Music Library Management System

1. Class-Based Views:

Refactor your existing views to use class-based views (CBVs) instead of function-based views (FBVs). CBVs provide a more organized and reusable approach to handling requests.

- Create a `ArtistListView` class-based view that extends Django's `ListView` to display a list of all artists. This view should include the artist's name and genre.
- Implement a `GenreFilterView` class-based view that allows users to filter artists by genre. This view should display a list of available genres and only show artists that belong to the selected genre.
- Create an `ArtistDetailView` class-based view that extends Django's `DetailView` to display the details of a selected artist. This view should include the artist's name, genre, and biography.

2. Cookies and Sessions:

Implement cookies or sessions to enhance user experience and provide personalized features.

- Add a "Favorites" feature that allows authenticated users to add songs or albums to their favorites list.
- Use cookies or sessions to store the user's favorite songs or albums. When a user adds an item to their favorites, store the relevant information in the session or a cookie.
- Create views to display the user's favorite songs or albums and allow them to remove items from their favorites list.

3. User Model and Authentication and Authorization:

Implement user registration, login, and authentication to provide secure access to the application.

- Create a user registration form where new users can sign up for an account. The form should include fields for username, email, and password.
- Implement a user login form where registered users can log in to their accounts.
- Add user authentication and authorization to protect certain views and functionality. For example, only authenticated users should be able to add new artists, albums, or songs.

4. Forms and Their Methods:

Create forms and handle form submissions to allow users to add new artists, albums, and songs to the music library.

- Implement forms to allow users to add new artists, albums, and songs to the music library.
- The artist form should include fields for the artist's name, genre, and biography.

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- The album form should include fields for the album's title, artist, release date, cover image, and description.
- The song form should include fields for the song's title, duration, track number, and lyrics.
- Perform form validation to ensure all required fields are filled out.
- Save the submitted data to the database using the respective models.

5. Django Generic Views:

Utilize Django's generic views to simplify common view patterns and reduce code duplication.

- Refactor your existing views to use Django's generic class-based views, such as `ListView`, `DetailView`, and `CreateView`.
- Use the appropriate generic views to display lists and details of artists, albums, and songs.
- Customize the generic views as needed to match your project requirements.

6. Advanced Customizing Admin Panel:

Customize the Django admin panel to provide a better user experience for managing artists, albums, and songs.

- Add search and filter functionality to the admin panel to make it easier to find specific artists, albums, or songs.
- Customize the admin forms to provide a more user-friendly interface for adding and editing artists, albums, and songs.
- Implement actions in the admin panel to perform bulk operations on artists, albums, or songs (e.g., delete multiple items at once).

7. Implementing Pagination (Optional):

Implement pagination to display a limited number of artists, albums, or songs per page for better usability.

- Modify your views to use Django's pagination feature to display a limited number of items per page.
- Create pagination views to handle the display of paginated data and provide navigation links to move between pages.