



ITCS241 Database Management System

Project 1

Grab Transport

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Overview



History

Grab Holdings Inc., is a Singaporean corporation known as "Grab," the founder of Grab transport. It is the creator of the Grab super-app, the food delivery app, and the digital mobile app. In addition to Cambodia, Indonesia, Myanmar, the Philippines, Thailand, Vietnam, and Singapore, Grab currently operates in these other countries as well. The largest technology startup in the region, it is Southeast Asia's first. Founded by Anthony Tan and Tan Hooi Ling in 2012 as the MyTeksi app and is only based in Malaysia only. It was expanded the next year as Grab Taxi.

In 2013, MyTeksi was renamed "GrabTaxi" and began spreading to additional countries in the area, including the Philippines, Singapore, and Thailand. A year later, GrabTaxi expanded into Vietnam and Indonesia, as well as introducing the personal automobile service GrabCar.

In 2015, GrabBike debuted in Vietnam and Indonesia, while GrabCar+ (later rebranded as GrabCar Premium) debuted in the Philippines. GrabBike allows passengers to select motorcycles/motorbikes as their preferred mode of transportation, whilst GrabCar+ allows users to ride in more high-end or luxury vehicles.

In 2016, The company was relaunched as "Grab", and it now offers automobile and document delivery services. In the same year, the firm developed a function in the app that allows drivers and riders to speak with one another.

In 2018, To fight with Indonesian rival Gojek, Grab launched GrabFood and also invested in digital payment provider OVO.

In 2019, Grab has announced the construction of a new corporate office in Singapore. The new headquarters, which is located in Queenstown's one-north business park, cost \$135 million and will be operational by the end of 2020.

During the 2020 Coronavirus outbreak, the company expanded GrabMart and GrabAssistant (on-demand concierge), while also providing \$40 million to relief efforts across Southeast Asia.

Grab Financial Group, the company's financial arm, raised \$300 million from Hanwha Asset Management in January 2021. The investment came on the heels of Grab and Singapore Telecommunications obtaining a digital banking license in Singapore.



Partnerships

Grab revealed plans to go public in April 2021 through a SPAC merger with Altimeter Growth Corp. for \$39.6 billion. It was the largest blank-check merger at the time, according to

reports. Emtel Group of Indonesia invested \$375 million in Grab's Indonesian business unit in July 2021 to increase digital adoption among small and medium-sized businesses in the nation. Grab will collaborate with McDonald's in Singapore in November 2021 to combine GrabExpress, GrabPay, and GrabRewards with the restaurant's online and in-store ordering. Following a SPAC with Altimeter Growth Corp, Grab debuted on Nasdaq in December 2021, with shares opening at \$13.06. Fuel shortages in Vietnam increased gasoline prices in March 2022, and numerous ride-hailing firms hiked their pricing to pass the higher cost on to customers. In the same month, Grab implemented a temporary driver fee in Singapore to assist its drivers in covering greater operational costs due to rising gasoline prices.

