

# JukeBox application

## Problem

JukeBox application is intended to maintain a catalog of music albums by various musicians. The application should also maintain information about musicians, music and the relationships between musicians and music (i.e., who has sung/played which album). You are required to implement a set of demonstrable REST APIs that can be consumed by any UI/client application to retrieve information about artists and music albums & also to add new music albums, artist details.

Following information should be maintained for **Music Albums**

- Album name (Mandatory, Should be minimum 5 characters)
- Date of release (Mandatory)
- Genre (i.e., Type of music)
- Price (Mandatory, value between 100 to 1000)
- Description

Following information should be maintained for **Musicians**

- Name (Mandatory, Should be minimum 3 characters)
- Musician type (Vocalist, Instrumentalist, etc...)

## Constraints

- A music album can be sung/played by one or more musicians
- A musician can contribute (sing or play) to multiple music albums

## APIs to be Developed

Implement REST APIs for the following:

1. API to create/update music album records
2. API to create/update musician records
3. API to retrieve the list of Music albums sorted by *Date of release* in ascending order (i.e Oldest first)
  - o **Sorting should be done in the code using any standard sorting algorithms (and NOT at the Database level using SQL or using Framework annotations or functions)**
4. API to retrieve the list of Music albums **for a specified musician** sorted by *Price* in ascending order (i.e Lowest first)
  - o **Sorting can be done at the Database level using SQL or using Framework annotations or functions. If the chosen DB or programming language framework does not support in-built sorting, it can be done explicitly using code.**
5. API to retrieve the list of musicians **for a specified music album** sorted by musician's *Name* in ascending order.

## Evaluation Criteria:

- Completeness of Data model
- Number of APIs completed.
- Problem solving ability
- Code Quality
- Adherence to coding standards
- Implementation of JUnit test cases and code coverage
- Effective use of Git repository, i.e., Task breakdown and Issue creation, Separate commits per task against issue.