

# ER Model for Turo – Taiwo Olatunde

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## About Turo:

Turo is an American peer-to-peer carsharing company based in San Francisco, United States. The company allows private car owners to rent out their vehicles via an online and mobile interface in over 56 countries. The URL for the website is <https://www.turo.com/>

## Assignment Summary:

You must create a database in MySQL for Turo. A database design project generally starts with requirements - you analyze the requirements to identify the business rules, entities, and relationships to form an ERD and then convert it into a database. In this case, however, we are using snapshots from a functional website (<https://www.turo.com/>) to understand the entities and business rules so that we can reverse engineer the database design. This document provides the snapshots from the website for your reference. However, I recommend that you go through the Turo website to understand the **car owner & customer** workflows.

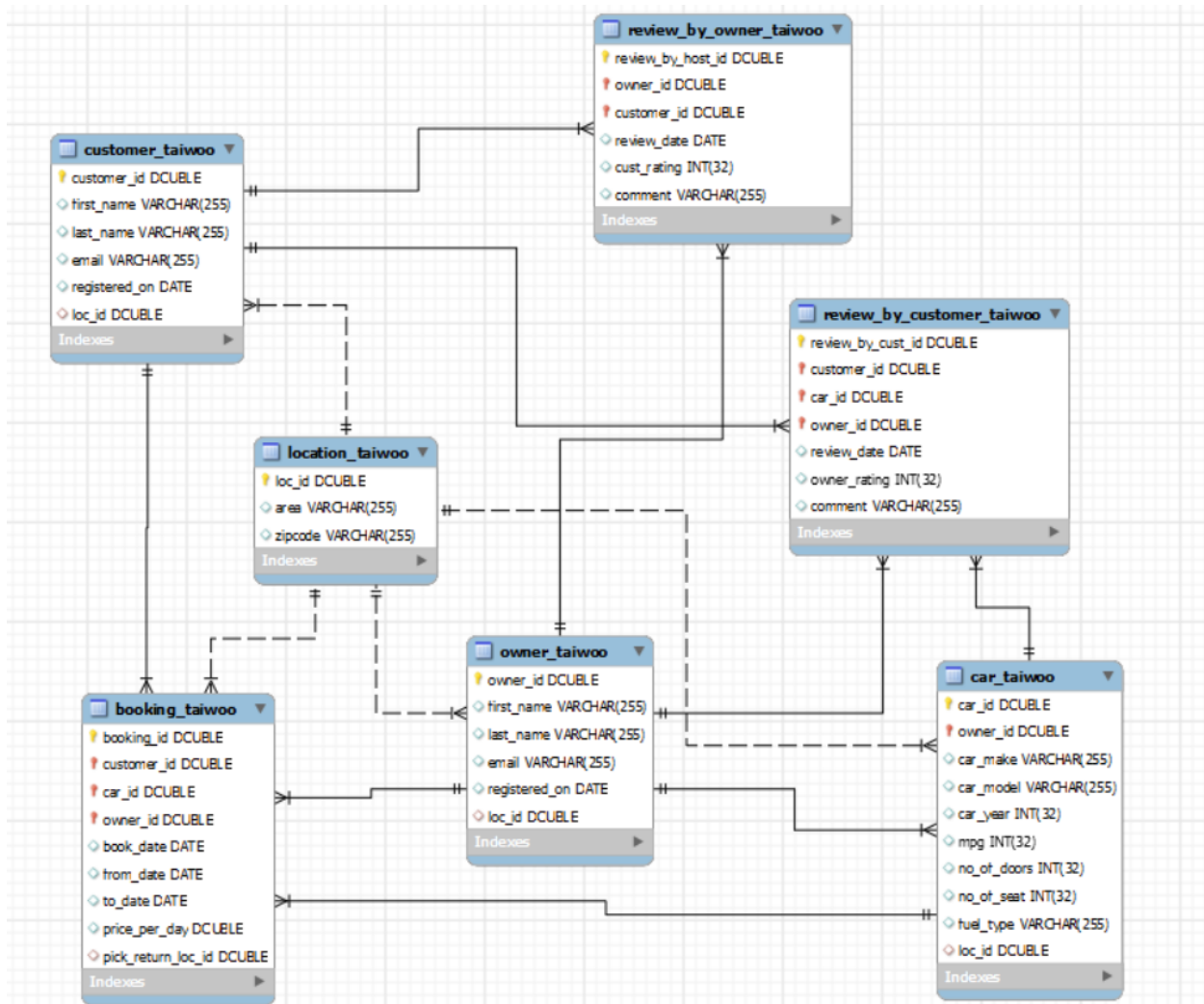
## Scope:

The customer searches for a car to rent it out. Also, the car owner can rent his/her car to any customer for any number of days. The scope of the project is limited to the booking and reviews. The website offers a whole lot of information about the booking and reviews.