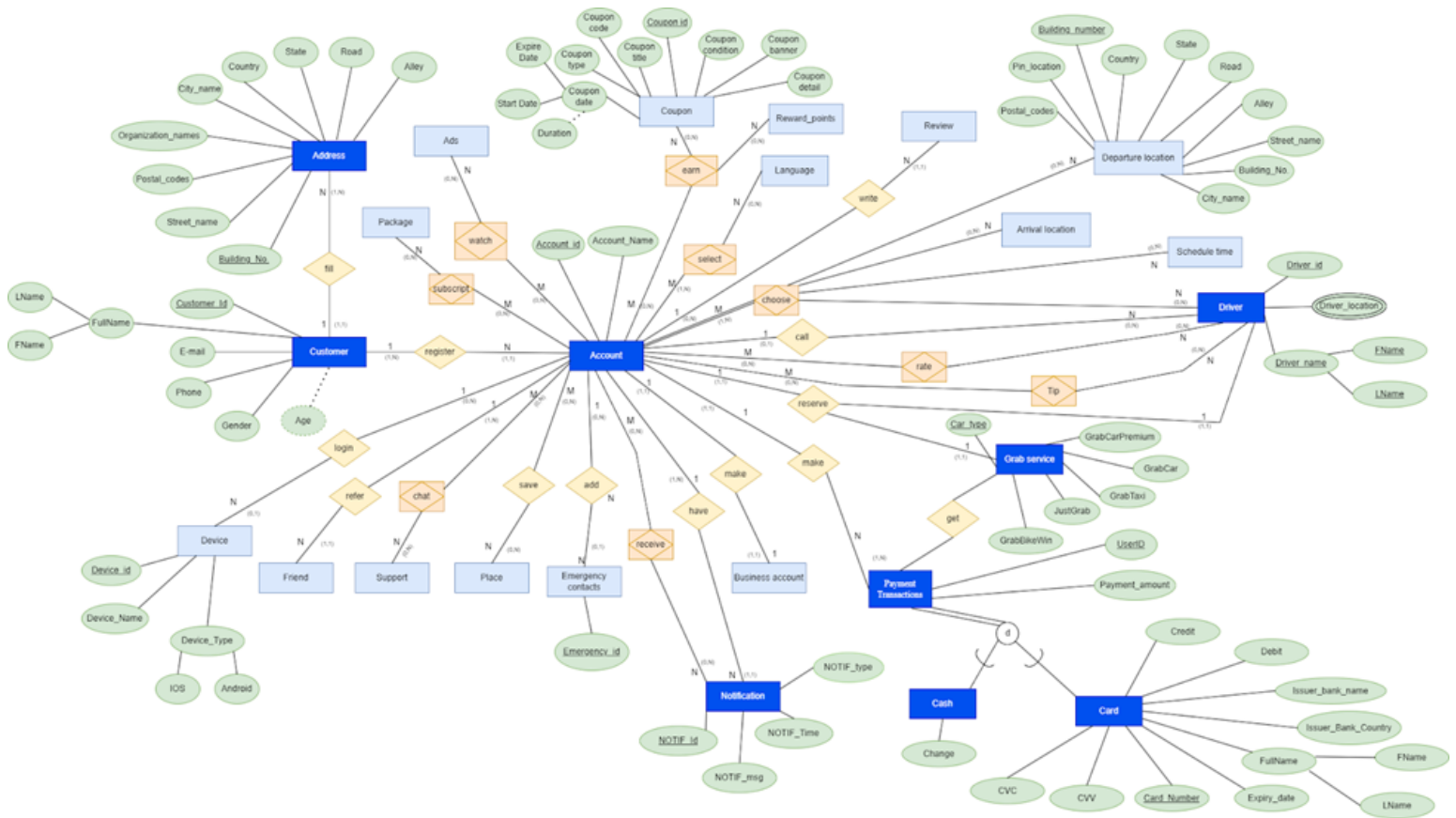
Goal

- Use tech for good in Southeast Asia.
- Achieving carbon neutrality by 2040
- doubling the number of marginalized individuals earning income on its platform by 2025

Vision

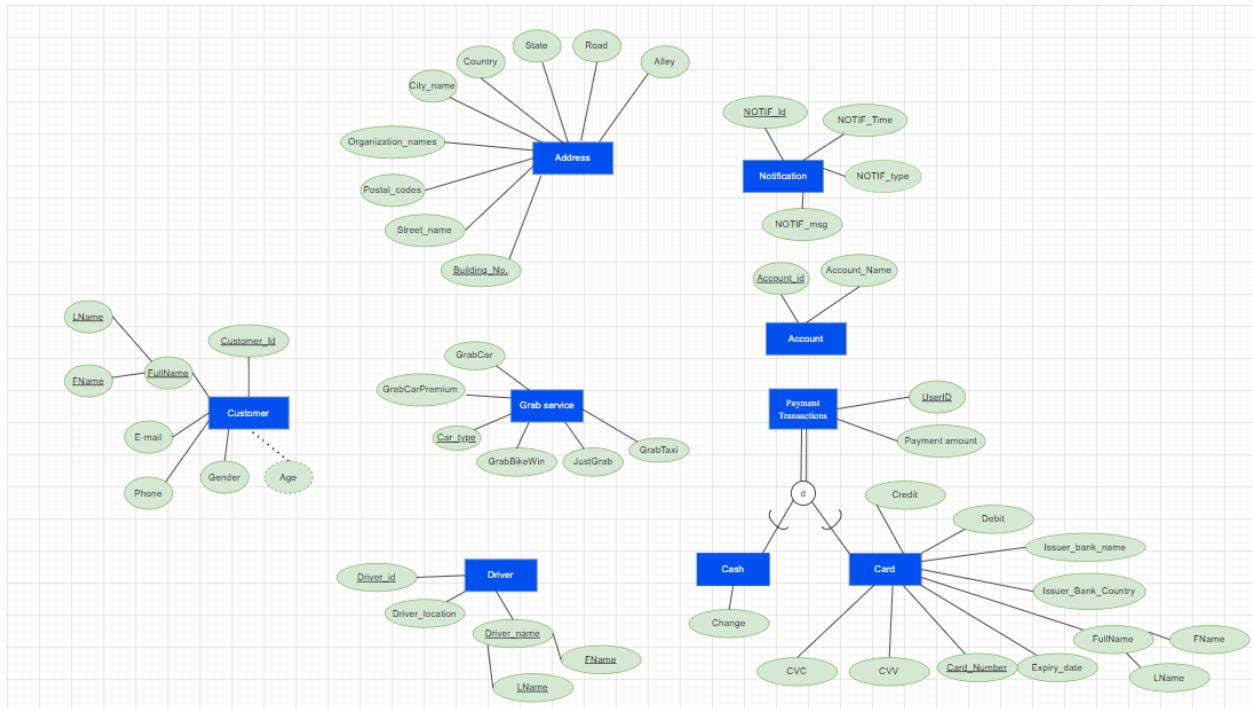
“The Grab vision encourages a future where Southeast Asians may access seamless mobility, on-demand food delivery, logistics, cashless payments, and financial services through a single smartphone app.”

