GROUP ASSIGNMENT

TECHNOLOGY PARK MALAYSIA

AICT005-4-1-DAS

DATABASE SYSTEMS

UCDF2005(1) ICT(DI)

ASSIGNMENT TITLE: APU'S E-BOOKSTORE (PART 2)

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Table of Contents

1.0 Introduction

This report had provided a finalised entity relationship diagram with a relational schema. In addition, it also includes normalisation process up to 3NF on the relational schema designed. This report also provides the data dictionary and database diagram of the database designed. This report also shows all the CREATE TABLE and INSERT statements and provides the screenshots of all the tables with data. This report also provides the SQL Statements in Data Manipulation Language with respect to the ten questions given.

2.0 Database Schema

2.1 Finalised Entity Relationship Diagram

Figure 2-1: Finalised Entity Relationship Diagram

2.2   Relational Schema

MEMBER (<u>memberID</u>, customerName, customerAddress, gender, phoneNumber)

SHOPPING_CART (<u>cartID</u>, memberID (Foreign Key))

ORDER (<u>orderID</u>, paymentDate, deliveryDate, statusOfDelivery, memberID (Foreign Key), cartID (Foreign Key))

BOOK (<u>bookID</u>, title, genre, quantityInStock, pricePerUnit, publisherID (Foreign Key))

PUBLISHER (<u>publisherID</u>, phoneNumber, publisherAddress, publisherName)

FEEDBACK (<u>feedbackID</u>, rating, remarks, memberID (Foreign Key), bookID (Foreign Key))

PURCHASE (<u>purchaseID</u>, quantityDelivered, dateDelivered, publisherID (Foreign Key))

BOOK_PURCHASE (<u>bookID (Foreign Key), purchaseID (Foreign Key)</u>)

SHOPPING_CART_BOOK (<u>cartID (Foreign Key), bookID (Foreign Key)</u>)

ORDER_BOOK (<u>orderID (Foreign Key), bookID (Foreign Key)</u>)

AUTHOR (<u>bookID (Foreign Key)</u>, author)

2.3   Normalisation Process

1. **Relation: MEMBER** (<u>memberID</u>, customerName, customerAddress, gender, phoneNumber)

   Functional dependencies:

   memberID → customerName, customerAddress, gender, phoneNumber (full dependency)

   No partial and transitive dependencies are identified so the MEMBER relation is already in 3NF form.

2. **Relation: SHOPPING_CART** (<u>cartID</u>, memberID (Foreign Key))

   Functional dependencies:

   cartID → quantityDought, memberID (full dependency)

   No partial and transitive dependencies are identified so the SHOPPING_CART relation is already in 3NF form.

3. **Relation: ORDER** (<u>orderID</u>, paymentDate, deliveryDate, statusOfDelivery, memberID (Foreign Key), cartID (Foreign Key))

   Functional dependencies:

   orderID → paymentDate, deliveryDate, statusOfDelivery, memberID, cartID (full dependency)

   No partial and transitive dependencies are identified so the ORDER relation is already in 3NF form.

4. **Relation: BOOK** (<u>bookID</u>, title, genre, quantityInStock, pricePerUnit, publisherID (Foreign Key))

   Functional dependencies:

   bookID → title, genre, quantityStock, pricePerUnit, publisherID (full dependency)

   No partial and transitive dependencies are identified so the BOOK relation is already in 3NF form.

5. **Relation: PUBLISHER** (<u>publisherID</u>, phoneNumber, publisherAddress, publisherName)

   Functional dependencies:

   publisherID → phoneNumber, publisherAddress, publisherName (full dependency)

   No partial and transitive dependencies are identified so the PUBLISHER relation is already in 3NF form.

6. **Relation: FEEDBACK** (<u>feedbackID</u>, rating, remarks, memberID (Foreign Key), bookID (Foreign Key))

   Functional dependencies:

   feedbackID → rating, remarks, memberID, bookID (full dependency)

   No partial and transitive dependencies are identified so the FEEDBACK relation is already in 3NF form.

7. **Relation: PURCHASE** (<u>purchaseID</u>, quantityDelivered, dateDelivered, publisherID (Foreign Key))

   Functional Dependencies:

   purchaseID → quantityDelivered, dateDelivered, publisherID (full dependency)

   No partial and transitive dependencies are identified so the PURCHASE relation is already in 3NF form.

8. **Relation: BOOK_PURCHASE** (<u>bookID (Foreign Key), purchaseID (Foreign Key)</u>)

   Functional Dependencies:

   The relation BOOK_PURCHASE is already in 3NF form because there are no non-key attributes.

9. **Relation: SHOPPING_CART_BOOK** (<u>cartID (Foreign Key), bookID (Foreign Key)</u>)

   The relation SHOPPING_CART_BOOK is already in 3NF form because there are no non-key attributes.

10. **Relation: ORDER_BOOK** (<u>orderID (Foreign Key), bookID (Foreign Key)</u>)

The relation ORDER_BOOK is already in 3NF form because there are no non-key attributes.

11. Relation: AUTHOR (<u>bookID (Foreign Key)</u>, author)

The relation AUTHOR is already in 3NF form because there are no non-key attributes.

2.4 Relations in 3NF

MEMBER (<u>memberID</u>, customerName, customerAddress, gender, phoneNumber)

SHOPPING_CART (<u>cartID</u>, memberID (Foreign Key))

ORDER (<u>orderID</u>, paymentDate, deliveryDate, statusOfDelivery, memberID (Foreign Key), cartID (Foreign Key))

BOOK (<u>bookID</u>, title, genre, quantityInStock, pricePerUnit, publisherID (Foreign Key))

PUBLISHER (<u>publisherID</u>, phoneNumber, publisherAddress, publisherName)

FEEDBACK (<u>feedbackID</u>, rating, remarks, memberID (Foreign Key), bookID (Foreign Key))

PURCHASE (<u>purchaseID</u>, quantityDelivered, dateDelivered, publisherID (Foreign Key))

BOOK_PURCHASE (<u>bookID (Foreign Key), purchaseID (Foreign Key)</u>)

SHOPPING_CART_BOOK (<u>cartID (Foreign Key), bookID (Foreign Key)</u>)

ORDER_BOOK (<u>orderID (Foreign Key), bookID (Foreign Key)</u>)

AUTHOR (<u>bookID (Foreign Key)</u>, author)

2.5 Data Dictionary

Table Name	Attribute Name	Contents	Type	Format	Range	Required	PK or FK	FK Referenced Table
Member	memberID	ID of the customer	VARCHAR (5)	X9999	X0000-X9999	Y	PK	
	customerName	Customer full name	VARCHAR (50)	Xxxxxxxxx		Y		
	customerAddress	Customer Address	VARCHAR (100)	Xxxxxxxxx		Y		
	gender	Customer gender	CHAR(1)	X		Y		
	phoneNumber	Customer phone number	VARCHAR (12)	999-9999999	000-0000000-999-9999999	Y		
"Shopping Cart"	cartID	ID of the shopping cart	VARCHAR (5)	X0000	X0000-X9999	Y	PK	

	memberID	ID of the member	VARCHAR (5)	X0000	X0000-X9999	Y	FK	Member
"Order"	orderID	ID of the order	VARCHAR (5)	X0000	X0000-X9999	Y	PK	
	paymentDate	Date of member make payment	DATE	yyyy-mm-dd		Y		
	deliveryDate	Date of item delivered to member	DATE	yyyy-mm-dd		N		
	statusOfDelivery	Status of Item delivery	VARCHAR (15)	Xxxxxxxxx	'Delivered'/ 'Not delivered'	Y		
	memberID	ID of the member	VARCHAR (5)	X0000	X0000-X9999	Y	FK	Member
	cartID	ID of the shopping cart	VARCHAR (5)	X0000	X0000-X9999	Y	FK	"Shopping Cart"
Publisher	publisherID	ID of the publisher	VARCHAR (5)	X0000	X0000-X9999	Y	PK	

	phoneNumber	Publisher phone number	VARCHAR (12)	999-9999999	000-0000000-999-9999999	Y		
	publisherAddress	Publisher Address	VARCHAR (100)	Xxxxxxxxx		Y		
	publisherName	Publisher Name	VARCHAR (50)	Xxxxxxxxx		Y		
Book	bookID	ID of the Book	VARCHAR (5)	X0000	X0000-X9999	Y	PK	
	title	Title of the book	VARCHAR (50)	Xxxxxxxxx		Y		
	genre	Genre of the book	VARCHAR (20)	Xxxxxxxxx		Y		
	quantityInStock	Number of book in stock	INTEGER	99	0-100	Y		
	pricePerUnit	Price per book	MONEY	999	0-1000	Y		
	publisherID	ID of the publisher	VARCHAR (5)	X0000	X0000-X9999	Y	FK	Publisher
Feedback	feedbackID	ID of the feedback	VARCHAR (5)	X0000	X0000-X9999	Y	PK	

	rating	Rating of the book	INTEGER	9	1-10	Y		
	remarks	Remarks on the book	VARCHAR (50)	Xxxxxxx		N		
	memberID	ID of the member	VARCHAR (5)	X0000	X0000-X9999	Y	FK	Member
	bookID	ID of the book	VARCHAR (5)	X0000	X0000-X9999	Y	FK	Book
Purchase	purchaseID	ID of the purchase	VARCHAR (5)	X0000	X0000-X9999	Y	PK	
	quantityDelivered	Quantity of the book delivered to the bookstore	INTEGER	99	0-100	Y		
	dateDelivered	Date of the book delivered to the bookstore	DATE	yyyy-mm-dd		N		

	publisherID	ID of the publisher	VARCHAR (5)	X0000	X0000-X9999	Y	FK	Publisher
Book_Purcha se	bookID	ID of the book	VARCHAR (5)	X0000	X0000-X9999	Y	FK	Book
	purchaseID	ID of the purchase	VARCHAR (5)	X0000	X0000-X9999	Y	FK	Purchase
Shopping Cart_Book	cartID	ID of the shopping cart	VARCHAR (5)	X0000	X0000-X9999	Y	FK	Shopping Cart
	bookID	ID of the book	VARCHAR (5)	X0000	X0000-X9999	Y	FK	Book
Order_Book	orderID	ID of the order	VARCHAR (5)	X0000	X0000-X9999	Y	FK	Order
	bookID	ID of the book	VARCHAR (5)	X0000	X0000-X9999	Y	FK	Book
Author	bookID	ID of the book	VARCHAR (5)	X0000	X0000-X9999	Y	FK	Book
	author	Name of the author	VARCHAR (50)	Xxxxxxxxx		Y		

