

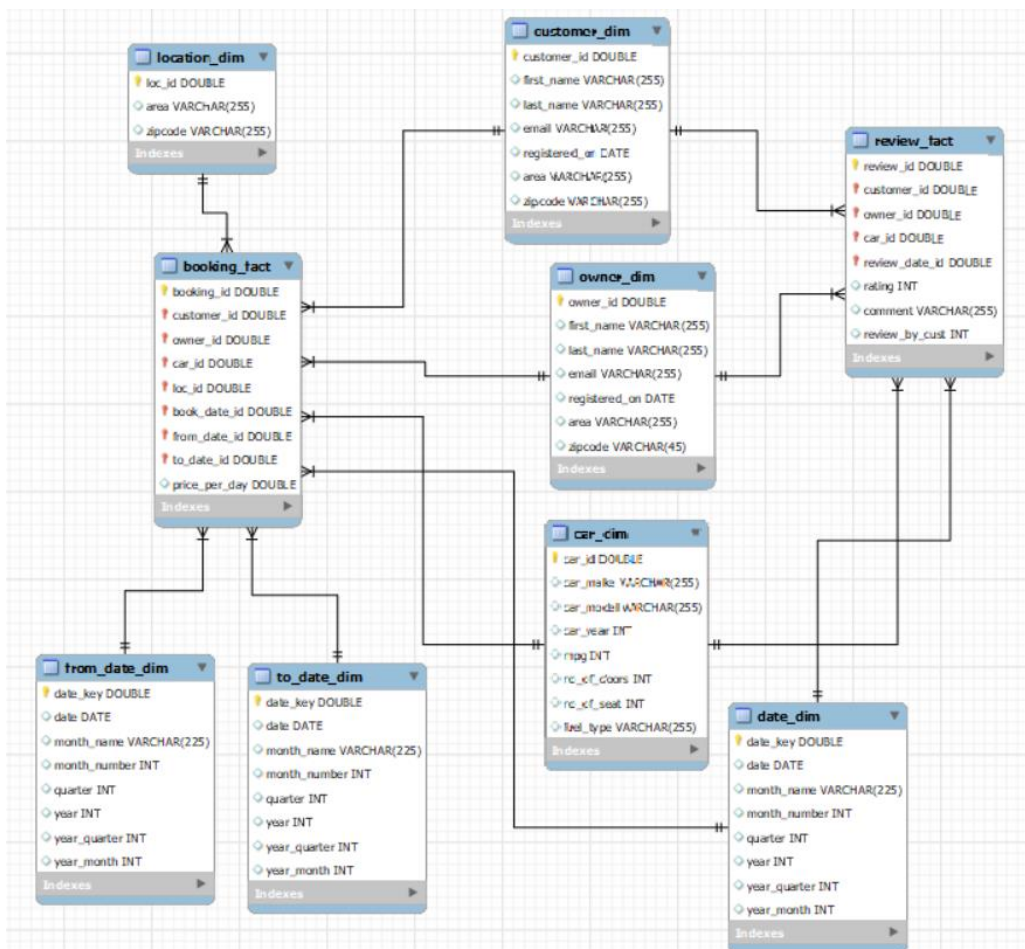
# Dimensional Model for Turo–Taiwo Olatunde

## BCIS 5610–Enterprise Data Warehousing

### Assignment Summary:

Create a dimensional model for the problem in Assignment 1. Regardless of your design for Assignment 1, assume that you have at least two associate tables; one for reviews and one for the transaction. Use this information for the design of Assignment 2. Implement the model in MySQL and populate 10 records in each table. Provide snapshots of each step in a MS Word document.

### Snapshot of dimensional model created in MySQL:



## Snapshot of physical tables created in MySQL with data:

date\_dim table:

The screenshot shows a database management tool interface. On the left, the 'SCHEMAS' pane displays a tree view with 'mydb', 'sys', and 'turo\_dim'. Under 'turo\_dim', there are 'Tables' and 'Views'. The 'Tables' list includes 'booking\_fact', 'car\_dim', 'customer\_dim', 'date\_dim', 'from\_date\_dim', 'location\_dim', 'owner\_dim', 'review\_fact', and 'to\_date\_dim'. The 'date\_dim' table is selected. The main pane shows the 'date\_dim' table structure and a query result grid. The query is 'SELECT \* FROM turo\_dim.date\_dim;'. The result grid shows 17 rows of data for January 2024.

