

Database Lab 3.2

Creating a Python form for managing data into an SQLite database

Objective

- To consolidate the introduction to Python and SQLite
- To provide experience at creating a small database application with Python

Scenario

You are a freelance software engineer who is newly hired by a client. The client does not understand programming and has given you a half working programme (Lab_3_2021_22.py) which is full of bugs written by their previous software engineer who is now fired. The client is now asking you to fix it. The client doesn't care how you fix it but just wants a program that allows them or their admin to manipulate the data and have the features mentioned in the assignment below. They would be pleased if you added any extra features in addition to the ones mentioned below.

The requirements of the program

You are to create (edit/rewrite) a program that allows management of employees' data for ABC company. The program should provide a means for the admin of the company to enter the following information:

- Title (Mr, Mrs, Dr, ...)
- Forename
- Surname
- Email address
- Salary

The admin should be able to create an employee table that has the above fields. **If the table already exists then, the program should display a warning message on the screen "This table is already created"**. The admin should be able to insert employee data, search and show all data into a database on the screen. Additionally, **if they want to amend some records, they should be able to do it on this program.**

How to complete this lab

You can download the example of a python program on the Moodle (Lab_3_2021_22.py) who was written by the previous software engineer. You will notice this program does not completely work yet. It displays the menu however the functionalities do not work. You will need to debug and add on some queries, some methods and modify the given code for making the program work. You have full liberty to what extent you want to change this program as long as it meets the following functions in the marking schema. You can choose to start from scratch and write a new programme to meet the following functionalities. Make sure it provides a menu for the user to interact with the programme.

MSc Coursework

As part of your MSc coursework, you will need to complete this lab. This lab constitutes 20% of your total unit. You need to submit a revised version of the Lab_3_2021_22.py code which compiles and runs to provide a working version of this program.

You must submit a text file with the repl.it link and Python code. Make sure the repl link is not edited after the submission date or it will be considered a late submission.

The marking schema

There are 100 marks in total.

Schema	Marks
To create a table and show a warning message if it is already created	5
To insert data	10
To update data	20
To delete data and show all data from the table	20
To search for data using employee id	10
To enhance code and/or add any extra functions of your choice	20
Code formatting, comments, user friendliness and presentation of the output	15