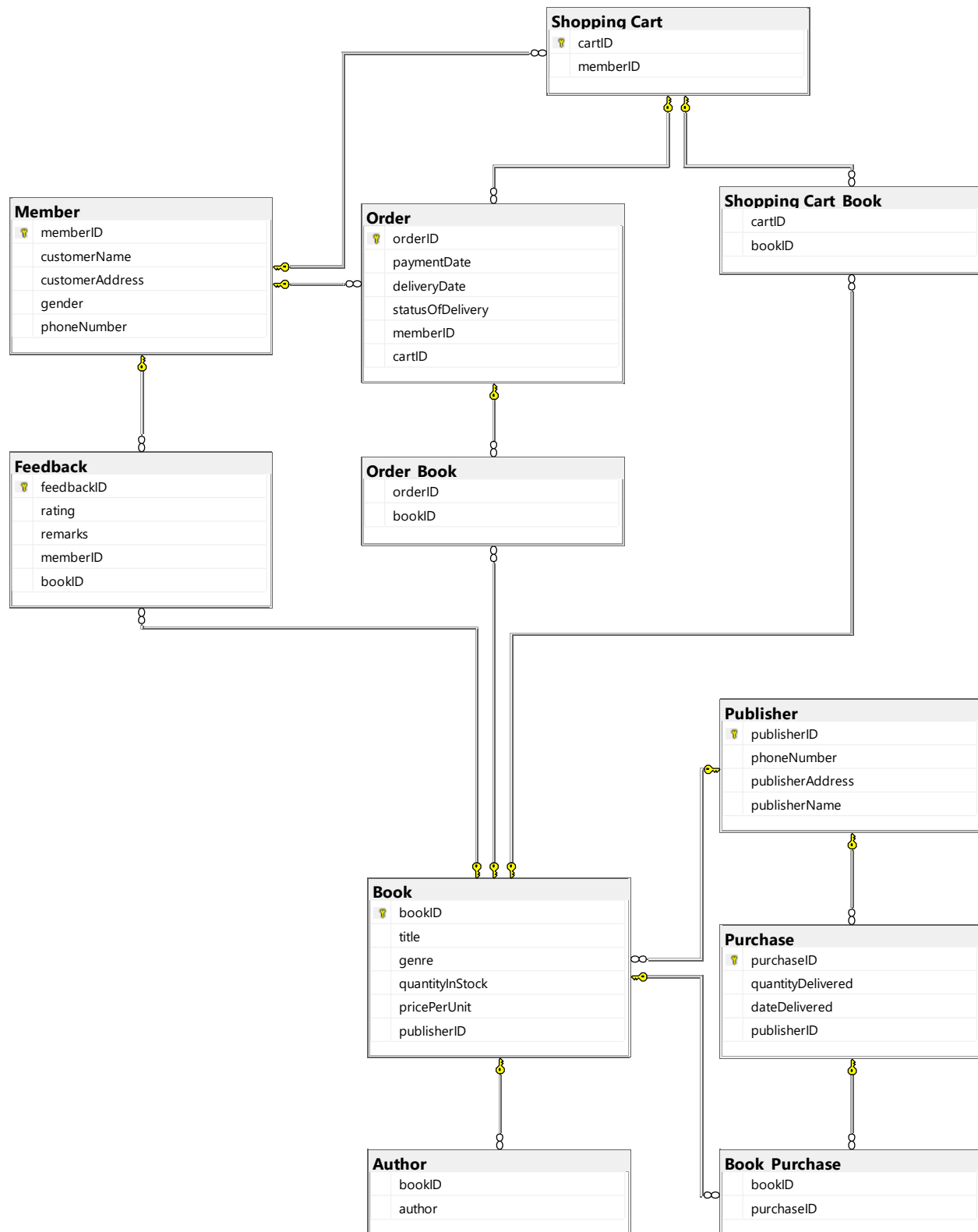## 2.6   Database Diagram

Figure 2: Database Diagram

3.0   SQL - Data Definition Language (DDL)

3.1   CREATE TABLE and INSERT statements

```
CREATE DATABASE eBookstore;
GO


USE eBookstore;
GO
```
Figure 3-1: CREATE DATABASE and USE statement

```sql
CREATE TABLE Member
    (memberID VARCHAR(5) PRIMARY KEY,
     customerName VARCHAR(50) NOT NULL,
     customerAddress VARCHAR(100) NOT NULL,
     gender CHAR(1) NOT NULL,
     phoneNumber VARCHAR(12) NOT NULL);
```

Figure 3-2: CREATE TABLE MEMBER Statement

```sql
INSERT INTO Member (
    memberID,
    customerName,
    customerAddress,
    gender,
    phoneNumber
) VALUES
    --DX DATA
    ('M0001','Lim Hon Heng','14, Jalan Makmur, Taman Makmur, 56100 Cheras, KL','F','011-23458765'),
    ('M0002','Chow Yin Xin','E-08-09, Jalan Teknologi 5, Teknologi Park Malaysia, 56000 Bukit Jalil, KL','M','013-25749255'),
    ('M0003','Tan Wing Yee','56, Jalan Prima, Taman Prima, 43200 Cheras, Selangor','F','014-8388608'),
    ('M0004','Lai Yue Kit','34, Jalan Pintar 3, Taman Pintar, 28300 Triang, Pahang','M','011-3141592'),
    ('M0005','Lee Kai Yee','9, Jalan Inovasi, Taman Inovasi, 68000 Ampang, Selangor','F','012-4194304'),
    ('M0006','Kok Sheng Jie','49, Jalan Ketumbar, Taman Yulek, 56100 Cheras, KL','M','018-42487427'),
    ('M0007','Shim Wye Yong','31, Jalan Orkid 5, Taman Orkid, 43200 Cheras, Selangor','M','018-01912192'),
    ('M0008','Tam Jia Zhen','4, Jalan Setia, Taman Setia, 25000 Sitiawan, Perak','F','017-88327317'),
    ('M0009','Ooi Hui Wen','73, Jalan Bersatu 3, Taman Bersatu, 23000 Taiping, Perak','M','018-09719845'),
    ('M0010','Chong Wei Chee','44, Jalan Jesselton, Taman Bukit Kuching, 98400 Kota Kinabalu, Sabah','F','014-7144234'),
    --HK DATA
    ('M0011', 'Rafeah Koh', '22 Jalan SS 5C/8 Kelana Jaya, Petaling Jaya, Selangor', 'F', '016-3122222'),
    ('M0012', 'Affendi Foon', '3 Blok 154 Kompleks Maluri 154 3 6 Jln Jejaka Taman Maluri, Kuala Lumpur', 'M', '012-3320976'),
    ('M0013', 'Preeta Singh a/l Sothinathan Karathu', '6, Jln 8, Seri Maluri, 87013 Rancha-Rancha, Labuan', 'F', '010-7189314'),
    ('M0014', 'Muhammet Fithri bin Hazaril', 'No. 9-7, Jln 7/2, Laman Tun Perak, 23892 Teluk Kalung, Terengganu Darul Iman', 'M', '015-4354172'),
    ('M0015', 'Woo Cham Choon', '2, Jalan Chan Sow Lin 8S, Kondominium Dato Harun, 70204 Sungai Gadut, Negeri Sembilan', 'M', '015-1231643'),
    ('M0016', 'Nor Dalili binti Wan Al', '551, Jalan Prangin 96F, Batu Pertama, 85560 Pagoh, Johor Darul Tazim', 'F', '011-10877563'),
    ('M0017', 'Kiran Sachithanandan a/l Renuga', 'H-16-47, Lorong 1/2V, Kondominium Seputeh, 09160 Lunas, Kedah Darul Aman', 'F', '015-2293976'),
    ('M0018', 'Hj Chailan Saad bin Ramly', '75, Jalan Zaaba 5/96, Kota Damai, 63909 Subang, Selangor Darul Ehsan', 'M', '084-480956'),
    --YY DATA
    ('M0019', 'Gozilla Kong', 'Lebuh Batu Nilam 1, Bandar Bukit Tinggi, 41200', 'F', '03-5122-7218'),
    ('M0020', 'Nokisa Tang ', '2 25 Lrg 20 Taman Petani Jaya Sungai Petani Sungai', 'F', '012-4210093'),
    ('M0021', 'Hey Joker ', 'Pasar 5 Jln Raja Bot', 'M', '019-2698294'),
    ('M0022', 'John K Smock ', '285 -287, Jalan Tuanku Abdul Rahman', 'M', '03-2948589'),
    ('M0023', 'Kingsley Wong', 'A 279 Jln Bandar 2 Taman Melawati Hulu', 'M', '016-9869155'),
    ('M0024', 'Raymond Yong ', 'No. 3377, Jln Rj6/2, Seremban', 'M', '017-6310227'),
    ('M0025', 'Susan Ong ', 'No. 5 Jalan SS 21/39, Damansara Uptown', 'F', '014-7727862'),
    ('M0026', 'Carmen Woo', 'Suite 19.01, Level 19, The Gardens South Tower', 'F', 'N'016-7789352'),
    ('M0027', 'Manad Lise', 'Lot 318, Jahlan Muhibbah, 93400, Kuching', 'M', '018-478-5855'),
    ('M0028', 'Findy Sow', '2300  Tanglewood Road', 'F', '014-2388954');
GO
```

Figure 3-3: INSERT Statement of MEMBER Table

```
CREATE TABLE "Shopping Cart"
    (cartID VARCHAR(5) PRIMARY KEY,
     memberID VARCHAR(5) NOT NULL REFERENCES Member(memberID));
```

Figure 3-4: CREATE TABLE "SHOPPING CART" Statement

```
--SHOPPING CART DATA
INSERT INTO "Shopping Cart" (
    cartID,
    memberID
) VALUES
    --DX DATA
    ('C0001','M0001'),
    ('C0002','M0002'),
    ('C0003','M0003'),
    ('C0004','M0004'),
    ('C0005','M0005'),
    ('C0006','M0006'),
    ('C0007','M0007'),
    ('C0008','M0008'),
    ('C0009','M0009'),
    ('C0010','M0010'),
    --HK DATA
    ('C0011', 'M0011'),
    ('C0012', 'M0012'),
    ('C0013', 'M0013'),
    ('C0014', 'M0014'),
    ('C0015', 'M0015'),
    ('C0016', 'M0016'),
    ('C0017', 'M0017'),
    ('C0018', 'M0018'),
    --YY DATA
    ('C0019', 'M0019'),
    ('C0020', 'M0020'),
    ('C0021', 'M0021'),
    ('C0022', 'M0022'),
    ('C0023', 'M0023'),
    ('C0024', 'M0024'),
    ('C0025', 'M0025'),
    ('C0026', 'M0026'),
    ('C0027', 'M0027'),
    ('C0028', 'M0028');
GO
```

Figure 3-5: INSERT Statement of "SHOPPING CART" Table

```
CREATE TABLE "Order"
    (orderID VARCHAR(5) PRIMARY KEY,
     paymentDate DATE NOT NULL,
     deliveryDate DATE NULL,
     statusOfDelivery VARCHAR(15) NOT NULL,
     memberID VARCHAR(5) NOT NULL REFERENCES Member(memberID),
     cartID VARCHAR(5) NOT NULL REFERENCES "Shopping Cart");
```