ER Diagram



8 Steps to transform ERD to relational schema

Step 1: Create a relation R for each regular entity type E.



Customer

<u>FNAME</u>	<u>LNAME</u>	E-mail	Phone	Gender	Age
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Address

<u>Buidling_NO</u>	Street_name	Postal_code	Organization_name	City_name	Country
State	Road	Alley			

Notification

<u>NOTIF_ID</u>	NOTIF_Time	NOTIF_Type	NOTIF_MSG
-----------------	------------	------------	-----------

Account

<u>Account_id</u>	Account_Name
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Driver

<u>Driver_id</u>	<u>FName</u>	<u>LName</u>	Driver_location
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Grab Service

<u>Car_type</u>	Grabcar	GrabCarPremium	GrabBikeWin	JustGrab	GrabTaxi
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Payment transaction

<u>UserID</u>	Payment_Amount
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Cash

Change

Card

<u>Card_Number</u>	Credit	Debit	Issuer_bank_name	Issuer_bank_country	Fname
Lname	Expiry_date	CVV	CVC		

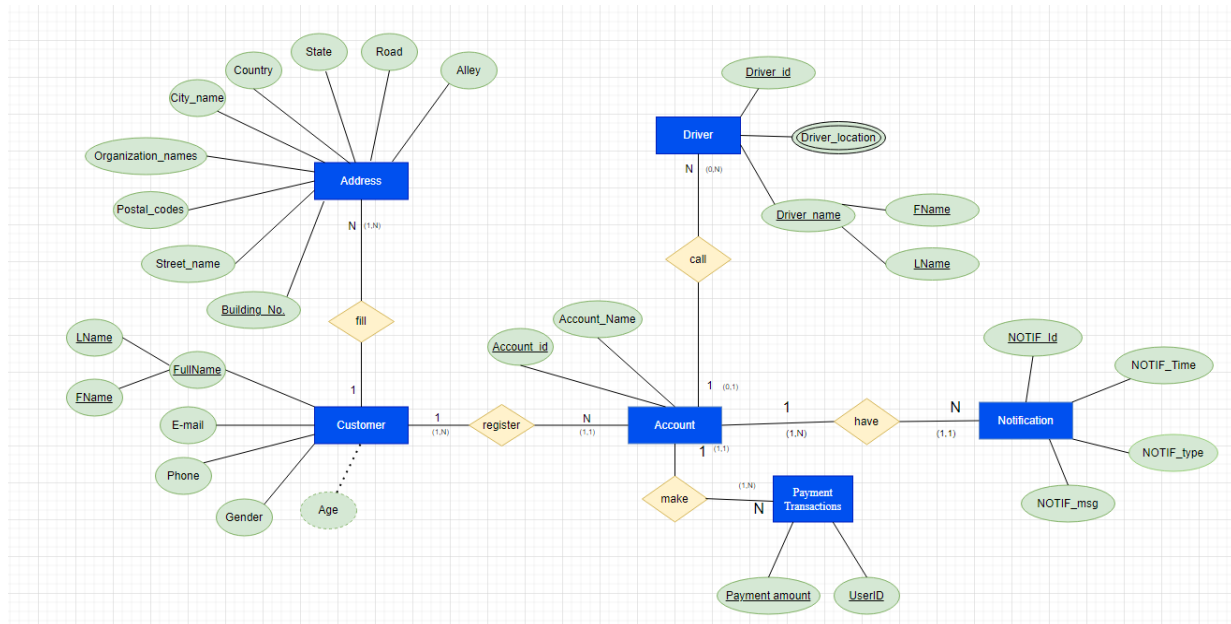
Step 2: Create a relation R for each weak entity type W

There is no weak entity.

