Python & Database project

The console application
“Sakila Search”

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Intro

Project name:

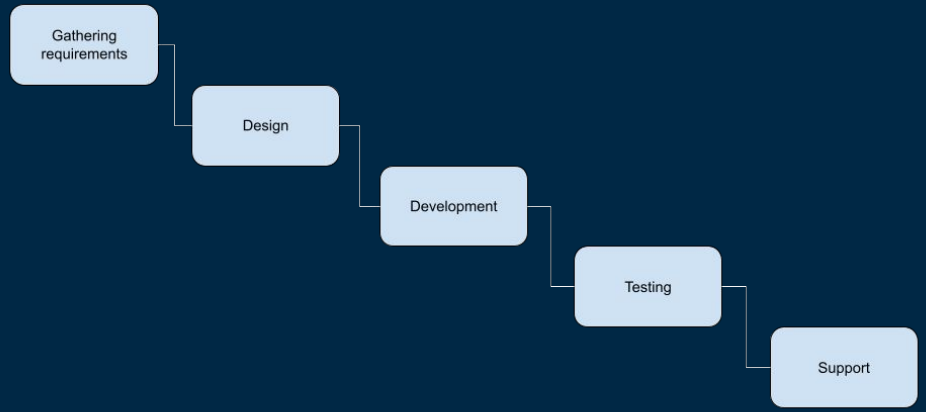
Console application for searching movies by Sakila database.

Description:

The app allows to search for movies in the Sakila database, filter the results by title, genre, release year, actor, get detailed information about the movies and view popular queries.

Software development model

Taking into account fixed software requirements and short implementation deadlines, a waterfall development model was chosen.



Requirements

Basic:

- Creating a console application for searching movies in the sakila database.
- All entered search queries are stored in a separate table.
- Search by the keyword, by genre and year.
- On command a list of the most popular queries are displayed.

Additional functionality:

- View all movies
- Flexible search by request

Technologies

Python: Application logic, request processing.

MySQL: Storing data about films, actors and categories.unittest

Database tools:
DBeaver

Python libraries:
PyMySQL
python-dotenv
tabulate

Design Python modules:

main.py

represents the main interface for interaction with the program for working with the DB.

db_connect.py

represents a ConnectionDB class, which is used to work with the MySQL database.

user_input.py

contains functions for user input that are used in the main module (main.py).

sql_requests.py

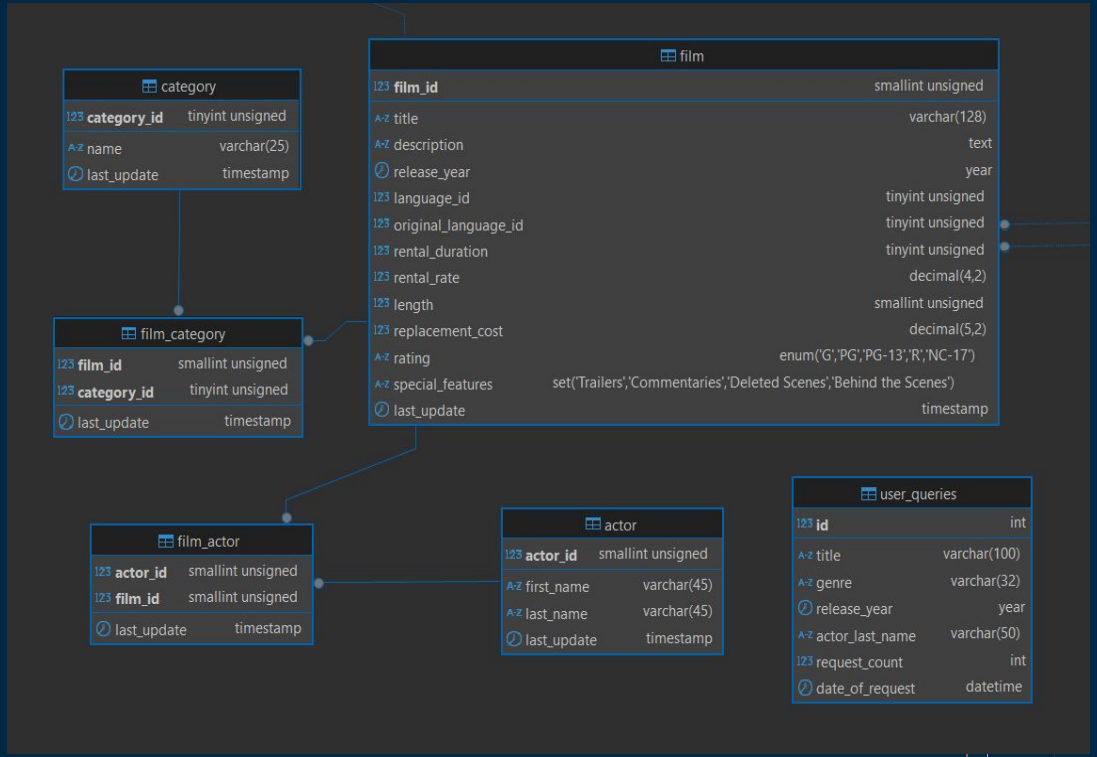
working with the MySQL database associated with user requests.

print_tables.py

class for page-by-page output of movies (pagination).

Database model

The diagram IDEF1X shows the analyzed tables of the database model.



Testing

User Interface:

```
 - input genre:comedy2
Invalid name of genre. The genre name must not contain numbers.
 - input genre:CfRvpeWaPskLyElcwGRpRihnPUfjUNjrV
Invalid name of genre. Name of genre must be less than 32 characters
 - input genre:comedy
 - input film release year:two
Invalid input. Please enter a numeric year.
 - input film release year:1900
Invalid year. Year must be between 1901 and 2155.
```

Unit Test:

```
Ran 3 tests in 0.026s

OK

Process finished with exit code 0
```

THANKS