## Assumptions:

- A customer can sign up via email and create an account.
- A customer cannot be a car owner.
- Customer can leave reviews about the car owners. Also, car owners can leave reviews about the customer(s).
- The system should keep track of the confirmed bookings.

Snapshot of ER diagram:



Snapshot of physical tables created in MySQL with data:

Customer\_TaiwoO table:

MySQL Workbench interface showing the 'customer\_taiwoo' table data. The query is: `SELECT * FROM turodb.customer_taiwoo;`

customer_id	first_name	last_name	email	registered_on	loc_id
1010	Emmanuel	Emma	emma.emmanuel@gmail.com	2020-02-01	5352
1011	Joshua	Josh	josh.joshua@yahoo.com	2021-05-05	5350
1012	Redeemed	Child	redeemedchild@gmail.com	2020-03-02	5351
1013	John	Akpabio	akpabiojohn34@gmail.com	2022-03-16	5354
1014	Victor	Chris	chris.victor@yahoo.com	2021-12-06	5356
1015	Ada	Osemene	adang@gmail.com	2019-03-06	5357
1016	Victor	Agbo	victoryindeed@yahoo.com	2023-09-01	5355
1017	Mary	Elizabeth	elizzy65@yahoo.com	2022-07-22	5353
1018	Joseph	Joseph	joseph.joseph@gmail.com	2021-09-03	5352
NULL	NULL	NULL	NULL	NULL	NULL

Owner\_TaiwoO table:

MySQL Workbench interface showing the 'owner\_taiwoo' table data. The query is: `SELECT * FROM turodb.owner_taiwoo;`

owner_id	first_name	last_name	email	registered_on	loc_id
2010	Isreal	Newton	isreal.newton@gmail.com	2022-03-05	5354
2011	Ebenezer	Delta	ebenezer.delta@yahoo.com	2022-07-14	5357
2012	David	Sling	david.sling@gmail.com	2020-02-17	5355
2013	Ayotunde	Ayo	ayotundeayo67@yahoo.com	2021-09-13	5352
2014	Victoria	Ask	victoria.ask@gmail.com	2021-11-30	5353
2015	Blessing	King	kingblessing32@gmail.com	2020-05-02	5352
NULL	NULL	NULL	NULL	NULL	NULL

The screenshot shows the MySQL Workbench interface. The top toolbar includes icons for File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. The 'Query' tab is active, showing a query window with the following SQL statement:

```
1 • SELECT * FROM turodb.location_taiwoo;
```

The 'Navigator' pane on the left shows the 'SCHEMAS' tree with the following structure:

- mydb
  - sys
  - turodb
    - Tables
      - booking\_taiwoo
      - car\_taiwoo
      - customer\_taiwoo
      - location\_taiwoo
      - owner\_taiwoo
      - review\_by\_customer\_taiwoo
      - review\_by\_owner\_taiwoo
    - Views
    - Stored Procedures
    - Functions

The 'Result Grid' pane on the right displays the query results for 'location\_taiwoo'. The table has three columns: 'loc\_id', 'area', and 'zipcode'. The data is as follows:

loc_id	area	zipcode
5350	College Station	77840
5351	Byran	77801
5352	Denton	76209
5353	Crestwood	76107
5354	Fairmount	76110
5355	Round Rock	78701
5356	Montrose	77006
5357	Plano	75024
NULL	NULL	NULL

The bottom status bar shows 'Administration', 'Schemas', and 'ation\_taiwoo 1 x'. The 'Apply' and 'Revert' buttons are visible on the right side of the status bar.

The screenshot shows the MySQL Workbench interface. The top toolbar includes icons for File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. The 'Query' tab is active, showing a query window with the following SQL statement:

```
SELECT * FROM turodb.car_taiwoo;
```

The 'Navigator' pane on the left shows the 'SHEMAS' tree with the following structure:

- mydb
  - sys
  - turodb
    - Tables
      - booking\_taiwoo
      - car\_taiwoo
      - customer\_taiwoo
      - location\_taiwoo
      - owner\_taiwoo
      - review\_by\_customer\_taiwoo
      - review\_by\_owner\_taiwoo
    - Views
    - Stored Procedures
    - Functions

The 'Query Grid' pane on the right displays the results of the query. The grid has 10 columns: car\_id, owner\_id, car\_make, car\_model, car\_year, mpg, no\_of\_doors, no\_of\_seat, fuel\_type, and loc\_id. The results are as follows:

car_id	owner_id	car_make	car_model	car_year	mpg	no_of_doors	no_of_seat	fuel_type	loc_id
3460	2010	Jeep	Grand Cherokee L	2021	22	4	6	Gas	5354
3461	2015	Tesla	Model 3	2018	0	4	5	Electric	5352
3462	2013	BMW	5 Series	2015	28	4	5	Gas	5352
3463	2012	Tesla	Model X	2019	0	4	6	Electric	5355
3464	2012	BMW	Alpina B7	2018	20	4	5	Gas	5353
3465	2011	Toyota	Prius Prime	2021	54	5	5	Hybrid	5357
3466	2014	Nissan	Sentra	2019	34	4	5	Gas	5353
3467	2015	Jeep	Compass	2018	26	4	5	Gas	5352
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

The bottom status bar shows 'Administration Schemas car\_taiwoo 1 x' and 'Apply Revert' buttons.