Step 3: Binary 1: 1 → Relationship Type R

There is no 1:1 Relationship Type R

Step 4: Binary 1:N → Relationship Type R



Notification

<u>NOTIF_id</u>	NOTIF_Time	NOTIF_type	NOTIF_msg	AID
-----------------	------------	------------	-----------	-----

Payment transactions

<u>UserID</u>	Payment amount	<u>AID</u>
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Address

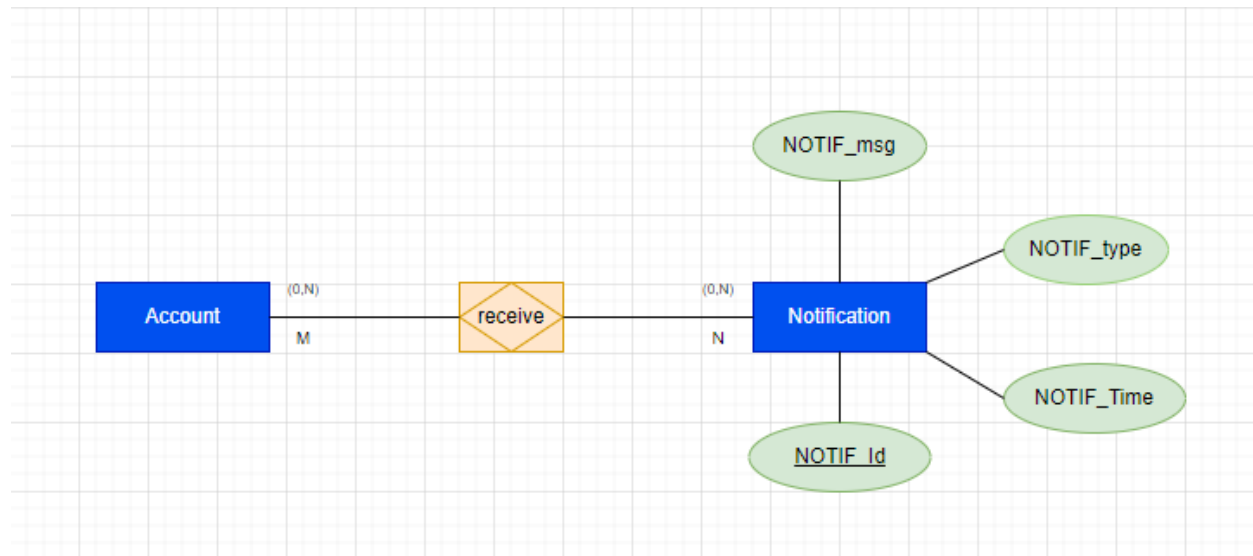
<u>Building_NO</u>	Street_name	Postal_codes	Organization_names	City_name
Country	State	Road	Alley	<u>CID</u>

Account

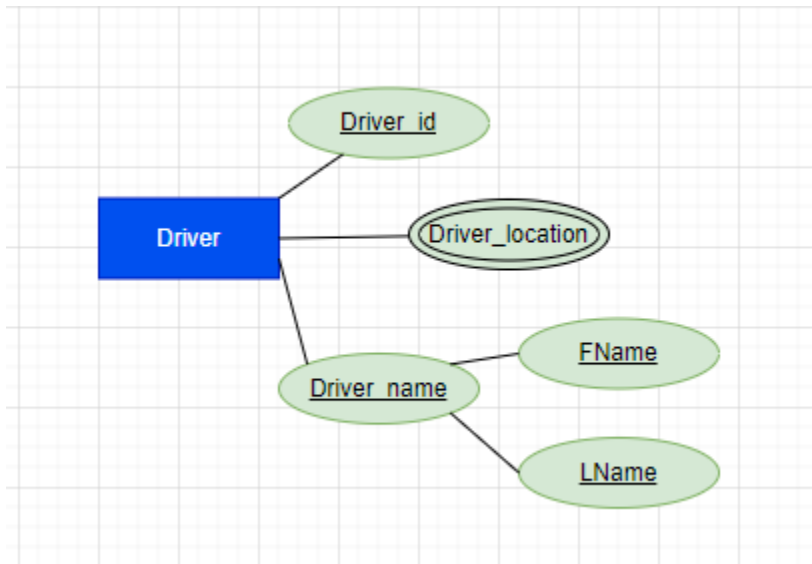
<u>Account_id</u>	Account_Name	<u>CID</u>
-------------------	--------------	------------

