Course: Introduction to Programming Using Python

Module 18. Using Databases. Part 1

Task 1

Create a single-table database named People (full name, city, country, date of birth) and a table of the same name. Write a program that allows the user to enter a query and get the results of the query. Use only the SELECT statement for the query. Generate an error if the user tries to execute other statements.

Task 2

Supplement Task 1 with the ability to insert, delete, and update data using the statements INSERT, DELETE, UPDATE. Check if the table name is correct before executing the query. Also, prevent all rows from being deleted or updated (UPDATE and DELETE without conditions).

Task 3

Modify Task 1 so that the user cannot enter a query but can use ready-made filters instead. For instance, show all people, show people whose age falls into the range, show all people from the same city (the user types it in as a value), show all people from the same country (the user types it in as a value).

Task 4

Modify Task 3 so that it could work with multiple filters. For example, the user can filter by country and city at the same time. AND and OR should be supported.

Task 5

Supplement Task 4 with the ability to insert, delete, and update data using the app interface. The user cannot enter the INSERT, UPDATE, DELETE statements directly.