

CSCI 136

Data Structures & Advanced Programming

Music Catalog

Fall 2020

Instructors: (BillJ,BillL)

Music Catalog : Vector-Based

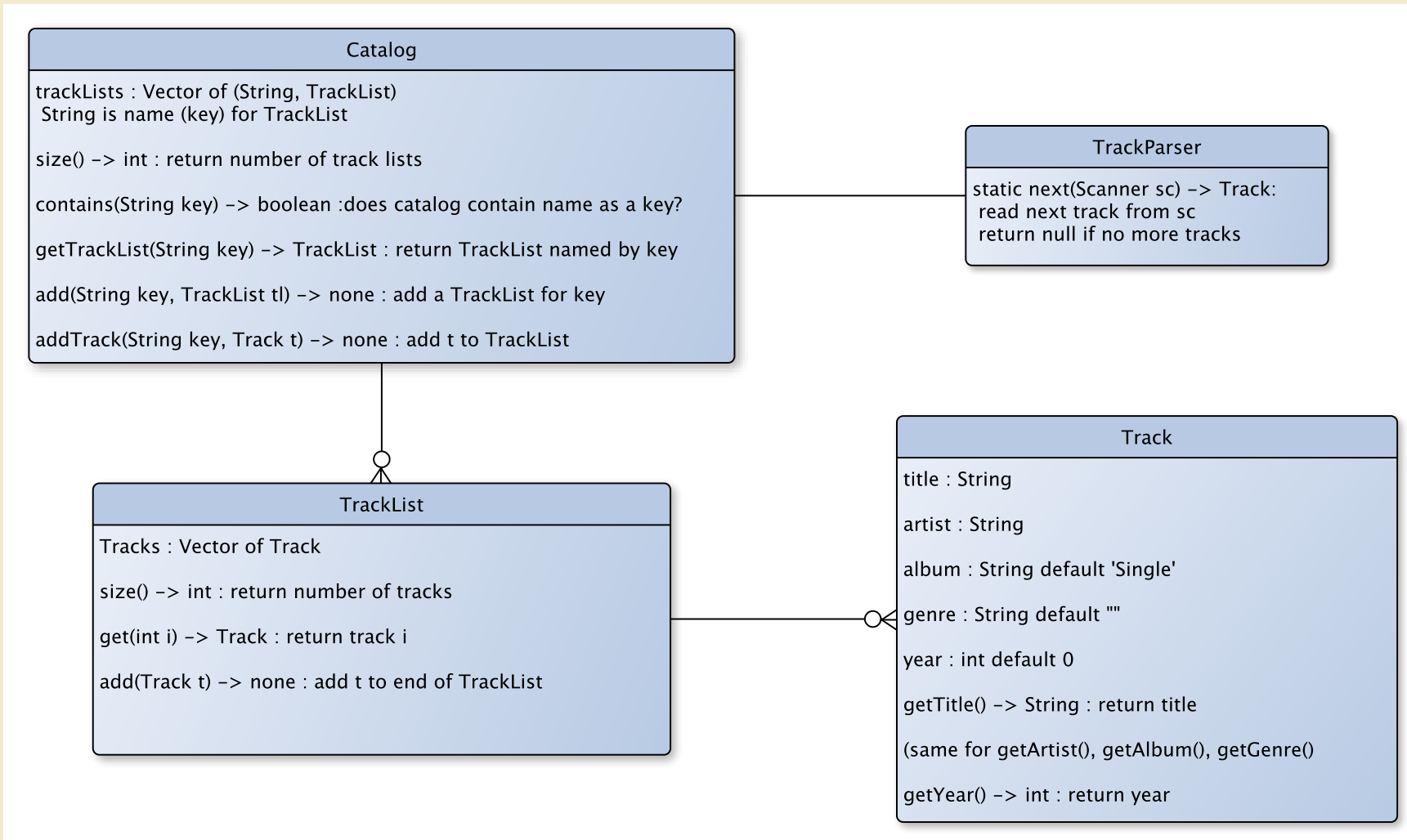
Vector Catalog: Classes

- Track
 - Store data about a single music track
 - Allow access (not updating) to that data
- TrackList
 - Store a set of tracks
 - Allow access to i^{th} track, add new tracks
- Catalog
 - Store a set of *named* track lists
 - Allow access to track list by name, add a track list, add a track
- TrackParser : utilities to parse XML track file

Vector Catalog: Class Diagram



Vector Catalog: Class Diagram



Implementation Notes

- Track
 - Object data is private, methods are public
 - Use of “this” to disambiguate names
 - Special methods: constructors and toString
- TrackList
 - Vector simplifies construction dramatically over array-based version
- Catalog
 - Vector simplifies construction dramatically again

Implementation Notes

- Catalog
 - Use an Association to pair name with TrackList
 - Stores a pair of objects as a (key, value) pair
 - Supports getKey() and getValue() methods
- TrackParser
 - Assumes one XML tag per line
 - Minimal error-checking
 - Uses private parseLine() method for modularity
 - Uses *switch* statement on tag
 - With default case for some bag tag recognition