Exercise: Building the Data Layer with Python

Campusbier Database

In this exercise, we are going to build the data layer with Python that allows to fetch data via defined queries from our database. The data layer serves as the glue between the database and the application layer and aims to encapsulate access to the database to decouple the application from the underlying data structure.

> Note that you must have downloaded and opened the *campusbier.db* database before you start this exercise.

Task 1: Create read access for frequent reports

Imagine that we're building an information system that uses data from our Campusbier database to serve a hypothetical employee in her daily business. The employee requires the same information at a certain frequency (e.g. daily, weekly) and we therefore want to create a functionality to pull up that information with the push of a button.

Create suitable Python functions to fetch the following information. Use parameters where necessary:

1. The detailed information regarding a specific order with a given order ID.
2. A list of orders containing the order ID, date, and customer information for a given date range.
3. A list of the unique customers along with the number of orders and total turnover per customer for a given date range.
4. Create Python script that a user can run from the command line and that prompts the user to choose one of the three reports from above. It then asks for the specific parameter values of the chosen report, fetches the data, and displays the result on the console.