Figure 3-6: CREATE TABLE ORDER Statement

```
--ORDER DATA
INSERT INTO "Order" (
    orderID,
    paymentDate,
    deliveryDate,
    statusOfDelivery,
    memberID,
    cartID
) VALUES
    --DX DATA
    ('O0001','2021-04-01','2021-04-05','Delivered','M0001','C0001'),
    ('O0002','2021-04-03','2021-04-07','Delivered','M0002','C0002'),
    ('O0003','2021-04-06','2021-04-10','Delivered','M0003','C0003'),
    ('O0004','2021-04-08','2021-04-12','Delivered','M0004','C0004'),
    ('O0005','2021-04-10','2021-04-13','Delivered','M0005','C0005'),
    ('O0006','2021-04-15','2021-04-20','Delivered','M0006','C0006'),
    ('O0007','2021-04-27','2021-04-30','Delivered','M0007','C0007'),
    ('O0008','2021-05-02','2021-05-07','Delivered','M0008','C0008'),
    ('O0009','2021-05-08','2021-05-14','Delivered','M0009','C0009'),
    ('O0010','2021-05-17',NULL,'Not Delivered','M0010','C0010'),
    --HK DATA
    ('O0011', '2021-05-20', NULL, 'Not Delivered', 'M0013', 'C0013'),
    ('O0012', '2021-05-10', '2021-05-13', 'Delivered', 'M0014', 'C0014'),
    ('O0013', '2021-04-27', '2021-04-29', 'Delivered', 'M0011', 'C0011'),
    ('O0014', '2021-03-20', '2021-03-24', 'Delivered', 'M0015', 'C0015'),
    ('O0015', '2021-05-23', NULL, 'Not Delivered', 'M0017',  'C0017'),
    ('O0016', '2021-02-14', '2021-02-17', 'Delivered', 'M0014', 'C0014'),
    ('O0017', '2021-05-21', NULL, 'Not Delivered', 'M0018', 'C0018'),
    ('O0018', '2021-05-24', NULL, 'Not Delivered', 'M0012', 'C0012'),
    ('O0019', '2021-03-23', '2021-03-26', 'Delivered', 'M0016', 'C0016'),
    ('O0020', '2021-05-25', NULL, 'Not Delivered', 'M0016', 'C0016'),
    --YY DATA
    ('O0021', '2021-05-23', NULL,'Not Delivered', 'M0019', 'C0019'),
    ('O0022', '2021-05-24', NULL,'Not Delivered', 'M0019', 'C0019'),
    ('O0023', '2021-01-07', '2021-01-13', 'Delivered', 'M0027', 'C0027'),
    ('O0024', '2021-05-30', NULL,'Not Delivered', 'M0025', 'C0025'),
    ('O0025', '2021-03-13' , '2021-03-20','Delivered', 'M0026', 'C0026'),
    ('O0026', '2021-03-19', '2021-03-21','Delivered', 'M0024', 'C0024'),
    ('O0027', '2021-04-04', '2021-04-08','Delivered', 'M0022', 'C0022');
GO
```

Figure 3-7: INSERT Statement of ORDER Table

```
CREATE TABLE Publisher
        (publisherID VARCHAR(5) PRIMARY KEY,
        phoneNumber VARCHAR(12) NOT NULL,
        publisherAddress VARCHAR(100) NOT NULL,
        publisherName VARCHAR(50) NOT NULL);
```

Figure 3-8: CREATE TABLE PUBLISHER Statement

```
INSERT INTO Publisher (
    publisherID,
    phoneNumber,
    publisherAddress,
    publisherName
) VALUES
    --DX DATA
    ('P0001','013-2341233','13, Jalan Shinji, Taman Shinji, 43200 Cheras, Selangor','Shinji Publishing'),
    ('P0002','014-4958212','23, Jalan Karisma 4, Taman Berkarisma, 43200 Cheras, Selangor','Akari Publishing'),
    ('P0003','015-6421356','2, Jalan Kembangan, Taman Kembangan, 43300 Seri Kembangan, Selangor','DX Bookstore'),
    ('P0004','012-1234542','1, Jalan Pelangi, Taman Pelangi, 46300 Petaling Jaya, Selangor','Pelangi Publishing'),
    ('P0005','011-58027191','25, Jalan Motivasi, Taman Motivasi, 56100 Cheras, Kuala Lumpur','3M Publishing'),
    ('P0006','011-6797246','9, Jalan Loke Yew, Taman Loke Yew, 56000 Taman Maluri, Kuala Lumpur','Tsun Jin Publishing'),
    ('P0007','017-7774682','43, Jalan Aman 4, Taman Bukit Aman, 56100 Cheras, Kuala Lumpur','Kuen Cheng Publishing'),
    ('P0008','016-9805896','27, Jalan Taynton View, Taman Taynton View, 56000 Cheras, Kuala Lumpur','Western Bookshop'),
    ('P0009','014-2106974','10, Jalan Ahliman, Taman Connaught, 56000 Cheras, Kuala Lumpur','Success Publishing'),
    ('P0010', '013-2058234', '13, Jalan Teknologi 13, Taman Teknologi Malaysia, 56000 Bukit Jalil, Kuala Lumpur','Asia Pacific Publishing'),
    --HK DATA
    ('P0011', '016-0972213', 'Blok Kedai Area B Seksyen 1 Wangsa Maju 53300 Wilayah Persekutuan Kuala Lumpur, Malaysia', 'Prentice Hall'),
    ('P0012', '010-0283111', 'Lot 5713, Bgn Tabung Haji, 45300', 'Kurt Wolff'),
    ('P0013', '011-0203826', '2nd Floor, Jalan 19/3, 46300', 'Pearson Schools'),
    ('P0014', '010-3213445', 'sp-5 the Street Mall Persiaran Multimedia 63000 Cyberjaya', 'Blackwood'),
    ('P0015', '016-0913281', 'Ground Floor Blok 2 Jln 18/118B Desa Tun Razak 56000 Wilayah Persekutuan, Malaysia', 'Secker and Warburg'),
    ('P0016', '011-5133222', '1St Floor, Desa Bunga Raya, 43000', 'Simon & Schuster'),
    ('P0017', '012-3248976', 'Kelana Centre Point 3, Jalan Ss7/19, 47301', 'Heinnemann'),
    ('P0018', '016-3929877', 'Lot 3452, Taman Bangi Jaya, 43500', 'Changbi'),
    ('P0019', '011-0903333', 'Off Jalan Banting, Landpac Industrial Park, Port 42000', 'Kiepenheuer & Witsh'),
    ('P0020', '013-2231412', 'Tingkat 2, Medan MARA, Jalan Raja Laut', 'Doubleday'),
    ('P0021', '011-3224411', '1 Jalan Ngee Heng 80000 Johor Malaysia', 'Harper Collins.'),
    --YY DATA
    ('P0022', '03-22844837', '20-2F, Bangsar Village 2, 59100 Kuala Lumpur', 'Sliverfish Books Sdn Bhd'),
    ('P0023', '03-79318998', 'No 2. Jalan SS2, Subang Jaya', 'University Book Store'),
    ('P0024', '03-78805840', ' No. 7-6, Dataran Prima, 47301 Petaling Jaya', 'Malaysian Book Publishers Association'),
    ('P0025', '03-89416172', 'UPM Press, 43400 Serdang, Selangor', 'UPM Press'),
    ('P0026', '03-56371090', '17-2, Jalan PJS 11/28b, Sunway, 47500 Subang Jaya', 'Snappars'),
    ('P0027', '03-62634884', 'No. 31-2, Jalan 11/62a, 52200 Kuala Lumpur', 'Kanyin Publication ');
GO
```

Figure 3-9: INSERT Statement of PUBLISHER Table

```
CREATE TABLE Book
    (bookID VARCHAR(5) PRIMARY KEY,
     title VARCHAR(50) NOT NULL,
     genre VARCHAR(50) NOT NULL,
     quantityInStock INTEGER NOT NULL,
     pricePerUnit MONEY NOT NULL,
     publisherID VARCHAR(5) NOT NULL REFERENCES Publisher(publisherID));
```

Figure 3-10: CREATE TABLE BOOK Statement

```
-- BOOK DATA
INSERT INTO Book (
    bookID,
    title,
    genre,
    quantityInStock,
    pricePerUnit,
    publisherID
) VALUES
    --DX DATA
    ('B0001','The Hare','Fiction',3,25,'P0001'),
    ('B0002','Success Additional Mathematics SPM','Non-fiction',4,30,'P0002'),
    ('B0003','Encyclopedia of Expedia','Non-fiction',5,23,'P0003'),
    ('B0004','Eye','Fiction',2,27,'P0004'),
    ('B0005','Your Nose','Fiction',3,24,'P0005'),
    ('B0006','Her Lips','Fiction',4,20,'P0006'),
    ('B0007','Pillow Talk','Fiction',5,21,'P0007'),
    ('B0008','The Jungle Book','Fiction',2,21,'P0008'),
    ('B0009','Python Programming Handbook','Non-fiction',5,20,'P0009'),
    ('B0010','Littering Awareness','Non-fiction',1,22,'P0010'),
    --HK DATA
    ('B0011', 'For whom the Bell Tolls', 'Historical Fiction', 3, 78.99, 'P0011'),
    ('B0012', 'The Castle', 'Political Fiction', 2, 60.00, 'P0012'),
    ('B0013', 'Apple Cart', 'Satire', 3, 160.99, 'P0013'),
    ('B0014', 'Silas Marner', 'Domestic Fiction', 5, 32.00, 'P0014'),
    ('B0015', 'Animal Farm', 'Satire', 3, 20.00, 'P0015'),
    ('B0016', 'Faust', 'Tragedy', 2, 120.00, 'P0016'),
    ('B0017', 'Time Machine', 'Science Fiction', 5, 30.00, 'P0017'),
    ('B0018', 'The Vegetarian', 'Psychological Fiction', 2, 50.00, 'P0018'),
    ('B0019', 'The Clown', 'Historical Fiction', 3, 50.00, 'P0019'),
    ('B0020', 'A Little Life', 'Domestic Fiction', 2, 75.00, 'P0020'),
    ('B0021', 'To Kill a Mockingbird', 'Southern Gothic', 4, 120.00, 'P0021'),
    ('B0022', 'The Alchemist', 'Fantasy Fiction', 4, 60.00, 'P0021'),
    --YY DATA
    ('B0023', 'Hey my mama', 'Fiction', 4, 20.00, 'P0026'),
    ('B0024', 'The Sun also rises ', 'Fiction', 3, 50.00, 'P0023'),
    ('B0025', 'Debt-Free', 'non-fiction', 10, 23.00, 'P0025'),
    ('B0026', 'Their Eyes were watching God', 'Non-Fiction', 7, 33.00, 'P0022'),
    ('B0027', 'How to be healthy', 'Healh and Fitness', 1, 12.00, 'P0022'),
    ('B0028', 'English for life', 'Dictionary', 6, 30.00, 'P0027'),
    ('B0029', 'To kill a mockingbird', 'Fiction', 4, 42.00, 'P0027'),
    ('B0030', 'Why Sun is on the sky', 'Science fiction', 2, 26.00, 'P0023'),
    ('B0031', 'The Adventure of Huckleberry Finn','Fiction', 5, 32.70, 'P0026'),
    ('B0032', 'A Step To a New Venture', 'Non-Fiction', 4, 40.10, 'P0026');
GO
```

Figure 3-11: INSERT Statement of BOOK Table

```
CREATE TABLE Feedback
    (feedbackID VARCHAR(5) PRIMARY KEY,
     rating INTEGER NOT NULL,
     remarks VARCHAR(100) NULL,
     memberID VARCHAR(5) NOT NULL REFERENCES Member(memberID),
     bookID VARCHAR(5) NOT NULL REFERENCES Book(bookID));
```

