

Datenbanken II

Wintersemester 2019/20

Praktische Aufgabe 1

Der Inhalt dieser Übung wird im *1. Quiz* überprüft.

1 Introduction

For the purpose of practical exercises (Praktische Aufgaben) *PostgreSQL* has to be installed locally on your machine. Then, you need to create a database and populate it with data.

The knowledge of this exercise's contents will be verified on **Quiz 1**.

1.1 Seeking Help

When you have any problems with exercises, you can seek help in the following channels:

1. Proseminar
2. Slack Channel **#db2** ¹
3. Tutorium (Martin Fischer, T.B.A.)

Start working on the practical exercises in advance. You may face obstacles that need help solving. The earlier you post your questions, the earlier the Proseminar-Team will give you an answer and act if needed.

¹<https://dbteaching.slack.com>

2 PostgreSQL Installation and Preparation

2.1 PostgreSQL Installation

The first step is to install PostgreSQL-Server locally on your machine. Afterwards, you can create a database and import data. Details of how to install PostgreSQL you can find in the Internet ². Details for Debian can be found in the Debian Wiki ³.

2.2 Data Preparation

In most exercises, we will operate on parts of the IMDB Database ⁴. We have already prepared the preprocessed data and a script that creates the tables (<https://kitten.cosy.sbg.ac.at/index.php/s/zP69GHaiyW9KpHA>) for you.

We create three tables with the following schemas:

Tabellenname: titles

```
tconst CHAR(9) PRIMARY KEY
titleType TEXT
primaryTitle TEXT
originalTitle TEXT
isAdult BOOLEAN
startYear INTEGER
endYear INTEGER
runtimeMinutes INTEGER
genres TEXT[]
```

Tabellenname: names

```
nconst CHAR(10) PRIMARY KEY
primaryName TEXT
birthYear INTEGER
deathYear INTEGER
primaryProfession TEXT[]
knownForTitles CHAR(9)[]
```

Tabellenname: principals

```
tconst CHAR(9)
ordering INTEGER
nconst CHAR(10)
category TEXT
job TEXT
characters TEXT
```

²<https://www.postgresql.org/download/>

³<https://wiki.debian.org/PostgreSql>

⁴<https://www.imdb.com/interfaces/>

To create the tables, you can use the downloaded SQL script `create_db.sql`. Execute it with `\i <path-to-create_db.sql>` in the `psql-console`. To import the data, we propose to use the PostgreSQL `\copy` command by executing the following lines in the `psql-console`:

```
\copy titles FROM title.basics_no_header_array_format.tsv WITH DELIMITER E'\t'  
\copy names FROM name.basics_no_header_array_format.tsv WITH DELIMITER E'\t'  
\copy principals FROM title.principals_no_header.tsv WITH DELIMITER E'\t'
```

After you have imported the data (it may take a while), you can view the table details with the `\d <tablename>` command. It shows the schema with attributes, constraints, indexes, and possible sorting (CLUSTER).