

**NANYANG  
TECHNOLOGICAL  
UNIVERSITY**  
**SINGAPORE**

## **SC2207: Introduction to Databases**

### **Lab 1 Report**

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Tutorial Group: SCSD

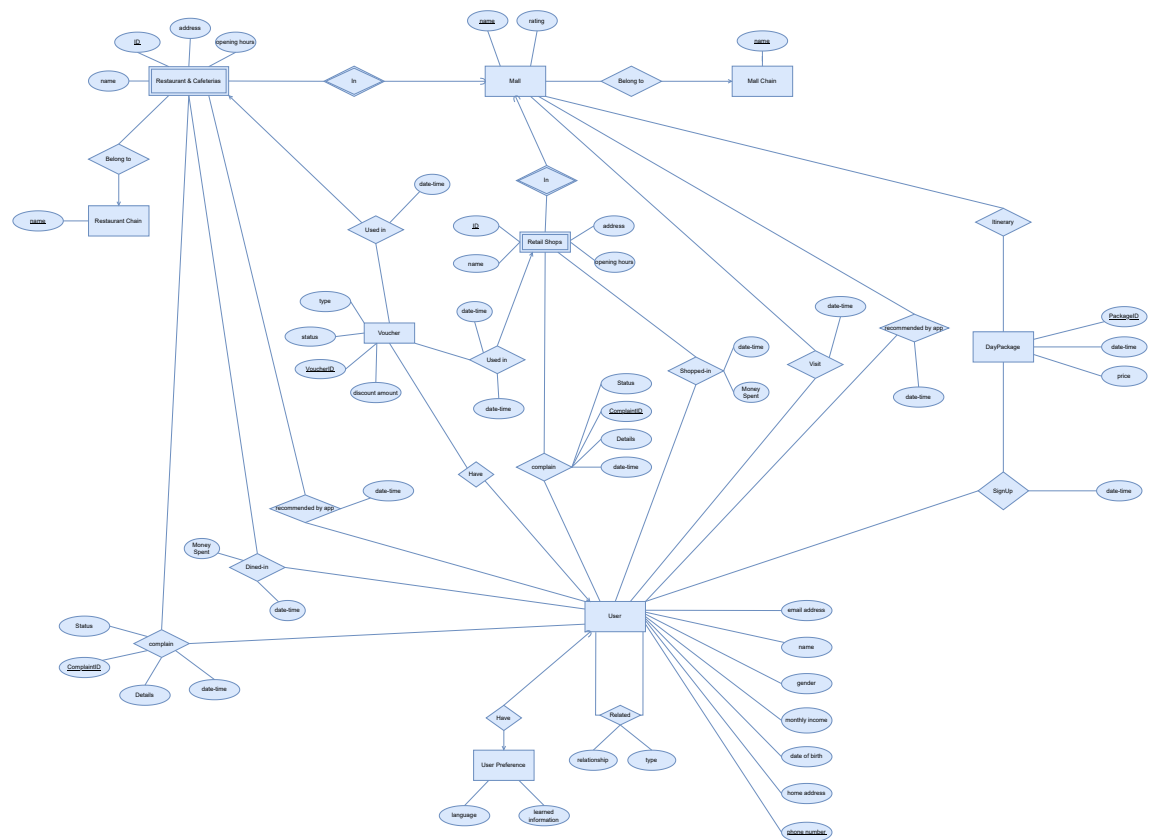
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School of Computer Science and Engineering  
Nanyang Technological University

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# ER Diagram



# Explanations

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## Assumptions

- For the *User* entity, date of birth, name, and gender are optional. If we don't have information about it, "None" will be filled in.
- For the *User Preference*, "learned information" uses natural language to store the user's preference, generated by ChatGPT.
- Assume that *Cafeterias* are a type of *Restaurant* and, hence can be grouped under the same entity set *Restaurant & Cafeterias*.
- Assume that a *User* can sign up for and be part of multiple *Day Packages* at the same time.
- Assume that *Cash Vouchers* can only be used in *Restaurants & Cafeterias*, and *Purchase Vouchers* can only be used in *Retail Shops*.
- Assume that *Discount Vouchers* mentioned in Appendix A of the Lab Manual, bullet point 6 is not another type of voucher, but refer to either of the 2 existing types of voucher, *Purchase Voucher* or *Cash Voucher*.

## Features

- The system can recommend suitable restaurants according to the user's visiting history.
- For the user-history-related queries (like the earnings of the restaurant), we only maintain the user history instead of maintaining all the answers for queries, which follows the principle "*Avoid Redundancy*".
- Instead of creating different types of vouchers, we use a general entity Vouchers with an attribute type, following the design principle "*Keep It Simple*".

# Appendix

## Appendix A: Individual Contribution Form

| Full Name           | Individual Contribution to Lab 1 Submission | Percentage of Contribution | Signature     |
|---------------------|---|----------------------------|---------------|
| Pu Fanyi            | ER Diagram                                  | 14.29%                     | 濮凡轶           |
| Jin Qingyang        | ER Diagram                                  | 14.29%                     | 晋清扬           |
| Qian Jianheng Oscar | ER Diagram                                  | 14.29%                     | Qian          |
| Soo Ying Xi         | ER Diagram                                  | 14.29%                     | So            |
| Ting Ruo Chee       | ER Diagram                                  | 14.29%                     | Ting Ruo Chee |
| Ye Yuhan            | ER Diagram                                  | 14.29%                     | Ye Yuhan      |
| Tang Yutong         | ER Diagram                                  | 14.29%                     | 唐毓童           |

## Appendix B: Individual Contribution Form

| Team member (full name) | Signature     | Date        | A or B* |
|-------------------------|---------------|-------------|---------|
| Pu Fanyi                | 濮凡轶           | 13/Feb/2024 | A       |
| Jin Qingyang            | 晋清扬           | 13/Feb/2024 | A       |
| Qian Jianheng Oscar     | Qian          | 13/Feb/2024 | A       |
| Soo Ying Xi             | So            | 13/Feb/2024 | A       |
| Ting Ruo Chee           | Ting Ruo Chee | 13/Feb/2024 | A       |
| Ye Yuhan                | Ye Yuhan      | 13/Feb/2024 | A       |
| Tang Yutong             | 唐毓童           | 13/Feb/2024 | A       |

\* Each team member should indicate either A or B:

- A. I affirm that my contribution(s) to the lab work is my own, produced without help from any AI tool(s).
- B. I affirm that my contribution(s) to the lab work has been produced with the use of AI tool(s).