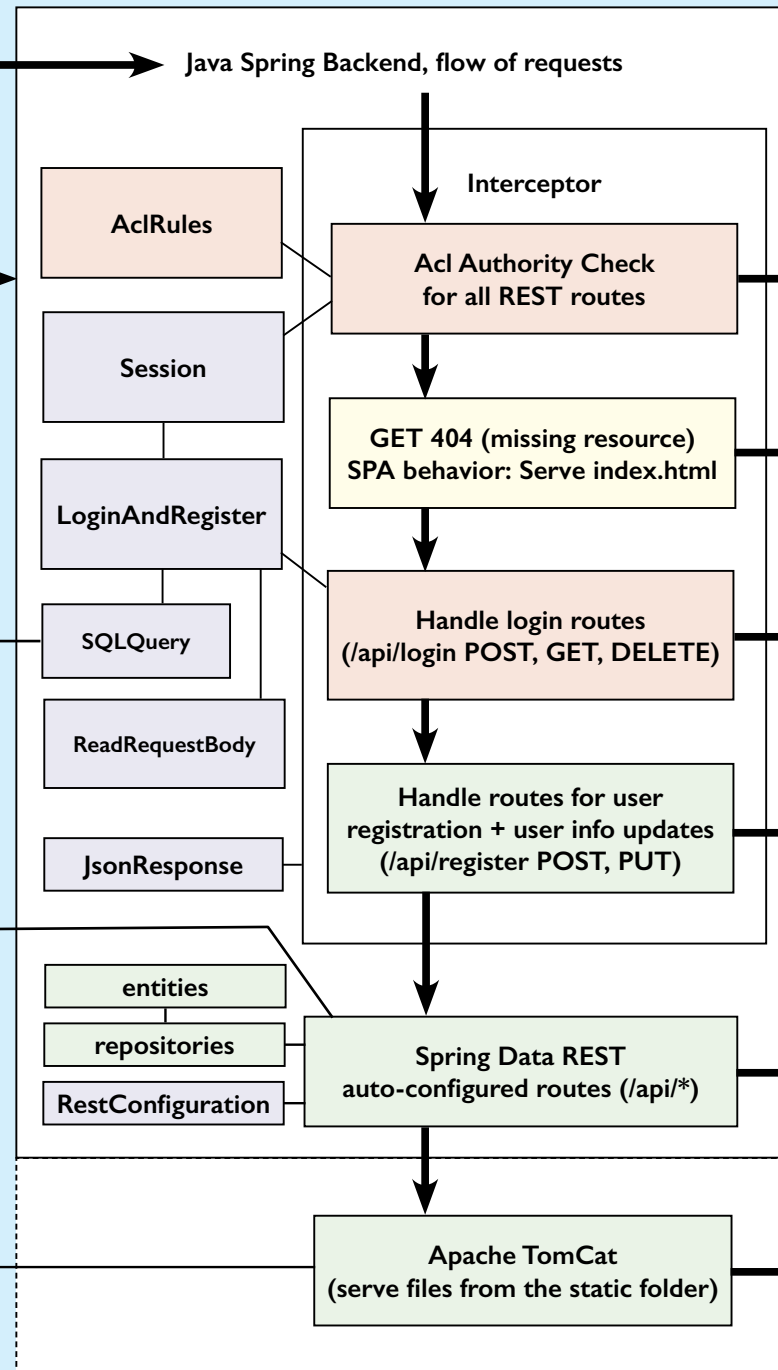
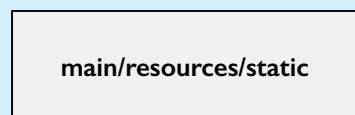
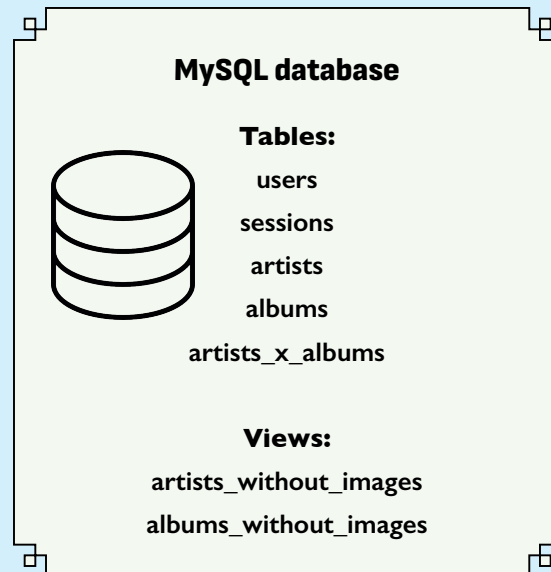
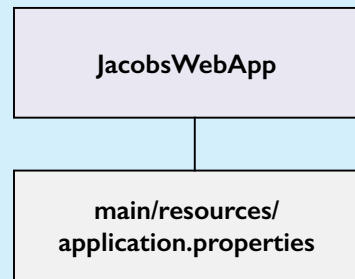