Driver

<u>Diver id</u>	<u>FName</u>	<u>LName</u>	Diver_location	<u>AID</u>
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Step 5: Binary M:N → Relationship Type R**Receive**

<u>NID</u>	<u>UserID</u>
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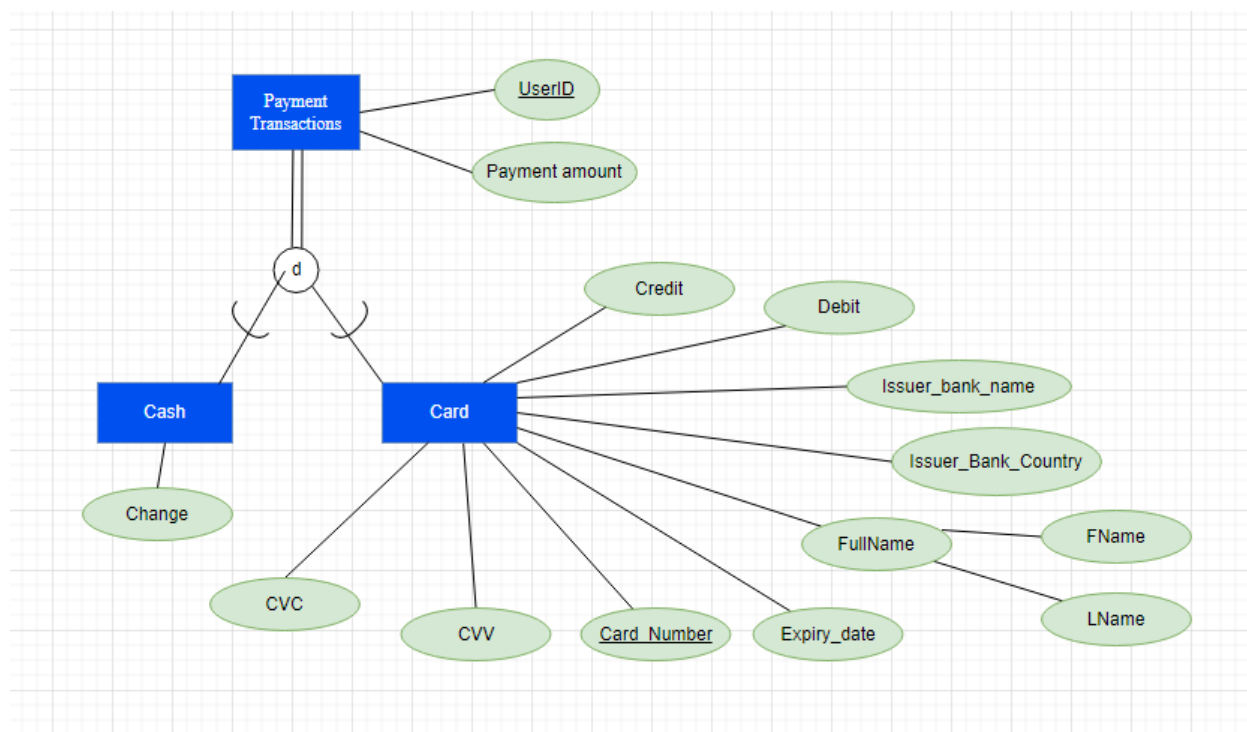
Step 6: Multi-Valued Attribute**Driver**

<u>Driver_id</u>	Driver_location	<u>FNAME</u>	<u>LNAME</u>
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Step 7: N-ary Relationship

There is no N-ary Relationship.