Figure 3-12: CREATE TABLE FEEDBACK Statement

```
--FEEDBACK DATA
INSERT INTO Feedback (
    feedbackID,
    rating,
    remarks,
    memberID,
    bookID
) VALUES
    --DX DATA
    ('F0001',7,'Nice to read','M0001','B0001'),
    ('F0002',8,'Clear Explanation','M0002','B0002'),
    ('F0003',6,'Very informative','M0003','B0003'),
    ('F0004',7,NULL,'M0004','B0004'),
    ('F0005',9,NULL,'M0005','B0005'),
    ('F0006',8,NULL,'M0006','B0006'),
    ('F0007',9,NULL,'M0007','B0007'),
    ('F0008',7,NULL,'M0008','B0008'),
    ('F0009',8,NULL,'M0009','B0009'),
    ('F0010',8,NULL,'M0010','B0010'),
    --HK DATA
    ('F0011', 8, NULL, 'M0012', 'B0011'),
    ('F0012', 9, 'The physicis principles and laws are well explained.', 'M0018', 'B0017'),
    ('F0013', 5, 'The storyline is quite confusing.', 'M0014', 'B0015'),
    ('F0014', 6, NULL, 'M0012', 'B0019'),
    ('F0015', 8, 'The story is realistic and relatable', 'M0017', 'B0017'),
    ('F0016', 4, 'The story is boring', 'M0011', 'B0018'),
    ('F0017', 7, 'This book is worth the reading time', 'M0015', 'B0021'),
    ('F0018', 9, 'The story is creative and interesting', 'M0011', 'B0022'),
    --YY DATA
    ('F0019', 10 , 'Absoloutly intresting to read', 'M0019', 'B0023'),
    ('F0020', 8 , 'Stil have alot place need to be improve ', 'M0019', 'B0024'),
    ('F0021', 9 , NULL, 'M0021', 'B0029'),
    ('F0022', 0 , 'not recommended. storyline too terrible ', 'M0027', 'B0030'),
    ('F0023', 5 , NULL, 'M0026', 'B0029'),
    ('F0024', 10 , 'I had learn many things in this book', 'M0027', 'B0027'),
    ('F0025', 3 , NULL, 'M0019', 'B0025'),
    ('F0026', 9 , 'good', 'M0028', 'B0026');
GO
```

Figure 3-13: INSERT Statement of FEEDBACK Table

```
CREATE TABLE Purchase
    (purchaseID VARCHAR(5) PRIMARY KEY,
     quantityDelivered INTEGER NOT NULL,
     dateDelivered DATE NULL,
     publisherID VARCHAR(5) NOT NULL REFERENCES Publisher(publisherID));
```

Figure 3-14: CREATE TABLE PURCHASE Statement

```
-- PURCHASE DATA
INSERT INTO Purchase (
    purchaseID,
    quantityDelivered,
    dateDelivered,
    publisherID
) VALUES
    --DX DATA
    ('S0001',1,'2020-04-03','P0001'),
    ('S0002',1,'2020-04-05','P0002'),
    ('S0003',2,'2020-04-08','P0003'),
    ('S0004',1,'2020-04-10','P0004'),
    ('S0005',1,'2020-04-11','P0005'),
    ('S0006',2,'2020-04-17','P0006'),
    ('S0007',1,'2020-04-28','P0007'),
    ('S0008',2,'2020-05-04','P0008'),
    ('S0009',1,'2020-05-11','P0009'),
    ('S0010',2,NULL,'P0010'),
    --HK DATA
    ('S0011', 3, '2021-03-21', 'P0010'),
    ('S0012', 2, '2021-03-22', 'P0012'),
    ('S0013', 3, '2021-04-04', 'P0013'),
    ('S0014', 5, '2021-04-05', 'P0014'),
    ('S0015', 3, '2021-04-10', 'P0015'),
    ('S0016', 2, '2021-04-14', 'P0016'),
    ('S0017', 5, '2021-04-16', 'P0017'),
    ('S0018', 2, '2021-04-17', 'P0018'),
    ('S0019', 3, '2021-04-23', 'P0019'),
    ('S0020', 2, '2021-04-24', 'P0020'),
    ('S0021', 6, '2021-04-25', 'P0021'),
    ('S0022', 2, '2021-04-28', 'P0021'),
    --YY DATA
    ('S0023', 4, '2020-12-12', 'P0026'),
    ('S0024', 6, '2021-1-13', 'P0022'),
    ('S0025', 2, '2021-3-5', 'P0023'),
    ('S0026', 5, '2021-1-31', 'P0025'),
    ('S0027', 5, '2021-2-19','P0027');
GO
```

Figure 3-15: INSERT Statement of PURCHASE Table

```sql
CREATE TABLE Book_Purchase
    (bookID VARCHAR(5) NOT NULL REFERENCES Book(bookID),
     purchaseID VARCHAR(5) NOT NULL REFERENCES Purchase(purchaseID));
```

Figure 3-16: CREATE TABLE BOOK_PURCHASE Statement

```sql
-- BOOK_PURCHASE DATA
INSERT INTO Book_Purchase (
    bookID,
    purchaseID
) VALUES
    --DX DATA
    ('B0001','S0001'),
    ('B0002','S0002'),
    ('B0003','S0003'),
    ('B0003','S0003'),
    ('B0004','S0004'),
    ('B0005','S0005'),
    ('B0006','S0006'),
    ('B0006','S0006'),
    ('B0007','S0007'),
    ('B0008','S0008'),
    ('B0008','S0008'),
    ('B0009','S0009'),
    ('B0010','S0010'),
    ('B0010','S0010'),
```

Figure 3-17 INSERT Statement of BOOK_PURCHASE Table Part 1

```
--HK DATA
('B0011', 'S0011'),
('B0011', 'S0011'),
('B0011', 'S0011'),
('B0012', 'S0012'),
('B0012', 'S0012'),
('B0013', 'S0013'),
('B0013', 'S0013'),
('B0013', 'S0013'),
('B0014', 'S0014'),
('B0014', 'S0014'),
('B0014', 'S0014'),
('B0014', 'S0014'),
('B0014', 'S0014'),
('B0015', 'S0015'),
('B0015', 'S0015'),
('B0015', 'S0015'),
('B0016', 'S0016'),
('B0016', 'S0016'),
('B0017', 'S0017'),
('B0017', 'S0017'),
('B0017', 'S0017'),
('B0017', 'S0017'),
('B0017', 'S0017'),
('B0018', 'S0018'),
('B0018', 'S0018'),
('B0019', 'S0019'),
('B0019', 'S0019'),
('B0019', 'S0019'),
('B0020', 'S0020'),
('B0020', 'S0020'),
('B0021', 'S0021'),
('B0021', 'S0021'),
('B0021', 'S0021'),
('B0022', 'S0021'),
('B0022', 'S0021'),
('B0022', 'S0021'),
('B0021', 'S0022'),
('B0022', 'S0022'),
```

Figure 3-18: INSERT Statement of BOOK_PURCHASE Table Part 2

```
--YY DATA
('B0023', 'S0023'),
('B0031', 'S0023'),
('B0032', 'S0023'),
('B0032', 'S0023'),
('B0026', 'S0024'),
('B0026', 'S0024'),
('B0026', 'S0024'),
('B0027', 'S0024'),
('B0027', 'S0024'),
('B0027', 'S0024'),
('B0024', 'S0025'),
('B0030', 'S0025'),
('B0025', 'S0026'),
('B0025', 'S0026'),
('B0025', 'S0026'),
('B0025', 'S0026'),
('B0025', 'S0026'),
('B0028', 'S0027'),
('B0028', 'S0027'),
('B0029', 'S0027'),
('B0029', 'S0027'),
('B0029', 'S0027');
GO
```

Figure 3-19: INSERT Statement of BOOK_PURCHASE Table Part 3

```
CREATE TABLE "Shopping Cart_Book"
    (cartID VARCHAR(5) NOT NULL REFERENCES "Shopping Cart"(cartID),
     bookID VARCHAR(5) NOT NULL REFERENCES Book(bookID));
```

Figure 3-20: CREATE TABLE SHOPPING CART_BOOK Statement

```
--SHOPPING_CART_BOOK
INSERT INTO "Shopping Cart_Book" (
    cartID,
    bookID
) VALUES
    --DX DATA
    ('C0001','B0001'),
    ('C0002','B0002'),
    ('C0003','B0003'),
    ('C0003','B0003'),
    ('C0004','B0004'),
    ('C0005','B0005'),
    ('C0006','B0006'),
    ('C0006','B0006'),
    ('C0007','B0007'),
    ('C0008','B0008'),
    ('C0008','B0008'),
    ('C0009','B0009'),
    ('C0010','B0010'),
    ('C0010','B0010'),
    --HK DATA
    ('C0011', 'B0011'),
    ('C0011', 'B0012'),
    ('C0011', 'B0021'),
    ('C0012', 'B0018'),
    ('C0012', 'B0018'),
    ('C0015', 'B0017'),
    ('C0016', 'B0014'),
    ('C0017', 'B0013'),
    ('C0017', 'B0013'),
    ('C0017', 'B0020'),
    ('C0014', 'B0011'),
    ('C0018', 'B0015'),
    ('C0018', 'B0016'),
    --YY DATA
    ('C0019', 'B0023'),
    ('C0019', 'B0023'),
    ('C0019', 'B0025'),
    ('C0019', 'B0025'),
    ('C0019', 'B0032'),
    ('C0019', 'B0031'),
    ('C0019', 'B0031'),
    ('C0020', 'B0026'),
    ('C0020', 'B0027'),
    ('C0021', 'B0025'),
    ('C0021', 'B0031'),
    ('C0021', 'B0030'),
    ('C0021', 'B0028'),
    ('C0021', 'B0024'),
    ('C0023', 'B0024'),
    ('C0023', 'B0032'),
    ('C0023', 'B0026'),
    ('C0024', 'B0028'),
    ('C0024', 'B0028'),
    ('C0024', 'B0028'),
    ('C0024', 'B0031'),
    ('C0024', 'B0031'),
    ('C0024', 'B0031'),
    ('C0024', 'B0025'),
    ('C0024', 'B0025'),
    ('C0024', 'B0025'),
    ('C0024', 'B0029'),
    ('C0024', 'B0029'),
    ('C0026', 'B0027'),
    ('C0027', 'B0023'),
    ('C0027', 'B0032'),
    ('C0027', 'B0025'),
    ('C0027', 'B0030'),
    ('C0028', 'B0026'),
    ('C0028', 'B0027'),
    ('C0028', 'B0032');
GO
```

Figure 3-21: INSERT Statement of SHOPPING CART_BOOK Table

```sql
CREATE TABLE Order_Book
    (orderID VARCHAR(5) NOT NULL REFERENCES "Order"(orderID),
     bookID VARCHAR(5) NOT NULL REFERENCES Book(bookID));
```