The Music Vault, Backend: Flow, classes and parts

HTTP request



Possible
HTTP responses

{error: not allowed}

index.html

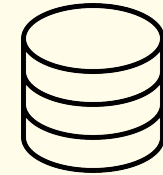
JSON data {user info etc}

JSON data {user info etc}

JSON data {from the DB}
including images

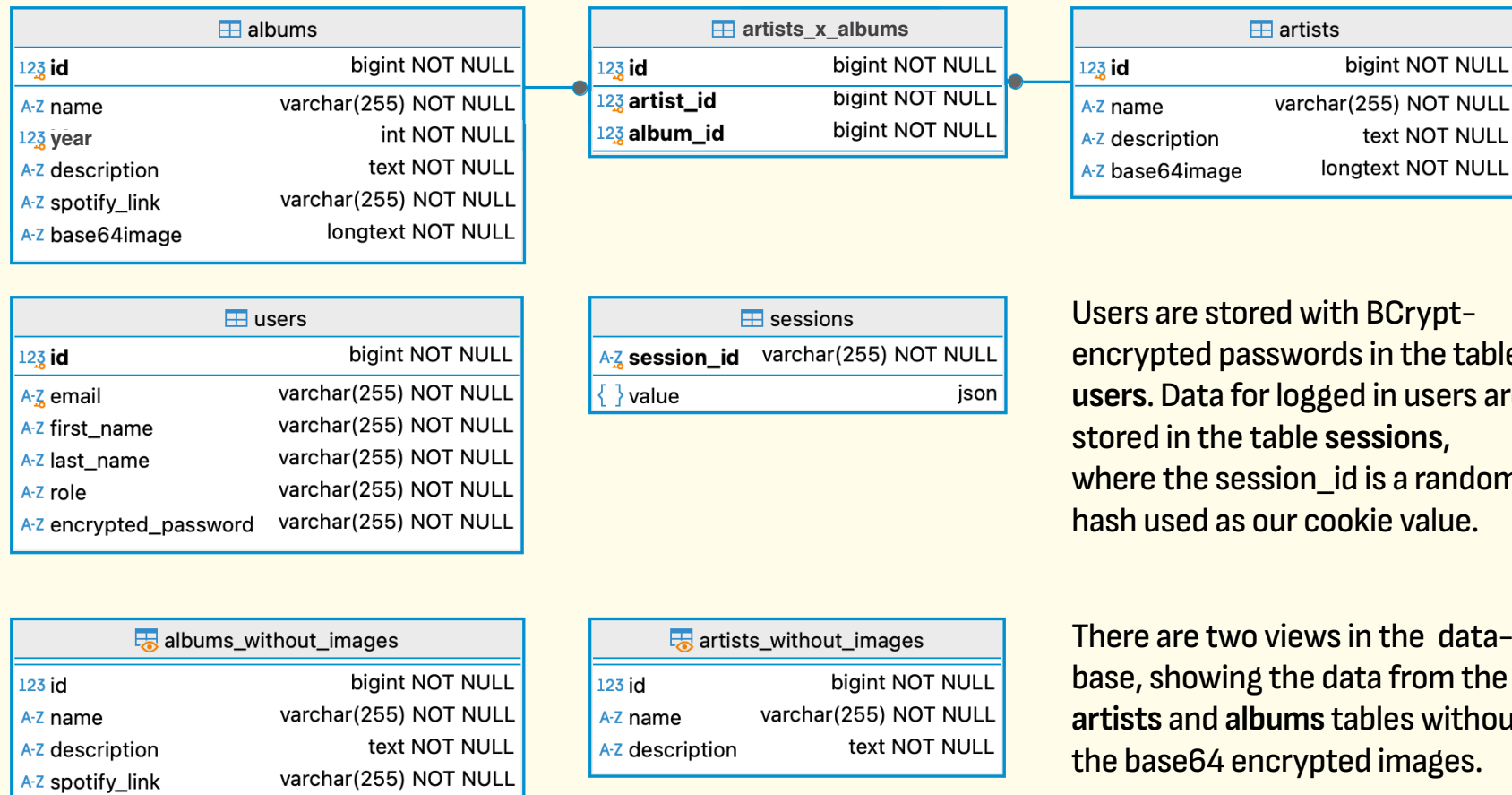
Frontend assets:
HTML, CSS, JS, icons etc

The Music Vault, MySQL database: ER Diagram



The only relation we have is a many-to-many relationship between albums and artists:

- An album is made by one or several artists, an artist can make one to many albums
- We solve this many-to-many relation in the classic SQL way, by introducing a join table, **artists_x_albums**.