Step 8: Transforming Specialization



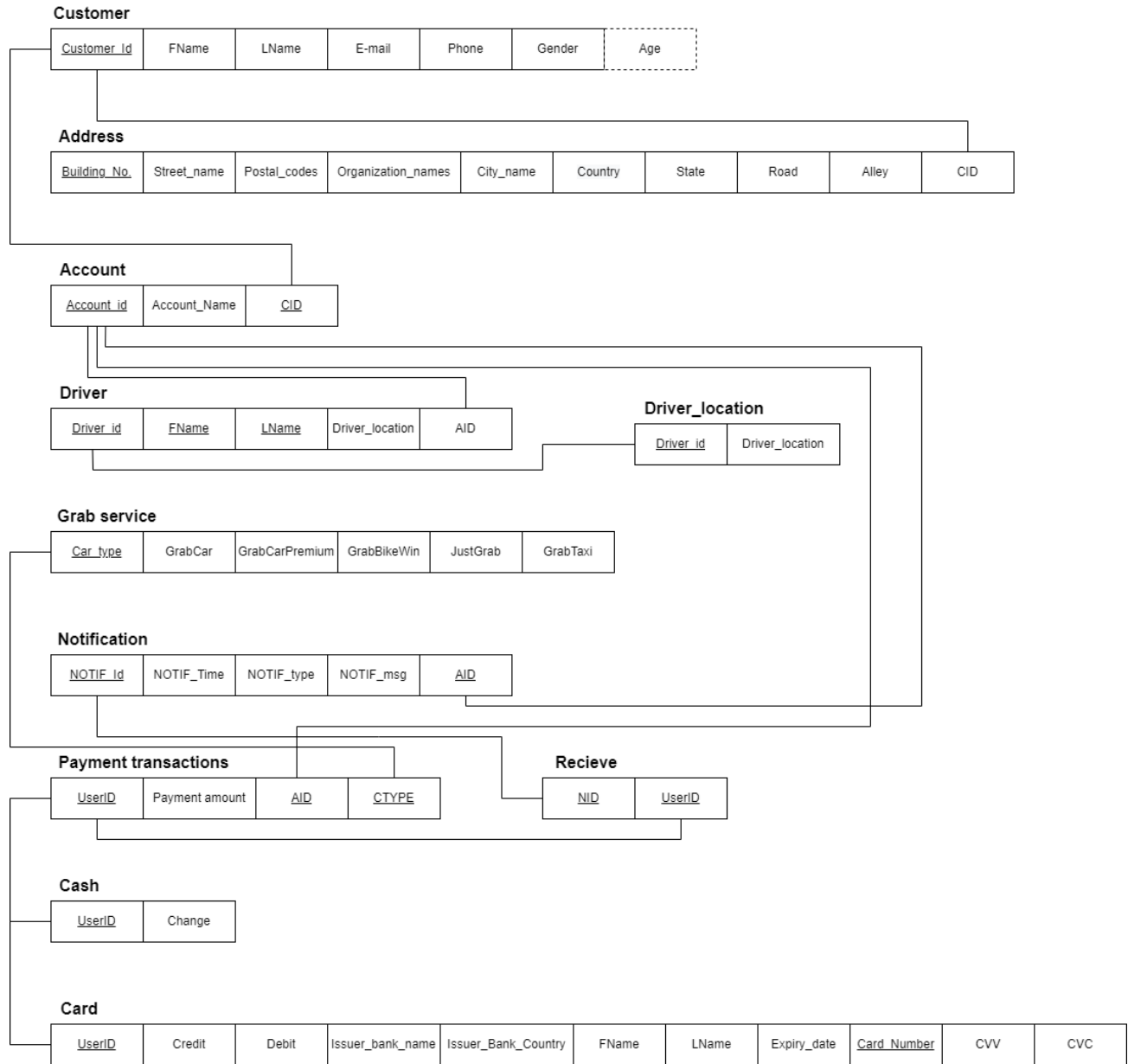
Cash

<u>UserID</u>	Change
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Card

<u>UserID</u>	Credit	Debit	Issuer_bank_name	Issuer_Bank_Country	FName
LName	Expiry_date	<u>Card_Number</u>	CVV	CVC	

The final relational schema



Data dictionary

Table Name	Attribute Name	Contents	Type	Format	Nulla ble	Range	Key	FK Referenced Table
Customer	Customer_Id	Customer's id	int	x			PK	
	Fname	Customer's first name	varchar(20)	Xxxxxx				
	Lname	Customer's last name	varchar(20)	Xxxxxx				
	Email	Customer's email	varchar(319)	Xxxxxx				
	Phone	Customer's phone	varchar(10)	xxx-xxx-xxxx				
	Gender	Customer's gender	char(1)	x	Y	M,F		
Address	Building_No	Building number	varchar(10)	xxxxxxx			PK	
	Street_name	Street name	varchar(40)	Xxxxxx	Y			
	Postal_codes	Postal codes	varchar(5)	xxxxxx				
	Organization_name	Organization name	varchar(40)	Xxxxxx	Y			
	City_name	City name	varchar(20)	Xxxxxx				
	Country	Country name	varchar(60)	Xxxxxx				
	District	District name	varchar(30)	Xxxxxx	Y			
	Road	Road name	varchar(30)	Xxxxxx	Y			
	Alley	Alley name	varchar(30)	Xxxxxx	Y			

