

## CS393 - Homework (1) – Esma Meral

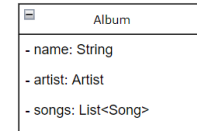
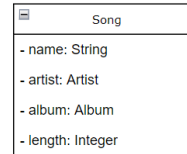
Assignment Date : 22.11.2022

Deadline : 29.11.2022 11.59 PM

- This assessment must be done individually
- You can send your project via email (zip file) or send project's link (Google Drive or GitHub)

### Homework Details:

1. Create a SpringBoot project with Spring Data JPA dependency
2. Add other required dependencies (database, Spring Dev Tools etc). Please use a very simple database (Derby, HSQLDB, H2DB, etc)
3. Add model (domain) classes you see in the diagram. Be careful about relationship types (bidirectional/unidirectional)
4. Add ID attribute to all your classes. The value of your ID should be generated automatically.
5. Define all your classes as Entity. Add the required database mapping rules. Define table names, Column names and other attributes (length, nullable etc). Do not create unnecessary relationship tables.
6. It is forbidden to use FetchType.EAGER
7. It is forbidden to use CascadeType.ALL and CascadeType.REMOVE. You can use the other cascade types depending on your requirements.



8. Create Spring Data JPA repositories for all model classes.
9. Create a Service Bean (or beans) which should provide following methods:

public void saveAlbum(Album album)	This method saves album with songs
public void addSongToAlbum(int albumId, Song song)	This method adds a new song to the album whose ID is provided.
public void assignArtistToAlbum(int albumId, int artistId)	Changes the artist of an album.
public void deleteAlbum(int albumId)	Deletes an album. Songs related to the album are not deleted.
public void deleteSong(int songId)	Deletes the song whose id is given. If the song is associated with an album (or playlist), the album (or playlist) is not deleted.
public List<Song> findSongsWithArtistId(int id)	Returns all songs related to an artist, including songs in an album

10. Finally, write a test class to test JPA configuration and previously listed service methods. You can call only service methods from the Test class