

SqlAlchemy

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Introduction to SQLAlchemy



- Popular Python SQL toolkit and Object Relational Mapper
- It gives full power and flexibility of SQL in python
 - Makes it easier to query from databases
- ORM is a programming technique that converts data between incompatible type systems
 - Each class maps to a table in the underlying database
- SQLAlchemy aims to accommodate:
 - SQL databases still behave like object collections the more size and performance start to matter
 - Object collections behave like table and rows even when abstraction starts to matter



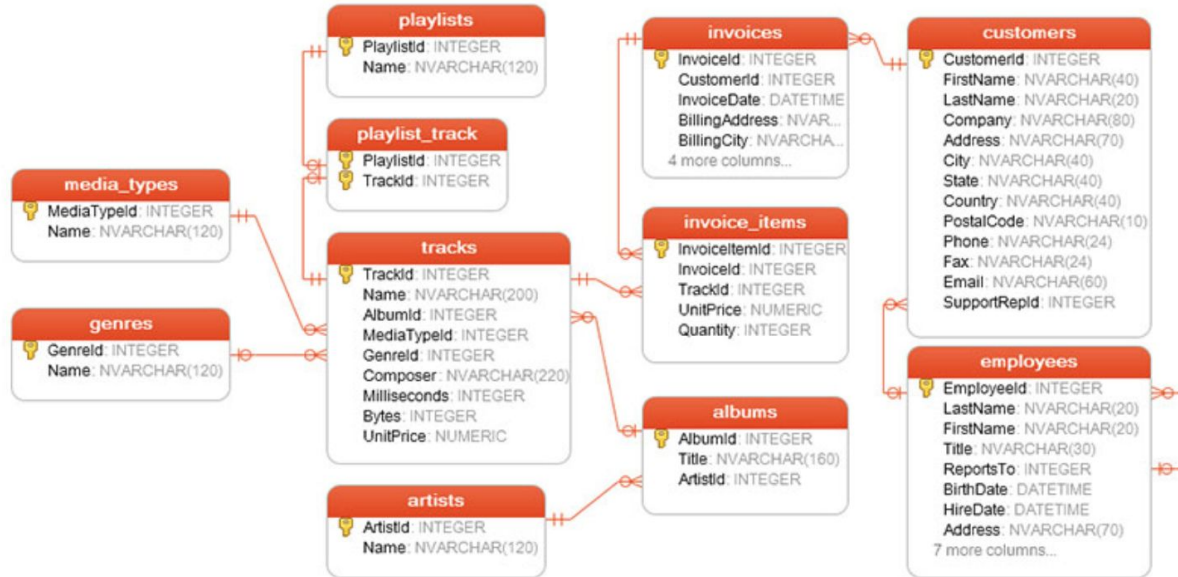
SQLAlchemy commands used



- `create_engine(..)` : produces an Engine object based on a URL (mostly a local database)
- `table(..)`: initializes the table with the columns and variable types
- `session()` :establishes all conversations with the database and is a holding zone for all objects currently in use
- `session.commit()` : commits the changes to the database
- `session.rollback()` : reverts all unsaved changes in the database



Chinook database



The Chinook data model represents a digital media store, including tables for artists, albums, customers, etc.

GOALS:

- Query data and observe trends in the same table
- Join varying tables together to analyze the data
- Ex: Query for tracks that are in a certain genre
- Ex: Query for artists that fall into a specific genre