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Assignment2

1. Item need to provide

- An assignment coversheet as a PDF document

- SQL file (SAGschema.sql) containing the SQL statement to generate the database schema and sample data.

  - supplied original schema and insert SQL statement, and your additional stored procedures

- Python file (database.py) containing the Python code you have written to access the database.

2. Task

- complete SQL files

- 5 function

项目名称	低分标准（0–1.5 分）	满分标准（2–2.5 分）
✅ Login 登录功能	只允许用户 `jdoe` 登录验证成功。	所有合法用户均可登录。用户名不区分大小写。错误的用户登录请求应被拒绝。
✅ View CarSales Summary 查看销售摘要	正确展示摘要内容。	正确展示全部摘要信息，并按品牌、型号升序排序。
✅ Find CarSales 查找销售记录	正确返回关键字为 `"ro"` 的销售记录。	正确返回任意关键词的销售记录，按要求排序和过滤（排除3年以上的销售记录等）。
✅ Add CarSale 添加销售车辆	能正确添加一条新车辆记录。	能正确添加所有合法车辆记录，非法输入（如无效品牌、负价格）被拒绝。
✅ Update CarSale 更新销售记录	能正确更新某一条记录的销售状态。	能正确更新所有合法记录，确保买家ID、销售员用户名有效，且销售日期不是未来时间。

项目名称	低分标准（0–1.5 分）	满分标准（2–2.5 分）
✅ Stored Procedure 创建与调用	创建了几个函数但不完整，或没有在 Python 中调用。trigger	至少正确创建并使用两个数据库函数，且在 Python 中成功调用（如用于统计或更新逻辑）。

项目名称	无分（0 分）	满分（1 分）
✅ 小组贡献与 Canvas记录	存在组员不贡献、Canvas 无记录、或记录不全。	所有成员均有贡献，并在 Canvas 上记录完整的会议讨论与分工。

3. Detail

3.1 Logging In

- Enter their username and password.
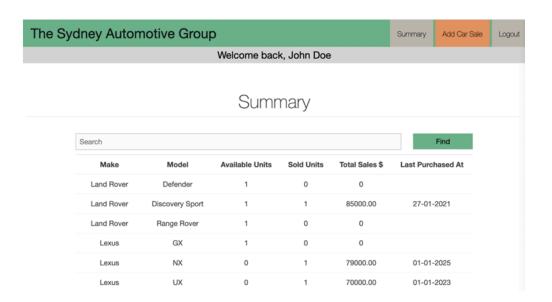- Just store original number or data, don`t need to be security.

- username should be case insensitive.

3.2 Viewing CarSales Summary

- ordered by `MAKE` , `MODEL` ASCENDING

- attribute :

  - Make

  - Model

  - Available Units

  - Sold Units

  - Total Sales
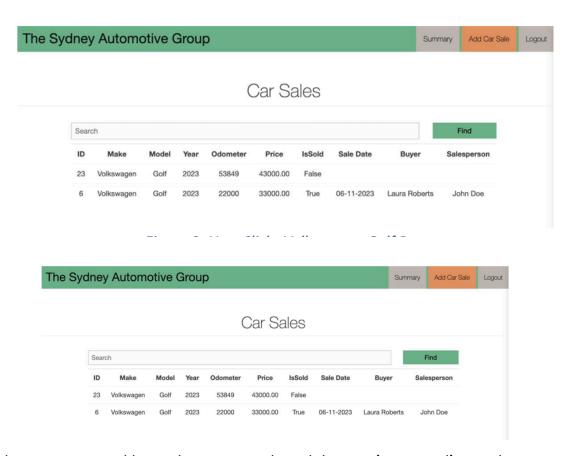
  - Last Purchased At (30-06-2002)

Return Summary

The Sydney Automotive Group				Summary	Add Car Sale	Logout

Welcome back, John Doe

Summary

Make	Model	Available Units	Sold Units	Total Sales $	Last Purchased At
Land Rover	Defender	1	0	0	
Land Rover	Discovery Sport	1	1	85000.00	27-01-2021
Land Rover	Range Rover	1	0	0	
Lexus	GX	1	0	0	
Lexus	NX	0	1	79000.00	01-01-2025
Lexus	UX	0	1	70000.00	01-01-2023

3.3 Finding CarSales

- After selecting row in the Car Sales Summary

- attribute

- sale ID

- make name

- model name

- built year

- odometer reading

- list price

- isSold

- sold cars are sorted by make name and model name in ascending order.

- The search result must exclude any sold car where sale dates are older than 3 years (from today's date)

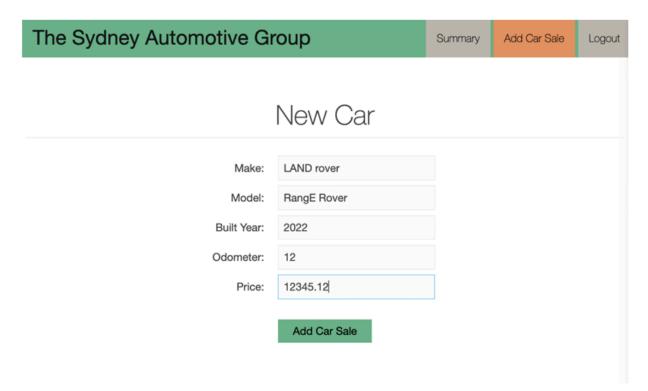- Sale date should be displayed in Date-Month-Year

3.4 Adding a CarSales

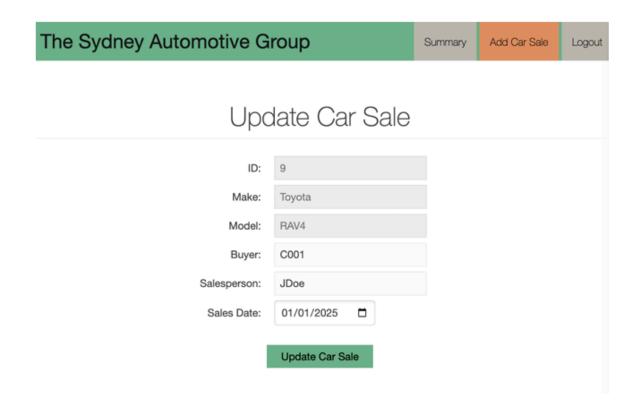*Figure 5: Adding a New Car Sale*

3.5 updating a Carsale

Figure 6 - Updating a Car Sale Record

4. The database structure

- **Salesperson** (UserName , Password , FirstName , LastName)

- **Customer** (CustomerID , FirstName , LastName , Mobile)

- **Make** (MakeCode , MakeName)

- **Model** (ModelCode , ModelName , MakeCode)

- **CarSales** (CarSaleID , MakeCode , ModelCode , BuiltYear , Odometer , Price , IsSold , BuyerID , SalespersonID , SaleDate)