

Mini-Project Report

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A) General overview of system:

- The interface of the mini project is based on the functionality of python3, sqlite3 and the interaction between these two.
- The interface itself relies on user input for the interaction between user and the program.
- For performing certain actions, try to follow the guidance as much as possible. If the inputs from users is not the acceptable form, the interface will ask for the same input until correct from of input is given.
- Small user guide:
 - (1) Login to the database if you have an account, register if you have no account
 - (2) Choose certain action to perform or logout
 - List all products with some active sales associated to them
 - Search for certain sales by entering several keywords
 - Post a sale
 - Search for certain user by providing a keyword

B) Detailed design:

The design of the source code can be divided into several parts

- Login screen:

Function 'login_screen' is responsible for user logging in, only if user inputs correct email, password or user registered successfully, other functionality can be performed.
- Listing products with active sales:

Function 'list_product' is responsible for listing all the products which are associated with active sales. After products are printed, user can choose one of them to perform following operations:

 - a. Write a product review
 - b. List all the existing reviews of this product
 - c. List all active sales associated to this product
- Searching sales

Function 'search_sales' is responsible for searching all the sales that is somehow related to the user input keywords, user can input more than one key word at this point.
- Follow-up functionalities for sales:

Function 'follow up' is designed to implement further operations when the result of previous actions include sales(e.g functionality 1c, 2, 5b in project description)

If there are sales printed, user can choose one of them to see its detailed information, even it is possible for three operations for the selected sale:

 - a. User can place a bid on the sale
 - b. List all active sales that are listed by the lister of the selected sale
 - c. List all existing reviews of the seller of this sale

- Posting sales

Function 'post_sales' are responsible for user posing sales.

- Searching users

Function 'search_users' is designed for searching certain users that are somehow related to the given keyword, in this case, only one keyword is accepted.

- Function 'main' is used for combining all the functionalities together.

(C) Testing Strategy

We used data from Natalie Iwaniuk for testing and completing our source code, and the data is only used for testing purpose, we have **NEVER** repost the data or use it for any bad purpose.

The testing strategy here is we basically run our query on sqlite3 and to ensure the query is doing desired job before we interact sqlite3 and python.

We also made some changes for the data just in order to cover as much edge cases as possible. Overall, our testing strategy is just using as much data as we can to improve our program performance.

At this point, we did not find any existing bugs.

(D) Group work break-down strategy

This strategy of breaking down work is based on the functions

1. Zhengyao Zhang (about 27 hours):

a. design of the program b. login_screen c. follow_up

- Zhengyao Zhang is mainly responsible for the functionality of login screen and those follow up operations after listing sales. Also, the overall design (structure) of the code is decided by Zhengyao Zhang.

2. Bingshen Yang (about 25 hours):

a. list_products b. search_sales c. modifying data

- Function 'list_products' and 'search_sales' are implemented by Bingshen Yang, and he is also responsible for modifying data for testing some certain cases.

3. Siyuan Wu (about 21 hours):

a. post_sales b. search_users c. debugging

- Function 'post_sales' and 'search_users' are made by Siyuan Wu, and he is also responsible for checking input validity(check if there is any input would make program crash).

- Coordination: After completing all the sub tasks, we combine our code together (using main function) and we did the testing and debugging together.

All functionalities are implemented based on the specifications and requirements of the mini project. We did not make any changes to the requirement.