Figure 3-22: CREATE TABLE ORDER_BOOK Statement

```sql
--ORDER_BOOK
INSERT INTO Order_Book (
    orderID,
    bookID
) VALUES
    --DX DATA
    ('O0001','B0001'),
    ('O0002','B0002'),
    ('O0003','B0003'),
    ('O0003','B0003'),
    ('O0004','B0004'),
    ('O0005','B0005'),
    ('O0006','B0006'),
    ('O0006','B0006'),
    ('O0007','B0007'),
    ('O0008','B0008'),
    ('O0008','B0008'),
    ('O0009','B0009'),
    ('O0010','B0010'),
    ('O0010','B0010'),
    --HK DATA
    ('O0018', 'B0011'),
    ('O0018', 'B0019'),
    ('O0017', 'B0017'),
    ('O0017', 'B0017'),
    ('O0017', 'B0017'),
    ('O0012', 'B0015'),
    ('O0016', 'B0020'),
    ('O0015', 'B0017'),
    ('O0013', 'B0018'),
    ('O0013', 'B0022'),
    ('O0014', 'B0021'),
    ('O0011', 'B0016'),
    ('O0011', 'B0016'),
    ('O0011', 'B0021'),
    --YY DATA
    ('O0021', 'B0023'),
    ('O0021', 'B0023'),
    ('O0021', 'B0025'),
    ('O0021', 'B0025'),
    ('O0022', 'B0032'),
    ('O0022', 'B0031'),
    ('O0022', 'B0031'),
    ('O0023', 'B0028'),
    ('O0023', 'B0028'),
    ('O0023', 'B0028'),
    ('O0023', 'B0031'),
    ('O0023', 'B0031'),
    ('O0023', 'B0031'),
    ('O0023', 'B0025'),
    ('O0023', 'B0025'),
    ('O0023', 'B0025'),
    ('O0023', 'B0029'),
    ('O0023', 'B0029'),
    ('O0024', 'B0026'),
    ('O0024', 'B0032'),
    ('O0025', 'B0026'),
    ('O0024', 'B0027'),
    ('O0026', 'B0023'),
    ('O0026', 'B0032'),
    ('O0026', 'B0025'),
    ('O0026', 'B0030'),
    ('O0027', 'B0025'),
    ('O0027', 'B0031'),
    ('O0027', 'B0030'),
    ('O0027', 'B0028'),
    ('O0027', 'B0024');
GO
```

Figure 3-23: INSERT Statement of ORDER_BOOK Table

```
CREATE TABLE Author
    (bookID VARCHAR(5) NOT NULL REFERENCES Book(BookID),
     author VARCHAR(50) NOT NULL);
```

Figure 3-24: CREATE TABLE AUTHOR Statement

```
--AUTHOR
INSERT INTO Author (
    bookID,
    author
) VALUES
    --DX DATA
    ('B0001','Melanie Finn'),
    ('B0002','Mustafa Shah'),
    ('B0003','Tan Heng Yu'),
    ('B0004','Ismail bin Zahid'),
    ('B0005','Sivaguru a/l Khoghilan'),
    ('B0006','Xian Gan Jun'),
    ('B0007','Jian Ching Guo'),
    ('B0008','Kok Lit Kei'),
    ('B0009','Najib bin Mustafa'),
    ('B0010','Daisy Lim'),
    --HK DATA
    ('B0011', 'Ernest Hemingway'),
    ('B0012', 'Franz Kalka'),
    ('B0013', 'G.B.Shaw'),
    ('B0014', 'George Eliot'),
    ('B0015', 'George Orwell'),
    ('B0016', 'Goethe'),
    ('B0017', 'H.G. Wells'),
    ('B0018', 'Han Kang'),
    ('B0019', 'Heinrich Boll'),
    ('B0020', 'Hanya Yanagihara'),
    ('B0021', 'Harper Lee'),
    ('B0022', 'Paulo Coelho'),
    --YY DATA
    ('B0023', 'Tomnson Helith'),
    ('B0023', 'Chales Stephen'),
    ('B0024', 'Chan Yue Gng'),
    ('B0025', 'William Blake'),
    ('B0025', 'Mahatma Gandhi'),
    ('B0026', 'Theodor Herzl'),
    ('B0026', 'Barack Obama'),
    ('B0026', 'Jack London'),
    ('B0027', 'O. Henry'),
    ('B0028', 'William Wordsworth'),
    ('B0029', 'John Milton'),
    ('B0030', 'Nikola Tesla'),
    ('B0031', 'John Masefield'),
    ('B0031', 'Rudyard Kipling'),
    ('B0032', 'Ernest Hemingway');
GO
```

Figure 3-25: INSERT Statement of AUTHOR Table

3.2 All Tables with data

	memberID	customerName	customerAddress	gender	phoneNumber
1	M0001	Lim Hon Heng	14, Jalan Makmur, Taman Makmur, 56100 Cheras, KL	F	011-23458765
2	M0002	Chow Yin Xin	E-08-09, Jalan Teknologi 5, Teknologi Park Malaysia, 56000 Bukit Jalil, KL	M	013-25749255
3	M0003	Tan Wing Yee	56, Jalan Prima, Taman Prima, 43200 Cheras, Selangor	F	014-8388608
4	M0004	Lai Yue Kit	34, Jalan Pintar 3, Taman Pintar, 28300 Triang, Pahang	M	011-3141592
5	M0005	Lee Kai Yee	9, Jalan Inovasi, Taman Inovasi, 68000 Ampang, Selangor	F	012-4194304
6	M0006	Kok Sheng Jie	49, Jalan Ketumbar, Taman Yulek, 56100 Cheras, KL	M	018-42487427
7	M0007	Shim Wye Yong	31, Jalan Orkid 5, Taman Orkid, 43200 Cheras, Selangor	M	018-01912192
8	M0008	Tam Jia Zhen	4, Jalan Setia, Taman Setia, 25000 Sitiawan, Perak	F	017-88327317
9	M0009	Ooi Hui Wen	73, Jalan Bersatu 3, Taman Bersatu, 23000 Taiping, Perak	M	018-09719845
10	M0010	Chong Wei Chee	44, Jalan Jesselton, Taman Bukit Kuching, 98400 Kota Kinabalu, Sabah	F	014-7144234
11	M0011	Rafeah Koh	22 Jalan SS 5C/8 Kelana Jaya, Petaling Jaya, Selangor	F	016-3122222
12	M0012	Affendi Foon	3 Blok 154 Kompleks Maluri 154 3 6 Jln Jejaka Taman Maluri, Kuala Lumpur	M	012-3320976
13	M0013	Preeta Singh a/l Sothinathan Karathu	6, Jln 8, Seri Maluri, 87013 Rancha-Rancha, Labuan	F	010-7189314
14	M0014	Muhammet Fithri bin Hazaril	No. 9-7, Jln 7/2, Laman Tun Perak, 23892 Teluk Kalung, Terengganu Darul Iman	M	015-4354172

Figure 3-26: MEMBER Table's Data Part 1

	memberID	customerName	customerAddress	gender	phoneNumber
15	M0015	Woo Cham Choon	2, Jalan Chan Sow Lin 8S, Kondominium Dato Harun, 70204 Sungai Gadut, Negeri Sembilan	M	015-1231643
16	M0016	Nor Dalili binti Wan Al	551, Jalan Prangin 96F, Batu Pertama, 85560 Pagoh, Johor Darul Tazim	F	011-10877563
17	M0017	Kiran Sachithanandan a/l Renuga	H-16-47, Lorong 1/2V, Kondominium Seputeh, 09160 Lunas, Kedah Darul Aman	F	015-2293976
18	M0018	Hj Chailan Saad bin Ramly	75, Jalan Zaaba 5/96, Kota Damai, 63909 Subang, Selangor Darul Ehsan	M	084-480956
19	M0019	Gozilla Kong	Lebuh Batu Nilam 1, Bandar Bukit Tinggi, 41200	F	03-5122-7218
20	M0020	Nokisa Tang	2 25 Lrg 20 Taman Petani Jaya Sungai Petani Sungai	F	012-4210093
21	M0021	Hey Joker	Pasar 5 Jln Raja Bot	M	019-2698294
22	M0022	John K Smock	285 -287, Jalan Tuanku Abdul Rahman	M	03-2948589
23	M0023	Kingsley Wong	A 279 Jln Bandar 2 Taman Melawati Hulu	M	016-9869155
24	M0024	Raymond Yong	No. 3377, Jln Rj6/2, Seremban	M	017-6310227
25	M0025	Susan Ong	No. 5 Jalan SS 21/39, Damansara Uptown	F	014-7727862
26	M0026	Carmen Woo	Suite 19.01, Level 19, The Gardens South Tower	F	016-7789352
27	M0027	Manad Lise	Lot 318, Jahlan Muhibbah, 93400, Kuching	M	018-478-5855
28	M0028	Findy Sow	2300 Tanglewood Road	F	014-2388954

Figure 3-27: MEMBER Table's Data Part 2

	cartID	memberID
1	C0001	M0001
2	C0002	M0002
3	C0003	M0003
4	C0004	M0004
5	C0005	M0005
6	C0006	M0006
7	C0007	M0007
8	C0008	M0008
9	C0009	M0009
10	C0010	M0010
11	C0011	M0011
12	C0012	M0012
13	C0013	M0013
14	C0014	M0014

Figure 3-28: "SHOPPING CART" Table's Data Part 1

	cartID	memberID
15	C0015	M0015
16	C0016	M0016
17	C0017	M0017
18	C0018	M0018
19	C0019	M0019
20	C0020	M0020
21	C0021	M0021
22	C0022	M0022
23	C0023	M0023
24	C0024	M0024
25	C0025	M0025
26	C0026	M0026
27	C0027	M0027
28	C0028	M0028

Figure 3-29: "SHOPPING CART" Table's Data Part 2

	orderID	paymentDate	deliveryDate	statusOfDelivery	memberID	cartID
1	O0001	2021-04-01	2021-04-05	Delivered	M0001	C0001
2	O0002	2021-04-03	2021-04-07	Delivered	M0002	C0002
3	O0003	2021-04-06	2021-04-10	Delivered	M0003	C0003
4	O0004	2021-04-08	2021-04-12	Delivered	M0004	C0004
5	O0005	2021-04-10	2021-04-13	Delivered	M0005	C0005
6	O0006	2021-04-15	2021-04-20	Delivered	M0006	C0006
7	O0007	2021-04-27	2021-04-30	Delivered	M0007	C0007
8	O0008	2021-05-02	2021-05-07	Delivered	M0008	C0008
9	O0009	2021-05-08	2021-05-14	Delivered	M0009	C0009
10	O0010	2021-05-17	NULL	Not Delivered	M0010	C0010
11	O0011	2021-05-20	NULL	Not Delivered	M0013	C0013
12	O0012	2021-05-10	2021-05-13	Delivered	M0014	C0014
13	O0013	2021-04-27	2021-04-29	Delivered	M0011	C0011
14	O0014	2021-03-20	2021-03-24	Delivered	M0015	C0015

Figure 3-30: "ORDER" Table's Data Part 1

15	O0015	2021-05-23	NULL	Not Delivered	M0017	C0017
16	O0016	2021-02-14	2021-02-17	Delivered	M0014	C0014
17	O0017	2021-05-21	NULL	Not Delivered	M0018	C0018
18	O0018	2021-05-24	NULL	Not Delivered	M0012	C0012
19	O0019	2021-03-23	2021-03-26	Delivered	M0016	C0016
20	O0020	2021-05-25	NULL	Not Delivered	M0016	C0016
21	O0021	2021-05-23	NULL	Not Delivered	M0019	C0019
22	O0022	2021-05-24	NULL	Not Delivered	M0019	C0019
23	O0023	2021-01-07	2021-01-13	Delivered	M0027	C0027
24	O0024	2021-05-30	NULL	Not Delivered	M0025	C0025
25	O0025	2021-03-13	2021-03-20	Delivered	M0026	C0026
26	O0026	2021-03-19	2021-03-21	Delivered	M0024	C0024
27	O0027	2021-04-04	2021-04-08	Delivered	M0022	C0022