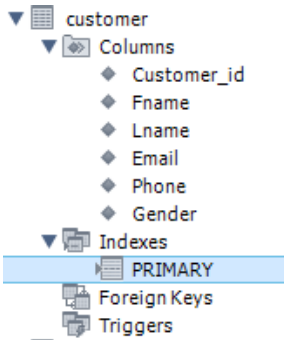
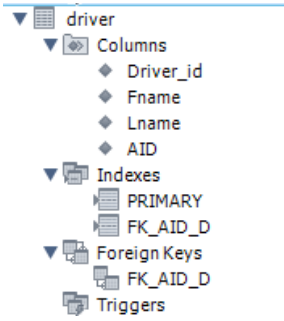
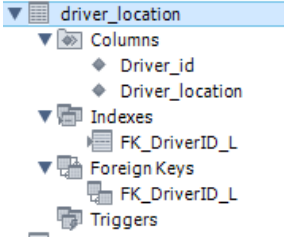
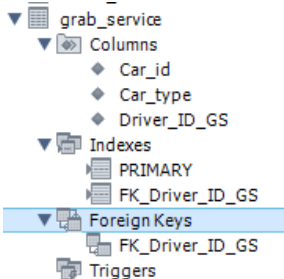
	CID	customer's id	int	x			PK, FK	Customer_Id [Customer]
Account	Account_Id	Account's id	int	x			PK	
	Account_Name	Account's name	varchar(20)	Xxxxxx				
	CID	Customer's id	int	x			FK	Customer_Id [Customer]
Driver	Driver_Id	Driver's id	int	x			PK	
	Fname	Driver's first name	varchar(20)	Xxxxxx			PK	
	Lname	Driver's last name	varchar(20)	Xxxxxx			PK	
	AID	Account's id	int	x			PK, FK	Account_Id [Account]
Driver_location	Driver_id	Driver's id	int	x			FK	Driver_Id [Driver]
	Driver_location	Driver's location	varchar(50)	Xxxxxx				
Grab service	Car_id	car id	int	x			PK	
	Car_type	Car type	varchar(20)	Xxxxxx		GrabCar, GrabCar Premium, GrabBikeWin, JustGrab, GrabTaxi		
	Driver_ID_GS	Driver's id	int	x			FK	Driver_Id [Driver]
Notificatio	NOTIF_id	Notification id	int	x			PK	

n								
	NOTLF_time	Notification time	date	xxxx-xx-xx				
	NOTLF_type	Notification type	varchar(20)	Xxxxxx				
	NOTIF_msg	Notification message	varchar(500)	Xxxxxx				
	AID	Account's id	int	x			PK, FK	Account_Id [Account]
Payment transactions	Payment_id	payment id	int	x			PK	
	Payment amount	Payment amount	decimal (5,2)	x				
	AID	Account's id	int	x			PK, FK	Account_Id [Account]
	Car_id	Car type	varchar(20)	Xxxxxx			PK, FK	Car_type [Grab service]
Cash	Payment_id	User Id	int	x			PK, FK	Payment_id [Payment transactions]
	Change	Returned money	decimal (5,2)	xxxxx.xx				
Card	Payment_id	User Id	int	x			PK, FK	Payment_id [Payment transactions]
	Credit	Credit card	char(1)	x		Y		
	Debit	Debit card	char(1)	x		Y		
	Issuer_bank_name	Bank name	varchar(20)	xxxxxxx				
	Issuer_bank_country	Bank country	varchar(20)	xxxxxxx				
	FName	Card holder	varchar(xxxxxxx				

		First name	20)					
	LName	Card holder last name	varchar(20)	xxxxxxx				
	Expiry_date	Month-Year of the date that will be expired	varchar(8)	xx-xx-xxxx				
	Card_number	Card number	varchar(16)	xxxx-xxxx-xxx x-xxxx			PK	
	CVV	CVV	char(3)	xxx				

