

ExerciseSheet03

The manager of the Artist is so happy with your implementation of the Event, that he has now some other request. He recognized, that an Event could be a Concert, a TVShow, or a CharityEvent. Depending of the type of the event, he needs to store and retrieve some additional information, although the basic informations are the same. e.g. in a TVshow, his Artist doesn't perform any tracks, while a Concert there needs to be a defined setlist. In a CharityEvent the costs are calculated not exactly like for the other ones.

This is the point when you will learn about Inheritance and Polymorphism and practice these concepts by implementing the above description.

Additionally, you will learn and understand how to override methods from base classes and therefore use a simple way to send information about an object to the console instead of using a method like `getString()`.

Tasks

- Import the newly uploaded classes `Date` and `Venue` to `MusicLandscape` (delete the old ones, as some changes were necessary)
- Implement the new methods in the class `Event`. You find them easily in the javadoc when searching for *ExerciseSheet03* below the *Introduced in:* Tag
- Implement the new classes `Concert` and `TVShow` derived from the class `Event`.
- Override the `toString` Method for `Artist` and `Track`
- Implement a class `DemoApp` with a main method. In the main method, create objects of the previously implemented classes. Apart from testing all newly implemented things manually, a good idea could be to create an Array of Events, holding `Concerts` as well as `TVShows` and print all of them to the console using the `toString()` mechanism to see the power of polymorphism. (recommended)

For a detailed description of the fields and methods, please refer to the respective javadoc. Unzip the file `ES03_Javadoc.zip` and open `index.html`. Remember: You find new Methods introduced in the actual ExerciseSheet by checking the *Introduced in:* Tag.

Information in javadoc

You are asked to implement everything listed for the classes `Concert` and `TVShow`

Additionally, you shall implement the newly added methods and constructors of the other classes.

As in the exercise before, you will need the classes `Date` and `Venue` (you should have imported them to the `MusicLandscape` folder).

For some methods/fields/classes, you may find a headline **Hint** which gives you implementation hints.

Tests

The following amount of tested methods should be shown in your testing overview:

Classes	Methods
Artist	5

Classes	Methods
Track	4
Event	4
TVShow	19
Concert	10
sum	42

ATTENTION

- Make sure you have implemented all methods and fields with the predefined names!
- If you are not able to implement some of them because of the requirements, generate at least the methods themselves, else the tests won't compile and therefore the ExerciseSheet won't be graded.
- Never change the testfiles themselves.
- Please note that 100 % passed tests don't mean 100% correct implementation.

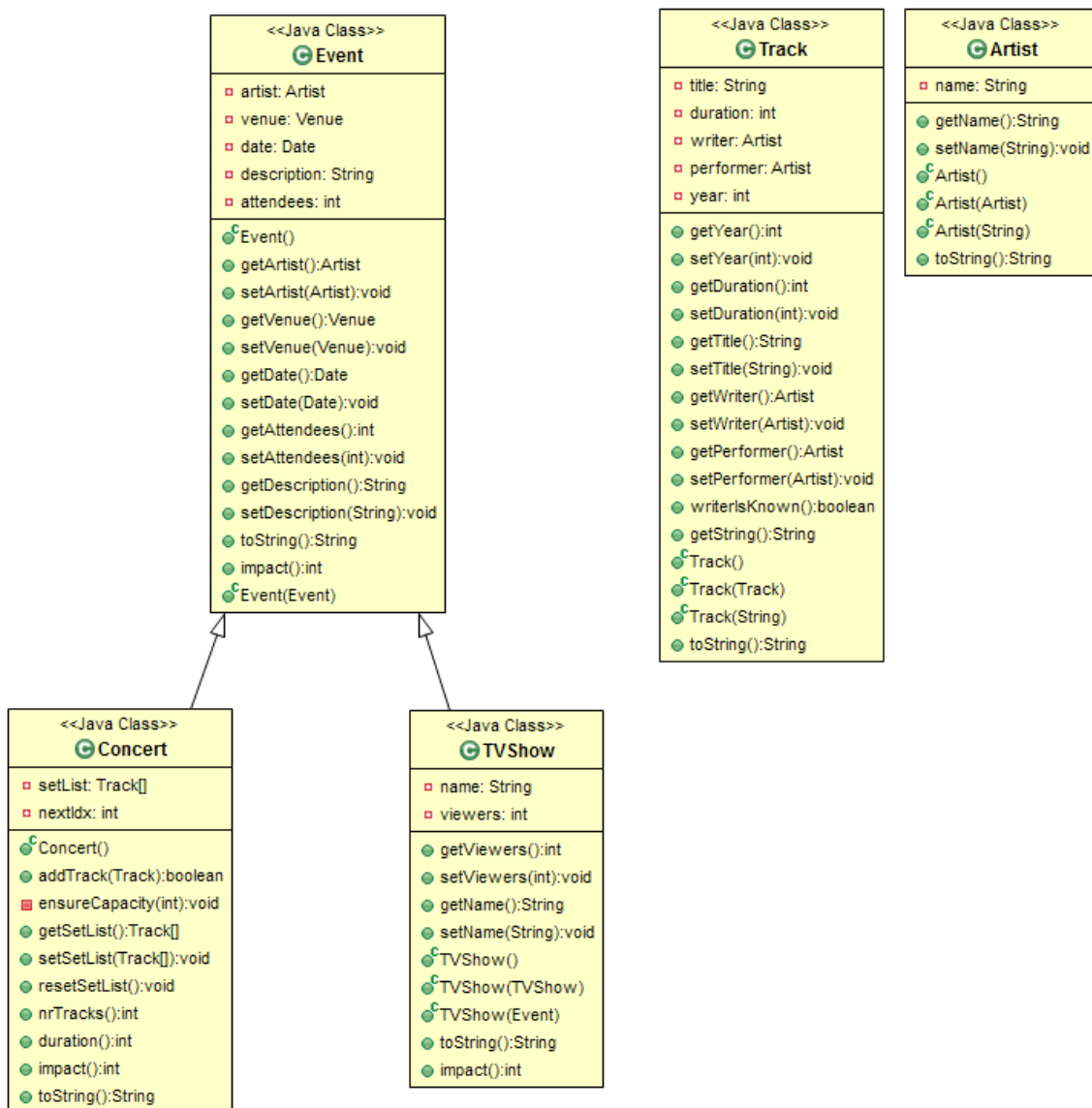


Figure 1: Classdiagram ES03