Figure 3-31: "ORDER" Table's Data Part 2

	publisherID	phoneNumber	publisherAddress	publisherName
1	P0001	013-2341233	13, Jalan Shinji, Taman Shinji, 43200 Cheras, Selangor	Shinji Publishing
2	P0002	014-4958212	23, Jalan Karisma 4, Taman Berkarisma, 43200 Cheras, Selangor	Akari Publishing
3	P0003	015-6421356	2, Jalan Kembangan, Taman Kembangan, 43300 Seri Kembangan, Selangor	DX Bookstore
4	P0004	012-1234542	1, Jalan Pelangi, Taman Pelangi, 46300 Petaling Jaya, Selangor	Pelangi Publishing
5	P0005	011-58027191	25, Jalan Motivasi, Taman Motivasi, 56100 Cheras, Kuala Lumpur	3M Publishing
6	P0006	011-6797246	9, Jalan Loke Yew, Taman Loke Yew, 56000 Taman Maluri, Kuala Lumpur	Tsun Jin Publishing
7	P0007	017-7774682	43, Jalan Aman 4, Taman Bukit Aman, 56100 Cheras, Kuala Lumpur	Kuen Cheng Publishing
8	P0008	016-9805896	27, Jalan Taynton View, Taman Taynton View, 56000 Cheras, Kuala Lumpur	Western Bookshop
9	P0009	014-2106974	10, Jalan Ahliman, Taman Connaught, 56000 Cheras, Kuala Lumpur	Success Publishing
10	P0010	013-2058234	13, Jalan Teknologi 13, Taman Teknologi Malaysia, 56000 Bukit Jalil, Kuala Lumpur	Asia Pacific Publishing
11	P0011	016-0972213	Blok Kedai Area B Seksyen 1 Wangsa Maju 53300 Wilayah Persekutuan Kuala Lumpur, Malaysia	Prentice Hall
12	P0012	010-0283111	Lot 5713, Bgn Tabung Haji, 45300	Kurt Wolff
13	P0013	011-0203826	2nd Floor, Jalan 19/3, 46300	Pearson Schools
14	P0014	010-3213445	sp-5 the Street Mall Persiaran Multimedia 63000 Cyberjaya	Blackwood

Figure 3-32: PUBLISHER Table's Data Part 1

15	P0015	016-0913281	Ground Floor Blok 2 Jln 18/118B Desa Tun Razak 56000 Wilayah Persekutuan, Malaysia	Secker and Warburg
16	P0016	011-5133222	1St Floor, Desa Bunga Raya, 43000	Simon & Schuster
17	P0017	012-3248976	Kelana Centre Point 3, Jalan Ss7/19, 47301	Heinnemann
18	P0018	016-3929877	Lot 3452, Taman Bangi Jaya, 43500	Changbi
19	P0019	011-0903333	Off Jalan Banting, Landpac Industrial Park, Port 42000	Kiepenheuer & Witsh
20	P0020	013-2231412	Tingkat 2, Medan MARA, Jalan Raja Laut	Doubleday
21	P0021	011-3224411	1 Jalan Ngee Heng 80000 Johor Malaysia	Harper Collins.
22	P0022	03-22844837	20-2F, Bangsar Village 2, 59100 Kuala Lumpur	Sliverfish Books Sdn ...
23	P0023	03-79318998	No 2. Jalan SS2, Subang Jaya	University Book Store
24	P0024	03-78805840	No. 7-6, Dataran Prima, 47301 Petaling Jaya	Malaysian Book Publi...
25	P0025	03-89416172	UPM Press, 43400 Serdang, Selangor	UPM Press
26	P0026	03-56371090	17-2, Jalan PJS 11/28b, Sunway, 47500 Subang Jaya	Snappars
27	P0027	03-62634884	No. 31-2, Jalan 11/62a, 52200 Kuala Lumpur	Kanyin Publication

Figure 3-33: PUBLISHER Table's Data Part 2

	bookID	title	genre	quantityInStock	pricePerUnit	publisherID
1	B0001	The Hare	Fiction	3	25.00	P0001
2	B0002	Success Additional Mathematics SPM	Non-fiction	4	30.00	P0002
3	B0003	Encyclopedia of Expedia	Non-fiction	5	23.00	P0003
4	B0004	Eye	Fiction	2	27.00	P0004
5	B0005	Your Nose	Fiction	3	24.00	P0005
6	B0006	Her Lips	Fiction	4	20.00	P0006
7	B0007	Pillow Talk	Fiction	5	21.00	P0007
8	B0008	The Jungle Book	Fiction	2	21.00	P0008
9	B0009	Python Programming Handbook	Non-fiction	5	20.00	P0009
10	B0010	Littering Awareness	Non-fiction	1	22.00	P0010
11	B0011	For whom the Bell Tolls	Historical Fiction	3	78.99	P0011
12	B0012	The Castle	Political Fiction	2	60.00	P0012
13	B0013	Apple Cart	Satire	3	160.99	P0013
14	B0014	Silas Marner	Domestic Fiction	5	32.00	P0014
15	B0015	Animal Farm	Satire	3	20.00	P0015
16	B0016	Faust	Tragedy	2	120.00	P0016
17	B0017	Time Machine	Science Fiction	5	30.00	P0017
18	B0018	The Vegetarian	Psychological ...	2	50.00	P0018
19	B0019	The Clown	Historical Fiction	3	50.00	P0019
20	B0020	A Little Life	Domestic Fiction	2	75.00	P0020
21	B0021	To Kill a Mockingbird	Southern Gothic	4	120.00	P0021
22	B0022	The Alchemist	Fantasy Fiction	4	60.00	P0021
23	B0023	Hey my mama	Fiction	4	20.00	P0026
24	B0024	The Sun also rises	Fiction	3	50.00	P0023
25	B0025	Debt-Free	non-fiction	10	23.00	P0025
26	B0026	Their Eyes were watching God	Non-Fiction	7	33.00	P0022
27	B0027	How to be healthy	Healh and Fitn...	1	12.00	P0022
28	B0028	English for life	Dictionary	6	30.00	P0027
29	B0029	To kill a mockingbird	Fiction	4	42.00	P0027
30	B0030	Why Sun is on the sky	Science fiction	2	26.00	P0023
31	B0031	The Adventure of Huckleberry Finn	Fiction	5	32.70	P0026
32	B0032	A Step To a New Venture	Non-Fiction	4	40.10	P0026

Figure 3-34: BOOK Table's Data

	feedbackID	rating	remarks	memberID	bookID
1	F0001	7	Nice to read	M0001	B0001
2	F0002	8	Clear Explanation	M0002	B0002
3	F0003	6	Very informative	M0003	B0003
4	F0004	7	NULL	M0004	B0004
5	F0005	9	NULL	M0005	B0005
6	F0006	8	NULL	M0006	B0006
7	F0007	9	NULL	M0007	B0007
8	F0008	7	NULL	M0008	B0008
9	F0009	8	NULL	M0009	B0009
10	F0010	8	NULL	M0010	B0010
11	F0011	8	NULL	M0012	B0011
12	F0012	9	The physicis principles and laws are well explai...	M0018	B0017
13	F0013	5	The storyline is quite confusing.	M0014	B0015
14	F0014	6	NULL	M0012	B0019
15	F0015	8	The story is realistic and relatable	M0017	B0017
16	F0016	4	The story is boring	M0011	B0018
17	F0017	7	This book is worth the reading time	M0015	B0021
18	F0018	9	The story is creative and interesting	M0011	B0022
19	F0019	10	Absoloutly intresting to read	M0019	B0023
20	F0020	8	Stil have alot place need to be improve	M0019	B0024
21	F0021	9	NULL	M0021	B0029
22	F0022	0	not recommended. storyline too terrible	M0027	B0030
23	F0023	5	NULL	M0026	B0029
24	F0024	10	I had learn many things in this book	M0027	B0027
25	F0025	3	NULL	M0019	B0025
26	F0026	9	good	M0028	B0026

Figure 3-35: FEEDBACK Table's Data

	purchaseID	quantityDelivered	dateDelivered	publisherID
1	S0001	1	2020-04-03	P0001
2	S0002	1	2020-04-05	P0002
3	S0003	2	2020-04-08	P0003
4	S0004	1	2020-04-10	P0004
5	S0005	1	2020-04-11	P0005
6	S0006	2	2020-04-17	P0006
7	S0007	1	2020-04-28	P0007
8	S0008	2	2020-05-04	P0008
9	S0009	1	2020-05-11	P0009
10	S0010	2	NULL	P0010
11	S0011	3	2021-03-21	P0010
12	S0012	2	2021-03-22	P0012
13	S0013	3	2021-04-04	P0013
14	S0014	5	2021-04-05	P0014
15	S0015	3	2021-04-10	P0015
16	S0016	2	2021-04-14	P0016
17	S0017	5	2021-04-16	P0017
18	S0018	2	2021-04-17	P0018
19	S0019	3	2021-04-23	P0019
20	S0020	2	2021-04-24	P0020
21	S0021	6	2021-04-25	P0021
22	S0022	2	2021-04-28	P0021
23	S0023	4	2020-12-12	P0026
24	S0024	6	2021-01-13	P0022
25	S0025	2	2021-03-05	P0023
26	S0026	5	2021-01-31	P0025
27	S0027	5	2021-02-19	P0027

Figure 3-36: PURCHASE Table's Data

	bookID	purchaseID
1	B0001	S0001
2	B0002	S0002
3	B0003	S0003
4	B0003	S0003
5	B0004	S0004
6	B0005	S0005
7	B0006	S0006
8	B0006	S0006
9	B0007	S0007
10	B0008	S0008
11	B0008	S0008
12	B0009	S0009
13	B0010	S0010
14	B0010	S0010
15	B0011	S0011
16	B0011	S0011
17	B0011	S0011
18	B0012	S0012
19	B0012	S0012
20	B0013	S0013
21	B0013	S0013
22	B0013	S0013
23	B0014	S0014
24	B0014	S0014
25	B0014	S0014
26	B0014	S0014
27	B0014	S0014
28	B0015	S0015
29	B0015	S0015
30	B0015	S0015
31	B0016	S0016
32	B0016	S0016
33	B0017	S0017
34	B0017	S0017
35	B0017	S0017
36	B0017	S0017

Figure 3-37: BOOK_PURCHASE Table's Data Part 1

37	B0017	S0017
38	B0018	S0018
39	B0018	S0018
40	B0019	S0019
41	B0019	S0019
42	B0019	S0019
43	B0020	S0020
44	B0020	S0020
45	B0021	S0021
46	B0021	S0021
47	B0021	S0021
48	B0022	S0021
49	B0022	S0021
50	B0022	S0021
51	B0021	S0022
52	B0022	S0022
53	B0023	S0023
54	B0031	S0023
55	B0032	S0023
56	B0032	S0023
57	B0026	S0024
58	B0026	S0024
59	B0026	S0024
60	B0027	S0024
61	B0027	S0024
62	B0027	S0024
63	B0024	S0025
64	B0030	S0025
65	B0025	S0026
66	B0025	S0026
67	B0025	S0026
68	B0025	S0026
69	B0025	S0026
70	B0028	S0027
71	B0028	S0027