Users are stored with BCrypt-encrypted passwords in the table **users**. Data for logged in users are stored in the table **sessions**, where the session_id is a random hash used as our cookie value.

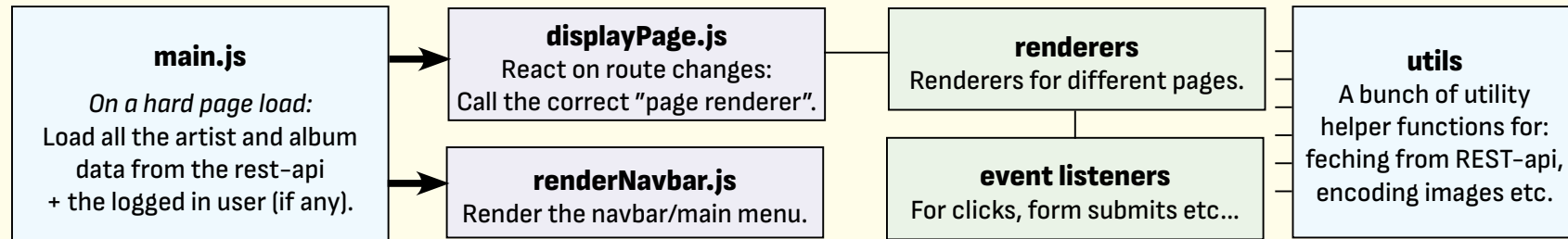
There are two views in the database, showing the data from the **artists** and **albums** tables without the base64 encrypted images.

The Music Vault: REST API Routes

| Request method | Route | Access control <i>(by user roles)</i> |
|----------------|-------------------------------|---------------------------------------|
| POST | /api/register | visitor |
| PUT | /api/register | user |
| POST | /api/login | visitor |
| GET | /api/login | visitor, user |
| DELETE | /api/login | user |
| POST | /api/artists | user |
| GET | /api/artists | visitor, user |
| GET | /api/artists/:id | visitor, user |
| PUT | /api/artists/:id | user |
| DELETE | /api/artists/:id | user |
| GET | /api/artistsWithoutImages | visitor, user |
| GET | /api/artistsWithoutImages/:id | visitor, user |
| POST | /api/albums | user |
| GET | /api/albums | visitor, user |
| GET | /api/albums/:id | visitor, user |
| PUT | /api/albums/:id | user |
| DELETE | /api/albums/:id | user |
| GET | /api/albumsWithoutImages | visitor, user |
| GET | /api/albumsWithoutImages/:id | visitor, user |
| GET | /api/artistXAlbums | visitor, user |
| POST | /api/artistXAlbums | user |
| DELETE | /api/artistXAlbums/:id | user |

The Music Vault, Frontend: Quick overview

The frontend is an SPA built with "vanilla JS" (JavaScript without any frontend framework). Two external JS libraries are used: The JS part of the Bootstrap CSS library and Marked.js (*conversion of markdown to html*). The Bootstrap CSS library is used to accomplish a modern responsive layout in conjunction with my own CSS.



SPA (Single Page Application): Frontend routing

The frontend is an SPA, which takes care of the routing of a number of different GET routes, via JavaScript running in the browser, without doing any hard page reloads between route changes.

| Menu item / Link | Shown for | GET route | Description |
|---------------------------------|--------------------------|-------------------|------------------------------|
| Artists | everyone | / | List of artists |
| Albums | everyone | /albums | List of albums |
| Add an artist | logged in users | /add-artist | Form for adding an artist |
| Add an album | logged in users | /add-album | Form for adding an album |
| About | everyone | /about | Info about the application |
| Register | visitors (not logged in) | /register | Form for registering a user |
| [name of logged in user] | logged in users | /register | Form for updating user info |
| [link from each artist in list] | everyone | /artists-info/:id | Details about an artist |
| [link from each album in list] | everyone | /album-info/:id | Details about an album |
| [link from each artist in list] | logged in users | /edit-artist/:id | Form for editing artist info |
| [link from each album in list] | logged in usrs | /edit-album/:id | Form for editing album info |