date_key	date	month_name	month_number	quarter	year	year_quarter	year_month
4350	2024-01-01	January	1	1	2024	202401	202401
4351	2024-01-02	January	1	1	2024	202401	202401
4352	2024-01-03	January	1	1	2024	202401	202401
4353	2024-01-04	January	1	1	2024	202401	202401
4354	2024-01-05	January	1	1	2024	202401	202401
4355	2024-01-06	January	1	1	2024	202401	202401
4356	2024-01-07	January	1	1	2024	202401	202401
4357	2024-01-08	January	1	1	2024	202401	202401
4358	2024-01-09	January	1	1	2024	202401	202401
4359	2024-01-10	January	1	1	2024	202401	202401
4360	2024-01-11	January	1	1	2024	202401	202401
4361	2024-01-12	January	1	1	2024	202401	202401
4362	2024-01-13	January	1	1	2024	202401	202401
4363	2024-01-14	January	1	1	2024	202401	202401
4364	2024-01-15	January	1	1	2024	202401	202401
4365	2024-01-16	January	1	1	2024	202401	202401
4366	2024-01-17	January	1	1	2024	202401	202401

from\_date\_dim table:

The screenshot shows a database management tool interface. On the left, the 'SCHEMAS' pane displays a tree view with 'mydb', 'sys', and 'turo\_dim'. Under 'turo\_dim', there are 'Tables' and 'Views'. The 'Tables' list includes 'booking\_fact', 'car\_dim', 'customer\_dim', 'date\_dim', 'from\_date\_dim', 'location\_dim', 'owner\_dim', 'review\_fact', and 'to\_date\_dim'. The 'from\_date\_dim' table is selected. The main pane shows the 'from\_date\_dim' table structure and a query result grid. The query is 'SELECT \* FROM turo\_dim.from\_date\_dim;'. The result grid shows 17 rows of data for January 2024.

date_key	date	month_name	month_number	quarter	year	year_quarter	year_month
5350	2024-01-01	January	1	1	2024	202401	202401
5351	2024-01-02	January	1	1	2024	202401	202401
5352	2024-01-03	January	1	1	2024	202401	202401
5353	2024-01-04	January	1	1	2024	202401	202401
5354	2024-01-05	January	1	1	2024	202401	202401
5355	2024-01-06	January	1	1	2024	202401	202401
5356	2024-01-07	January	1	1	2024	202401	202401
5357	2024-01-08	January	1	1	2024	202401	202401
5358	2024-01-09	January	1	1	2024	202401	202401
5359	2024-01-10	January	1	1	2024	202401	202401
5360	2024-01-11	January	1	1	2024	202401	202401
5361	2024-01-12	January	1	1	2024	202401	202401
5362	2024-01-13	January	1	1	2024	202401	202401
5363	2024-01-14	January	1	1	2024	202401	202401
5364	2024-01-15	January	1	1	2024	202401	202401
5365	2024-01-16	January	1	1	2024	202401	202401
5366	2024-01-17	January	1	1	2024	202401	202401

to\_date\_dim table:

The screenshot shows the DBeaver interface with the 'to\_date\_dim' table selected in the 'turo\_dim' schema. The left sidebar displays the 'Schemas' tree. The main window shows the 'to\_date\_dim' table structure and a query result grid. The query is 'SELECT \* FROM turo\_dim.to\_date\_dim;'. The result grid shows columns: date\_key, date, month\_name, month\_number, quarter, year, year\_quarter, and year\_month. The data rows show dates from 2024-01-01 to 2024-01-17.

date_key	date	month_name	month_number	quarter	year	year_quarter	year_month
6350	2024-01-01	January	1	1	2024	2024Q1	202401
6351	2024-01-02	January	1	1	2024	2024Q1	202401
6352	2024-01-03	January	1	1	2024	2024Q1	202401
6353	2024-01-04	January	1	1	2024	2024Q1	202401
6354	2024-01-05	January	1	1	2024	2024Q1	202401
6355	2024-01-06	January	1	1	2024	2024Q1	202401
6356	2024-01-07	January	1	1	2024	2024Q1	202401
6357	2024-01-08	January	1	1	2024	2024Q1	202401
6358	2024-01-09	January	1	1	2024	2024Q1	202401
6359	2024-01-10	January	1	1	2024	2024Q1	202401
6360	2024-01-11	January	1	1	2024	2024Q1	202401
6361	2024-01-12	January	1	1	2024	2024Q1	202401
6362	2024-01-13	January	1	1	2024	2024Q1	202401
6363	2024-01-14	January	1	1	2024	2024Q1	202401
6364	2024-01-15	January	1	1	2024	2024Q1	202401
6365	2024-01-16	January	1	1	2024	2024Q1	202401
6366	2024-01-17	January	1	1	2024	2024Q1	202401

customer\_dim table:

Navigator

SCHEMAS

Filter objects

mydb

sys

turo\_dim

Tables

booking\_fact

car\_dim

customer\_dim

date\_dim

from\_date\_dim

location\_dim

owner\_dim

review\_fact

to\_date\_dim

Views

Stored Procedures

Functions

turoth

Administration

Schemas

Information

No object selected

customer\_dim

Limit to 1000 rows

1 •

SELECT \* FROM turo\_dim.customer\_dim;

Result Grid

Filter Rows:

Edit

Export/Import

Wrap Cell Content

	customer_id	first_name	last_name	email	registered_on	area	zipcode
▶	1010	Emmanuel	Emma	emma.emmanuel@gmail.com	2020-02-01	Denton	76209
	1011	Joshua	Josh	josh.joshua@yahoo.com	2021-05-05	College Station	77840
	1012	Redeemed	Child	redeemedchild@gmail.com	2020-03-03	Byran	77801
	1013	John	Akpabio	akpabiojohn34@gmail.com	2022-03-16	Fairmount	76110
	1014	Victor	Chris	chris.victor@yahoo.com	2021-12-06	Montrose	77006
	1015	Ada	Osemene	adang@gmail.com	2019-03-06	Plano	75024
	1016	Victor	Agbo	victoryindeed@yahoo.com	2023-09-01	Round Rock	78701
	1017	Mary	Elizabeth	elizzy65@gmail.com	2022-07-22	Denison	75023
	1018	Joseph	Joseph	joseph.joseph@gmail.com	2021-09-03	Denton	76209
	1019	Fiyin	Grace	grace.fiyin@yahoo.com	2022-09-01	College Station	77840
	99999	n/a	n/a	n/a	1000-01-01	n/a	n/a
•	NULL	NULL	NULL	NULL	NULL	NULL	NULL

customer\_dim 1 ×

owner\_dim table:

The screenshot shows a database management interface with a left-hand 'SCHEMAS' pane and a main query editor. The 'SCHEMAS' pane shows a tree view with 'turo\_dim' expanded, listing tables like 'booking\_fact', 'car\_dim', 'customer\_dim', 'date\_dim', 'from\_date\_dim', 'location\_dim', 'owner\_dim', 'review\_fact', and 'to\_date\_dim'. The main editor shows a SQL query: `SELECT * FROM turo_dim.owner_dim;`. Below the query is a 'Result Grid' displaying the data for the 'owner\_dim' table. The table has 7 columns: owner\_id, first\_name, last\_name, email, registered\_on, area, and zipcode. The data includes 19 rows of owner information, followed by a row of nulls and a row of asterisks.

owner_id	first_name	last_name	email	registered_on	area	zipcode
2010	Israel	Newton	israel.newton@gmail.com	2022-03-05	Fairmount	76110
2011	Ebenezer	Delta	ebenezer.delta@yahoo.com	2022-07-14	Denison	75023
2012	David	Sling	david.sling@gmail.com	2020-02-17	Round Rock	78701
2013	Ayotunde	Ayo	ayotundeayo67@yahoo.com	2021-09-12	Byran	77801
2014	Victoria	Ask	victoria.ask@gmail.com	2021-11-30	Crestwood	76107
2015	Blessing	King	kingblessing32@gmail.com	2020-05-02	Denton	76209
2016	Bimbo	Odukoya	bimbo.odukoya45@yahoo.com	2019-08-17	Montrose	77006
2017	Chidi	First	chidi.first56@gmail.com	2021-05-23	Plano	75024
2018	Christian	Faith	christian.faith34@yahoo.com	2020-04-26	Allen	75009
2019	Jesus	Trinity	jesus.trinity6@gmail.com	2022-09-17	Montrose	77006
99999	n/a	n/a	n/a	1000-01-01	n/a	n/a
*						

Car\_dim table:

The screenshot shows a database management interface with a left-hand 'SCHEMAS' pane and a main query editor. The 'SCHEMAS' pane shows a tree view with 'turo\_dim' expanded, listing tables like 'booking\_fact', 'car\_dim', 'customer\_dim', 'date\_dim', 'from\_date\_dim', 'location\_dim', 'owner\_dim', 'review\_fact', and 'to\_date\_dim'. The main editor shows a SQL query: `SELECT * FROM turo_dim.car_dim;`. Below the query is a 'Result Grid' displaying the data for the 'car\_dim' table. The table has 8 columns: car\_id, car\_make, car\_model, car\_year, mpg, no\_of\_doors, no\_of\_seat, and fuel\_type. The data includes 19 rows of car information, followed by a row of nulls and a row of asterisks.