Figure 3-38: BOOK_PURCHASE Table's Data Part 2

72	B0029	S0027
73	B0029	S0027
74	B0029	S0027

Figure 3-39: BOOK_PURCHASE Table's Data Part 3

	cartID	bookID
1	C0001	B0001
2	C0002	B0002
3	C0003	B0003
4	C0003	B0003
5	C0004	B0004
6	C0005	B0005
7	C0006	B0006
8	C0006	B0006
9	C0007	B0007
10	C0008	B0008
11	C0008	B0008
12	C0009	B0009
13	C0010	B0010
14	C0010	B0010
15	C0011	B0011
16	C0011	B0012
17	C0011	B0021
18	C0012	B0018
19	C0012	B0018
20	C0015	B0017
21	C0016	B0014
22	C0017	B0013
23	C0017	B0013
24	C0017	B0020
25	C0014	B0011
26	C0018	B0015
27	C0018	B0016
28	C0019	B0023
29	C0019	B0023
30	C0019	B0025
31	C0019	B0025
32	C0019	B0032

Figure 3-40: SHOPPING CART_BOOK Table's Data Part 1

	cartID	bookID
33	C0019	B0031
34	C0019	B0031
35	C0020	B0026
36	C0020	B0027
37	C0021	B0025
38	C0021	B0031
39	C0021	B0030
40	C0021	B0028
41	C0021	B0024
42	C0023	B0024
43	C0023	B0032
44	C0023	B0026
45	C0024	B0028
46	C0024	B0028
47	C0024	B0028
48	C0024	B0031
49	C0024	B0031
50	C0024	B0031
51	C0024	B0025
52	C0024	B0025
53	C0024	B0025
54	C0024	B0029
55	C0024	B0029
56	C0026	B0027
57	C0027	B0023
58	C0027	B0032
59	C0027	B0025
60	C0027	B0030
61	C0028	B0026
62	C0028	B0027
63	C0028	B0032

Figure 3-41: SHOPPING CART_BOOK Table's Data Part 2

	orderID	bookID
1	O0001	B0001
2	O0002	B0002
3	O0003	B0003
4	O0003	B0003
5	O0004	B0004
6	O0005	B0005
7	O0006	B0006
8	O0006	B0006
9	O0007	B0007
10	O0008	B0008
11	O0008	B0008
12	O0009	B0009
13	O0010	B0010
14	O0010	B0010
15	O0018	B0011
16	O0018	B0019
17	O0017	B0017
18	O0017	B0017
19	O0017	B0017
20	O0012	B0015
21	O0016	B0020
22	O0015	B0017
23	O0013	B0018
24	O0013	B0022
25	O0014	B0021
26	O0011	B0016
27	O0011	B0016
28	O0011	B0021
29	O0021	B0023
30	O0021	B0023
31	O0021	B0025
32	O0021	B0025
33	O0022	B0032

Figure 3-42: ORDER_BOOK Table's Data Part 1

34	O0022	B0031
35	O0022	B0031
36	O0023	B0028
37	O0023	B0028
38	O0023	B0028
39	O0023	B0031
40	O0023	B0031
41	O0023	B0031
42	O0023	B0025
43	O0023	B0025
44	O0023	B0025
45	O0023	B0029
46	O0023	B0029
47	O0024	B0026
48	O0024	B0032
49	O0025	B0026
50	O0024	B0027
51	O0026	B0023
52	O0026	B0032
53	O0026	B0025
54	O0026	B0030
55	O0027	B0025
56	O0027	B0031
57	O0027	B0030
58	O0027	B0028
59	O0027	B0024

Figure 3-43: ORDER_BOOK Table's Data Part 2

	bookID	author
1	B0001	Melanie Finn
2	B0002	Mustafa Shah
3	B0003	Tan Heng Yu
4	B0004	Ismail bin Zahid
5	B0005	Sivaguru a/l Khoghilan
6	B0006	Xian Gan Jun
7	B0007	Jian Ching Guo
8	B0008	Kok Lit Kei
9	B0009	Najib bin Mustafa
10	B0010	Daisy Lim
11	B0011	Ernest Hemingway
12	B0012	Franz Kalka
13	B0013	G.B.Shaw
14	B0014	George Eliot
15	B0015	George Orwell
16	B0016	Goethe
17	B0017	H.G. Wells
18	B0018	Han Kang
19	B0019	Heinrich Boll
20	B0020	Hanya Yanagihara
21	B0021	Harper Lee
22	B0022	Paulo Coelho

Figure 3-44: AUTHOR Table's Data

23	B0023	Tomnson Helith
24	B0023	Chales Stephen
25	B0024	Chan Yue Gng
26	B0025	William Blake
27	B0025	Mahatma Gandhi
28	B0026	Theodor Herzl
29	B0026	Barack Obama
30	B0026	Jack London
31	B0027	O. Henry
32	B0028	William Wordsworth
33	B0029	John Milton
34	B0030	Nikola Tesla
35	B0031	John Masefield
36	B0031	Rudyard Kipling
37	B0032	Ernest Hemingway

Figure 3-45: AUTHOR Table's Data

4.0 SQL - Data Manipulation Language (DML)

4.1 Question 1 - Done by Kok Hon Kit

List the book(s) which has the highest rating. Show book id, book name, and the rating.

```
--List the book(s) which has the highest rating. Show book id, book name, and the rating.
SELECT F.bookID, B.title, F.rating
FROM Feedback F INNER JOIN Book B ON F.bookID = B.bookID
WHERE F.rating = (SELECT MAX(rating) FROM Feedback);
```

90 %

Results   Messages

	bookID	title	rating
1	B0023	Hey my mama	10
2	B0027	How to be healthy	10

Figure 4-1: Query Question 1

4.2 Question 2 - Done by Kok Hon Kit

Find the total number of feedbacks per member. Show member id, member name, and total number of feedbacks per member.

```
--Find the total number of feedback per member. Show member id, member name, and total number of feedback per member.
SELECT M.memberID, M.customerName, COUNT(F.memberID) AS 'Total Number of Feedback'
FROM Feedback F RIGHT JOIN Member M ON F.memberID = M.memberID
GROUP BY M.memberID, M.customerName;
```

90 %

Results   Messages

	memberID	customerName	Total Number of Feedback
1	M0001	Lim Hon Heng	1
2	M0002	Chow Yin Xin	1
3	M0003	Tan Wing Yee	1
4	M0004	Lai Yue Kit	1
5	M0005	Lee Kai Yee	1
6	M0006	Kok Sheng Jie	1
7	M0007	Shim Wye Yong	1
8	M0008	Tam Jia Zhen	1
9	M0009	Ooi Hui Wen	1
10	M0010	Chong Wei Chee	1
11	M0011	Rafeah Koh	2
12	M0012	Affendi Foon	2
13	M0013	Preeta Singh a/l Sothinathan Karathu	0
14	M0014	Muhammet Fithri bin Hazaril	1
15	M0015	Woo Cham Choon	1
16	M0016	Nor Dalili binti Wan Al	0
17	M0017	Kiran Sachithanandan a/l Renuga	1
18	M0018	Hj Chailan Saad bin Ramly	1
19	M0019	Gozilla Kong	3
20	M0020	Nokisa Tang	0
21	M0021	Hey Joker	1
22	M0022	John K Smock	0
23	M0023	Kingsley Wong	0
24	M0024	Raymond Yong	0
25	M0025	Susan Ong	0
26	M0026	Carmen Woo	1
27	M0027	Manad Lise	2
28	M0028	Findy Sow	1

Figure 4-2: Query Question 2

4.3   Question 3 - Done by Kok Hon Kit

Find the total number of books published by each publisher. Show publisher id, publisher name, and number of books published.

```
--Find the total number of book published by each publisher. Show publisher id, publisher name, and number of book published.
SELECT P.publisherID, P.publisherName, COUNT(DISTINCT BP.bookID) AS 'Number of Book Published'
FROM Publisher P FULL JOIN Purchase P1 ON P.publisherID = P1.publisherID
FULL JOIN Book_Purchase BP ON P1.purchaseID = BP.purchaseID
GROUP BY P.publisherID, P.publisherName;
```

90 %

Results | Messages

	publisherID	publisherName	Number of Book Published
1	P0005	3M Publishing	1
2	P0002	Akari Publishing	1
3	P0010	Asia Pacific Publishing	2
4	P0014	Blackwood	1
5	P0018	Changbi	1
6	P0020	Doubleday	1
7	P0003	DX Bookstore	1
8	P0021	Harper Collins.	2
9	P0017	Heinnemann	1
10	P0027	Kanyin Publication	2
11	P0019	Kiepenheuer & Witsh	1
12	P0007	Kuen Cheng Publishing	1
13	P0012	Kurt Wolff	1
14	P0024	Malaysian Book Publishers Association	0
15	P0013	Pearson Schools	1
16	P0004	Pelangi Publishing	1
17	P0011	Prentice Hall	0
18	P0015	Secker and Warburg	1
19	P0001	Shinji Publishing	1
20	P0016	Simon & Schuster	1
21	P0022	Sliverfish Books Sdn Bhd	2
22	P0026	Snappars	3
23	P0009	Success Publishing	1
24	P0006	Tsun Jin Publishing	1
25	P0023	University Book Store	2
26	P0025	UPM Press	1
27	P0008	Western Bookshop	1

Figure 4-3: Query Question 3

4.4   Question 4 - Done by Yam Yin Yee

Find the total number of books ordered by store manager from each publisher.

```sql
SELECT TOP 1 WITH TIES O.bookID, B.title, COUNT(O.bookID) AS 'Number of book sold'
FROM Order_Book O INNER JOIN Book B ON O.BookID = B.BookID
GROUP BY O.bookID, B.title
ORDER BY COUNT(O.bookID) DESC;
```

135 %

Results   Messages

	bookID	title	Number of book sold
1	B0025	Debt-Free	7

Figure 4-4 Query Question 4

4.5   Question 5 - Done by Yam Yin Yee

Find the total number of books ordered by each member.

```sql
SELECT O.memberID, M.customerName, COUNT(OB.bookID) AS 'Total Number of Books ordered'
FROM Order_Book OB INNER JOIN "Order" O ON OB.orderID = O.orderID
INNER JOIN Member M ON O.memberID = M.MemberID
GROUP BY O.memberID, M.customerName;
```

150 %

Results   Messages

	memberID	customerName	Total Number of Books ordered
1	M0001	Lim Hon Heng	1
2	M0002	Chow Yin Xin	1
3	M0003	Tan Wing Yee	2
4	M0004	Lai Yue Kit	1
5	M0005	Lee Kai Yee	1
6	M0006	Kok Sheng Jie	2
7	M0007	Shim Wye Yong	1
8	M0008	Tam Jia Zhen	2
9	M0009	Ooi Hui Wen	1
10	M0010	Chong Wei Chee	2
11	M0011	Rafeah Koh	2
12	M0012	Affendi Foon	2
13	M0013	Preeta Singh a/l Sothinathan Karathu	3
14	M0014	Muhammet Fithri bin Hazaril	2
15	M0015	Woo Cham Choon	1
16	M0017	Kiran Sachithanandan a/l Renuga	1
17	M0018	Hj Chailan Saad bin Ramly	3
18	M0019	Gozilla Kong	7
19	M0022	John K Smock	5
20	M0024	Raymond Yong	4
21	M0025	Susan Ong	3
22	M0026	Carmen Woo	1
23	M0027	Manad Lise	11