## Booking\_TaiwoO table:

MySQL Workbench

MySQL Model (Turo\_ERD\_Taiwo...x) EER Diagram x Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

- mydb
- sys
- turodb
  - Tables
    - booking\_taiwoo
    - car\_taiwoo
    - customer\_taiwoo
    - location\_taiwoo
    - owner\_taiwoo
    - review\_by\_customer\_taiwoo
    - review\_by\_owner\_taiwoo
  - Views
  - Stored Procedures
  - Functions

Query 1 booking\_taiwoo x

1 • SELECT \* FROM turodb.booking\_taiwoo;

Result Grid

booking_id	customer_id	car_id	owner_id	book_date	from_date	to_date	price_per_day	pick_return_loc
6435	1013	3462	2013	2022-04-01	2022-04-05	2022-04-10	60	5352
6436	1015	3467	2015	2020-02-03	2020-03-05	2020-03-07	50	5352
6437	1010	3464	2012	2020-05-15	2020-06-10	2020-06-15	56	5353
6438	1012	3465	2011	2021-09-07	2021-09-08	2021-09-11	39	5357
6439	1011	3463	2012	2021-07-18	2021-08-02	2021-08-11	99	5355
6440	1014	3460	2010	2023-05-09	2023-05-15	2023-05-17	75	5354
6441	1012	3463	2012	2022-06-22	2022-06-24	2022-06-26	110	5355
6442	1018	3466	2014	2021-10-10	2021-10-13	2021-10-15	50	5353
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Administration Schemas booking\_taiwoo 1 x Apply Revert

## Review\_by\_Customer\_TaiwoO table:

MySQL Workbench

MySQL Model (Turo\_ERD\_Taiwo...x) EER Diagram x Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

- mydb
- sys
- turodb
  - Tables
    - booking\_taiwoo
    - car\_taiwoo
    - customer\_taiwoo
    - location\_taiwoo
    - owner\_taiwoo
    - review\_by\_customer\_taiwoo
    - review\_by\_owner\_taiwoo
  - Views
  - Stored Procedures
  - Functions

Query 1 location\_taiwoo owner\_taiwoo review\_by\_customer\_taiwoo x

1 • SELECT \* FROM turodb.review\_by\_customer\_taiwoo;

Result Grid

review_by_cust_id	customer_id	car_id	owner_id	review_date	owner_rating	comment
7651	1018	3466	2014	2021-10-15	5	Great host. great car.
7652	1012	3465	2011	2021-09-12	4	Good host. Car was not very clean.
7653	1015	3467	2015	2020-03-09	3	Helpful host but car did not drive well.
7654	1010	3464	2012	2020-06-17	5	Great car. Great communication.
7655	1011	3463	2012	2021-08-11	5	Excellent car, very helpful host.
7656	1013	3462	2013	2022-04-11	4	Good host. Easy going.
7657	1014	3460	2010	2023-05-18	3	Reliable car. Host was not on time.
NULL	NULL	NULL	NULL	NULL	NULL	NULL

Administration Schemas owner\_taiwoo 1 x Apply Revert

## Review\_by\_Owner\_TaiwoO table:

MySQL Workbench

MySQL Model (Turo\_ERD\_Taiwo...x) EER Diagram x Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

- mydb
- sys
- turodb
  - Tables
    - booking\_taiwoo
    - car\_taiwoo
    - customer\_taiwoo
    - location\_taiwoo
    - owner\_taiwoo
    - review\_by\_customer\_taiwoo
    - review\_by\_owner\_taiwoo
  - Views
  - Stored Procedures
  - Functions

Query 1 review\_by\_owner\_taiwoo x

Limit to 1000 rows

1 • SELECT \* FROM turodb.review\_by\_owner\_taiwoo;

Result Grid

	review_by_host_id	owner_id	customer_id	review_date	cust_rating	comment
▶	8232	2014	1018	2021-10-16	4	Understanding customer. Was on time.
	8233	2012	1010	2020-06-18	5	Great customer. Cleaned car.
	8234	2012	1011	2021-08-11	5	Drop-off car as planned.
	8235	2013	1013	2022-04-11	2	Pet hair found in car.
	8236	2010	1014	2023-05-19	5	Friendly customer. Refueled car.
*	HIDE	HIDE	HIDE	HIDE	HIDE	HIDE

Administration Schemas vner\_taiwoo 1 x Apply Revert