The Music Vault: File Statistics, version 0.8.3

Java

| | | |
|--|------------|-------------|
| AclRules.java | 41 | 1.5 |
| AsciiLogo.java | 16 | 0.8 |
| Interceptor.java | 116 | 4.1 |
| JacobsWebApp.java | 94 | 3.6 |
| JsonResponse.java | 18 | 0.6 |
| LoginAndRegister.java | 113 | 4.2 |
| ReadRequestBody.java | 49 | 1.6 |
| RestConfiguration.java | 37 | 1.4 |
| SQLQuery.java | 50 | 1.6 |
| Session.java | 62 | 2.0 |
| SystemOutOnOff.java | 23 | 0.5 |
| entities/Album.java | 33 | 0.7 |
| entities/AlbumWithoutImage.java | 27 | 0.6 |
| entities/Artist.java | 28 | 0.6 |
| entities/ArtistWithoutImage.java | 24 | 0.5 |
| entities/ArtistXAlbum.java | 25 | 0.5 |
| entities/User.java | 34 | 0.7 |
| repositories/AlbumRepository.java | 8 | 0.3 |
| repositories/AlbumWithoutImageRepository.java | 8 | 0.4 |
| repositories/ArtistRepository.java | 8 | 0.3 |
| repositories/ArtistWithoutImageRepository.java | 8 | 0.4 |
| repositories/ArtistXAlbumRepository.java | 8 | 0.4 |
| repositories/UserRepository.java | 8 | 0.3 |
| SUM, 24 files: | 838 | 27.7 |



CSS

| | | |
|-----------------------|------------|------------|
| about-page.css | 45 | 0.5 |
| album.css | 161 | 2.3 |
| artist.css | 120 | 1.9 |
| basic.css | 40 | 0.5 |
| bootstrap-mods.css | 55 | 0.8 |
| edit-mode.css | 15 | 0.2 |
| font-imports.css | 53 | 1.3 |
| form.css | 50 | 0.6 |
| header.css | 4 | 0.1 |
| modal.css | 7 | 0.1 |
| sticky-footer.css | 9 | 0.1 |
| style.css | 19 | 0.4 |
| user-menu.css | 41 | 0.5 |
| variables.css | 3 | 0.0 |
| SUM, 15 files: | 622 | 9.5 |



JavaScript

| | | |
|--------------------------------------|--------------|-------------|
| displayPage.js | 71 | 2.4 |
| eventsForAlbumForm.js | 65 | 2.4 |
| eventsForArtistForm.js | 42 | 1.6 |
| eventsForUserForm.js | 43 | 1.6 |
| main.js | 46 | 1.6 |
| render404.js | 14 | 0.4 |
| renderAboutFromReadMe.js | 24 | 0.7 |
| renderAlbumForm.js | 70 | 2.7 |
| renderAlbums.js | 103 | 3.9 |
| renderArtistForm.js | 40 | 1.5 |
| renderArtists.js | 97 | 3.5 |
| renderLoginForm.js | 53 | 1.9 |
| renderNavbar.js | 60 | 2.3 |
| renderSpotifyPlaylist.js | 35 | 1.2 |
| renderUserForm.js | 55 | 1.9 |
| renderUserMenu.js | 52 | 1.7 |
| utils/addEventListener.js | 14 | 0.7 |
| utils/addRelations.js | 16 | 0.6 |
| utils/closeHamburgerBar.js | 8 | 0.2 |
| utils/displayToast.js | 24 | 0.9 |
| utils/fetchHelpers.js | 49 | 1.3 |
| utils/fileToBase64.js | 11 | 0.4 |
| utils/followExternalLinksInNewTab.js | 6 | 0.2 |
| utils/formDataCollector.js | 22 | 0.7 |
| utils/navigate.js | 8 | 0.2 |
| utils/noCommasOnArrayToString.js | 2 | 0.1 |
| utils/setActiveMenuChoice.js | 13 | 0.6 |
| utils/usePushStateOnInternalLinks.js | 15 | 0.5 |
| utils/waitForModalAnswer.js | 43 | 1.6 |
| SUM, 30 files: | 1,101 | 39.5 |



TOTAL STATISTICS

69 files
77 kilobytes of source code
2,561 source lines of code

including:

307 blank lines and
203 lines of comments