Figure 4-5 Query Question 5

4.6   Question 6 - Done by Yam Yin Yee

Find the bestselling book(s).

```
SELECT TOP 1 O.bookID, B.title, COUNT(O.bookID) AS 'Number of book sold'
FROM Order_Book O INNER JOIN Book B ON O.BookID = B.BookID
GROUP BY O.bookID, B.title
ORDER BY COUNT(O.bookID) DESC;
```

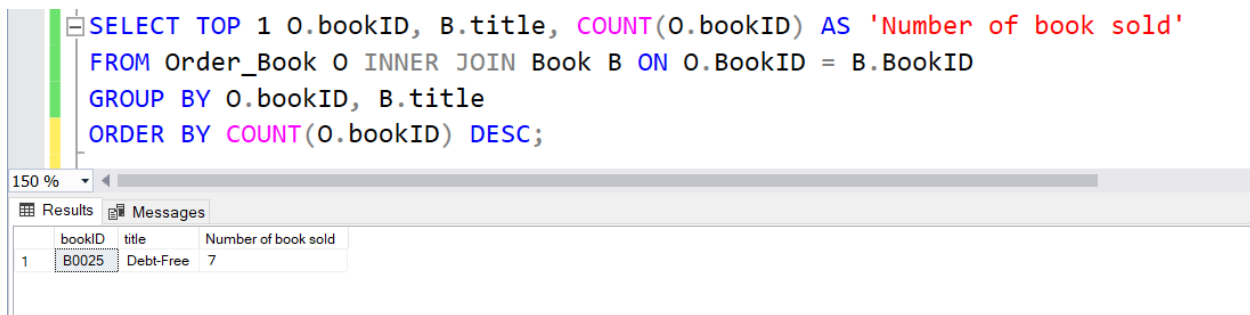|	bookID	title	Number of book sold
1	B0025	Debt-Free	7

Figure 4-6 Query Question 6

4.7 Question 7 - Done by Lee Dongxuan

Show list of total customers based on gender who are registered as members in APU E-Bookstore. The list should show total number of registered members and total number of gender (male and female).
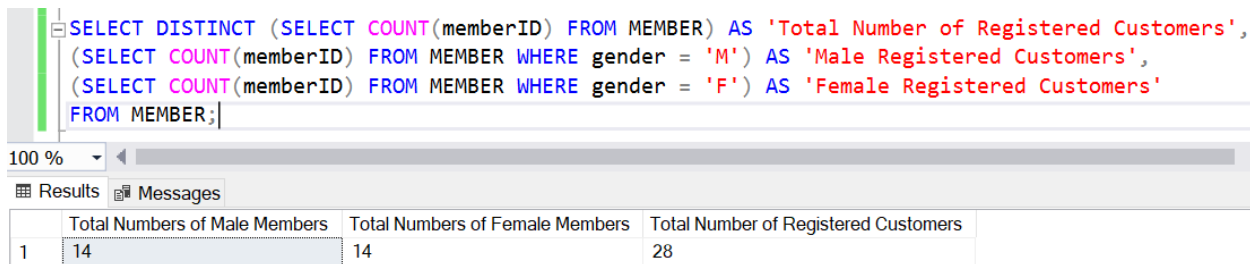
```
SELECT DISTINCT (SELECT COUNT(memberID) FROM MEMBER) AS 'Total Number of Registered Customers',
(SELECT COUNT(memberID) FROM MEMBER WHERE gender = 'M') AS 'Male Registered Customers',
(SELECT COUNT(memberID) FROM MEMBER WHERE gender = 'F') AS 'Female Registered Customers'
FROM MEMBER;
```

	Total Numbers of Male Members	Total Numbers of Female Members	Total Number of Registered Customers
1	14	14	28

Figure 4-7: Query Question 7

4.8 Question 8 - Done by Lee Dongxuan

Show a list of purchased books that **have not been delivered** to members. The list should show member identification number, address, contact number, book serial number, book title, quantity, date and status of delivery.

```
SELECT M.memberID,M.customerAddress,M.phoneNumber,OB.BookID,B.title,O.paymentDate,O.deliveryDate,COUNT(B.bookID)
AS 'Number of books that have not been delivered to member',O.statusOfDelivery
FROM Member M INNER JOIN "Order" O ON M.memberID=O.memberID
INNER JOIN Order_Book OB ON O.orderID=OB.orderID INNER JOIN Book B ON OB.bookID=B.bookID
WHERE O.DeliveryDate IS NULL
GROUP BY M.memberID,M.customerAddress,M.phoneNumber,OB.BookID,B.title,O.paymentDate,O.deliveryDate,O.statusOfDelivery
```

Figure 4-8: Query Question 8 (SQL statements)

	memberID	customerAddress	phoneNumber	BookID	title	paymentDate	deliveryDate	Number of books that have not been delivered to member	statusOfDelivery
1	M0010	44, Jalan Jesselton, Taman Bukit Kuching, 98400 Kot...	014-7144234	B0010	Littering Awareness	2021-05-17	NULL	2	Not Delivered
2	M0012	3 Blok 154 Kompleks Maluri 154 3 6 Jln Jejaka Tama...	012-3320976	B0011	For whom the Bell Tolls	2021-05-24	NULL	1	Not Delivered
3	M0012	3 Blok 154 Kompleks Maluri 154 3 6 Jln Jejaka Tama...	012-3320976	B0019	The Clown	2021-05-24	NULL	1	Not Delivered
4	M0013	6, Jln 8, Seri Maluri, 87013 Rancha-Rancha, Labuan	010-7189314	B0016	Faust	2021-05-20	NULL	2	Not Delivered
5	M0013	6, Jln 8, Seri Maluri, 87013 Rancha-Rancha, Labuan	010-7189314	B0021	To Kill a Mockingbird	2021-05-20	NULL	1	Not Delivered
6	M0017	H-16-47, Lorong 1/2V, Kondominium Seputeh, 09160...	015-2293976	B0017	Time Machine	2021-05-23	NULL	1	Not Delivered
7	M0018	75, Jalan Zaaba 5/96, Kota Damai, 63909 Subang, S...	084-480956	B0017	Time Machine	2021-05-21	NULL	3	Not Delivered
8	M0019	Lebuh Batu Nilam 1, Bandar Bukit Tinggi, 41200	03-5122-7218	B0023	Hey my mama	2021-05-23	NULL	2	Not Delivered
9	M0019	Lebuh Batu Nilam 1, Bandar Bukit Tinggi, 41200	03-5122-7218	B0025	Debt-Free	2021-05-23	NULL	2	Not Delivered
10	M0019	Lebuh Batu Nilam 1, Bandar Bukit Tinggi, 41200	03-5122-7218	B0031	The Adventure of Huckleberry Finn	2021-05-24	NULL	2	Not Delivered
11	M0019	Lebuh Batu Nilam 1, Bandar Bukit Tinggi, 41200	03-5122-7218	B0032	A Step To a New Venture	2021-05-24	NULL	1	Not Delivered
12	M0025	No. 5 Jalan SS 21/39, Damansara Uptown	014-7727862	B0026	Their Eyes were watching God	2021-05-30	NULL	1	Not Delivered
13	M0025	No. 5 Jalan SS 21/39, Damansara Uptown	014-7727862	B0027	How to be healthy	2021-05-30	NULL	1	Not Delivered
14	M0025	No. 5 Jalan SS 21/39, Damansara Uptown	014-7727862	B0032	A Step To a New Venture	2021-05-30	NULL	1	Not Delivered

Figure 4-9: Query Question 8 (Result) Done by Lee Dongxuan

4.9   Question 9 - Done by Lee Dongxuan

Show the member who spent most on buying books. Show member id, member name and total expenditure.

```sql
SELECT TOP 1 WITH TIES
M.memberID, M.customerName, SUM(B.pricePerUnit) AS 'Total Expenditure'
FROM Member M INNER JOIN "Order" O ON M.memberID=O.memberID
INNER JOIN Order_Book OB ON O.orderID=OB.orderID INNER JOIN Book B ON OB.bookID=B.bookID
GROUP BY M.memberID, M.customerName
ORDER BY SUM(B.pricePerUnit) DESC
```

Figure 4-10: Query Question 9 (SQL statements) Done by Lee Dongxuan

memberID	customerName	Total Expenditure
M0013	Preeta Singh a/l Sothinathan Karathu	360.00

Figure 4-11: Query Question 9 (Result) Done by Lee Dongxuan

4.10   Question 10 - Done by Lee Dongxuan

Show a list of total books as added by each members in the shopping cart.

```sql
SELECT SC.memberID, SC.cartID, COUNT(SCB.bookID) AS 'Number of books added by each member in the shopping cart'
FROM "Shopping Cart" SC INNER JOIN "Shopping Cart_Book" SCB ON SC.cartID=SCB.cartID
GROUP BY SC.memberID, SC.cartID
```

Figure 4-12: Query Question 10 (SQL statements) Done by Lee Dongxuan

	memberID	cartID	Number of books added by each member in the shopping cart
1	M0001	C0001	1
2	M0002	C0002	1
3	M0003	C0003	2
4	M0004	C0004	1
5	M0005	C0005	1
6	M0006	C0006	2
7	M0007	C0007	1
8	M0008	C0008	2
9	M0009	C0009	1
10	M0010	C0010	2
11	M0011	C0011	3
12	M0012	C0012	2
13	M0014	C0014	1
14	M0015	C0015	1
15	M0016	C0016	1
16	M0017	C0017	3
17	M0018	C0018	2
18	M0019	C0019	7
19	M0020	C0020	2
20	M0021	C0021	5
21	M0023	C0023	3
22	M0024	C0024	11
23	M0026	C0026	1
24	M0027	C0027	4
25	M0028	C0028	3

Figure 4-13: Query Question 10 (Result) Done by Lee Dongxuan

5.0 Conclusion

To conclude, the relational schema is drawn based on the finalised Entity-Relationship Diagram (ERD). Then, the functional dependency such as partial dependency and transitive dependency in the relation is identified and eliminated to proceed to the 3NF. After all the relations are in 3NF, data dictionary is prepared to implement the design into SQL Server. After creating the tables, inserting data, and executing queries, SQL statements and its result are screenshot and written in the documents.

6.0 References

There are no sources in the current document.

Workload Matrix

Name	Task / Description / Responsibility	Signature
Lee Dongxuan	Responsible in writing function of DBMS, business rules, finalising E-R diagram, relational schema, normalisation, data dictionary, database diagram, writing SQL statements for query number 7, 8, 9 and 10	
Kok Hon Kit	Responsible in writing advantages of DBMS, drawing and finalising E-R diagram, relational schema, normalisation, constructing and inserting data into the tables, writing SQL statements for query 1, 2, and 3	
Yam Yin Yee	Responsible in writing disadvantages of file-based system, business rules, finalising E-R diagram, relational schema, normalisation, data dictionary, writing SQL statements for query 4, 5 and 6	