car_id	car_make	car_model	car_year	mpg	no_of_doors	no_of_seat	fuel_type
3460	Jeep	Grand Cherokee L	2021	22	4	6	Gas
3461	Tesla	Model 3	2018	0	4	5	Electric
3462	BMW	S Series	2015	28	4	5	Gas
3463	Tesla	Model X	2019	0	4	6	Electric
3464	BMW	Alpina B7	2018	20	4	5	Gas
3465	Toyota	Prius Prime	2021	54	5	5	Hybrid
3466	Nissan	Sentra	2019	34	4	5	Gas
3467	Jeep	Compass	2018	26	4	5	Gas
3468	Subaru	Legacy	2011	27	4	5	Gas
3469	Mercedes-Benz	C-Class	2015	28	4	5	Gas
99999	n/a	n/a	0	0	0	0	n/a
*							

booking\_fact table:

**SCHMAS**

- mydb
  - sys
    - turo\_dim
      - Tables
        - booking\_fact
        - car\_dim
        - customer\_dim
        - date\_dim
        - from\_date\_dim
        - location\_dim
        - owner\_dim
        - review\_fact
        - to\_date\_dim
      - Views
      - Stored Procedures
      - Functions

Administration    Schemas

No object selected

---

Query Editor Window:

date\_dim | booking\_fact x

Limit to 1000 rows

```
1 • SELECT * FROM turo_dim.booking_fact;
```

Result Grid

	booking_id	customer_id	owner_id	car_id	loc_id	book_date_id	from_date_id	to_date_id	price_per_day
▶	6430	1013	2013	3462	5251	4350	5355	6359	60
	6431	1015	2015	3467	5352	4350	5359	6360	50
	6432	1010	2012	3464	5355	4351	5352	6354	56
	6433	1012	2011	3465	5359	4351	5357	6360	39
	6434	1011	2012	3463	5355	4351	5353	6354	99
	6435	1014	2010	3460	5354	4352	5361	6363	75
	6436	1012	2019	3461	5356	4353	5356	6357	110
	6437	1018	2014	3469	5353	4353	5358	6361	50
	6438	1016	2016	3468	5356	4353	5354	6355	70
	6439	1017	2017	3466	5357	4354	5360	6362	32
	6440	1011	2011	3463	5359	4354	5357	6359	49
	6441	1013	2015	3462	5251	4354	5357	6359	56
	6442	1015	2014	3469	5353	4354	5358	6360	90
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

booking\_fact 1 x

review\_fact table:

The screenshot shows a database management tool interface. On the left, a 'SCHEMAS' pane displays a tree view of the database structure, including tables like booking\_fact, car\_dim, customer\_dim, date\_dim, from\_date\_dim, location\_dim, owner\_dim, review\_fact, and to\_date\_dim. The 'review\_fact' table is selected. The main pane shows a SQL query: `SELECT * FROM turo_dim.review_fact;` and a 'Result Grid' displaying the table's data. The result grid has columns: review\_id, customer\_id, owner\_id, car\_id, review\_date\_id, rating, comment, and review\_by\_cust. The data shows various reviews with ratings and comments, and the review\_by\_cust column indicates whether the review was given by a customer (1) or an owner (0).

review_id	customer_id	owner_id	car_id	review_date_id	rating	comment	review_by_cust
7656	1011	2012	3463	4355	5	Great car. Great host.	1
7660	1012	2019	3461	4357	4	Good host. Easy going.	1
7657	1011	2012	3463	4357	2	Pet hair found in car.	0
7661	1012	2019	3461	4358	4	Car was dropped off a bit late.	0
7650	1013	2013	3462	4359	5	Great car. Great host.	1
7651	1013	2013	3462	4359	4	Customer was friendly.	0
7666	1011	2011	3463	4359	2	Smoke smell in car.	0
7667	1011	2011	3463	4359	5	Great host. Great car.	1
7668	1013	2015	3462	4360	5	Great customer!	0
7669	1013	2015	3462	4360	3	Helpful host. Car had issues with braking.	1
7652	1015	2015	3467	4360	3	Good host. Car was not very clean.	1
7653	1015	2015	3467	4360	5	Great customer. Returned car clean.	0
7654	1012	2011	3465	4361	5	Good customer. Friendly and easy-going.	0
7655	1012	2011	3465	4361	3	Helpful host. Car did not drive well.	1
7664	1017	2017	3466	4362	2	Car was in a shape. Host was rude.	1
7670	1015	2014	3469	4362	4	Helpful host.	1
7662	1018	2014	3469	4362	3	Car did not drive well.	1
7663	1018	2014	3469	4362	3	Customer was demanding.	0
7665	1017	2017	3466	4364	5	Great customer. Would rent again.	0

Review\_fact table note:

Only one table was created to hold the reviews given by the customer to the owner and from the owner to the customer. The review\_by\_cust column help identify who is giving the review (1 for reviews given by customers and 0 for reviews given by owners)