Table Description

Table name	Description	Schema View	Information
Account	Account is kept data in terms of account id, name and customer id created by customer		Table: account Columns: <u>Account_id</u> int PK Account_name varchar(20) CID int
Address	Address is kept data in terms of building no, note, postal code, organize name, city name, district, road, alley and customer id		Table: address Columns: <u>Build_no</u> varchar(10) PK note varchar(40) Postal_codes varchar(5) Organization_name varchar(40) City_name varchar(20) Country varchar(60) District varchar(30) Road varchar(30) Alley varchar(30) CID int PK
Card	Card keeps data in terms of payment id, credit, debit, bank name, bank country, fname, name expire, card number and CVV.		Table: card Columns: <u>Payment_id</u> int PK Credit char(1) Debit char(1) Issuer_bank_name varchar(20) Issuer_bank_country varchar(8) Fname varchar(20) Lname varchar(20) Expiry_date varchar(20) <u>Card_number</u> varchar(16) PK CVV char(3)
Cash	Cash keeps data in terms of payment id and money change.		Table: cash Columns: <u>Payment_id</u> int PK Money_change decimal(5,2)

Customer	Customer keeps data in terms of customer id, first name, last name, email, phone number and gender.	 <p>customer</p> <ul style="list-style-type: none">Columns<ul style="list-style-type: none">Customer_idFnameLnameEmailPhoneGenderIndexes<ul style="list-style-type: none">PRIMARYForeign KeysTriggers	<p>Table: customer</p> <p>Columns:</p> <table><tr><td><u>Customer_id</u></td><td>int PK</td></tr><tr><td>Fname</td><td>varchar(20)</td></tr><tr><td>Lname</td><td>varchar(20)</td></tr><tr><td>Email</td><td>varchar(319)</td></tr><tr><td>Phone</td><td>varchar(10)</td></tr><tr><td>Gender</td><td>char(1)</td></tr></table>	<u>Customer_id</u>	int PK	Fname	varchar(20)	Lname	varchar(20)	Email	varchar(319)	Phone	varchar(10)	Gender	char(1)
<u>Customer_id</u>	int PK														
Fname	varchar(20)														
Lname	varchar(20)														
Email	varchar(319)														
Phone	varchar(10)														
Gender	char(1)														
Driver	Driver keeps data in terms of driver id, first name, last name and account id.	 <p>driver</p> <ul style="list-style-type: none">Columns<ul style="list-style-type: none">Driver_idFnameLnameAIDIndexes<ul style="list-style-type: none">PRIMARYFK_AID_DForeign Keys<ul style="list-style-type: none">FK_AID_DTriggers	<p>Table: driver</p> <p>Columns:</p> <table><tr><td><u>Driver_id</u></td><td>int PK</td></tr><tr><td><u>Fname</u></td><td>varchar(20) PK</td></tr><tr><td><u>Lname</u></td><td>varchar(20) PK</td></tr><tr><td><u>AID</u></td><td>int PK</td></tr></table>	<u>Driver_id</u>	int PK	<u>Fname</u>	varchar(20) PK	<u>Lname</u>	varchar(20) PK	<u>AID</u>	int PK				
<u>Driver_id</u>	int PK														
<u>Fname</u>	varchar(20) PK														
<u>Lname</u>	varchar(20) PK														
<u>AID</u>	int PK														
Driver_location	Driver location keeps data in terms of driver id and driver location	 <p>driver_location</p> <ul style="list-style-type: none">Columns<ul style="list-style-type: none">Driver_idDriver_locationIndexes<ul style="list-style-type: none">FK_DriverID_LForeign Keys<ul style="list-style-type: none">FK_DriverID_LTriggers	<p>Table: driver_location</p> <p>Columns:</p> <table><tr><td><u>Driver_id</u></td><td>int</td></tr><tr><td>Driver_location</td><td>varchar(50)</td></tr></table>	<u>Driver_id</u>	int	Driver_location	varchar(50)								
<u>Driver_id</u>	int														
Driver_location	varchar(50)														
Grab_service	Grab service keeps data in terms of car id, car type and driver id.	 <p>grab_service</p> <ul style="list-style-type: none">Columns<ul style="list-style-type: none">Car_idCar_typeDriver_ID_GSIndexes<ul style="list-style-type: none">PRIMARYFK_Driver_ID_GSForeign Keys<ul style="list-style-type: none">FK_Driver_ID_GSTriggers	<p>Table: grab_service</p> <p>Columns:</p> <table><tr><td><u>Car_id</u></td><td>int PK</td></tr><tr><td>Car_type</td><td>varchar(20)</td></tr><tr><td><u>Driver_ID_GS</u></td><td>int</td></tr></table>	<u>Car_id</u>	int PK	Car_type	varchar(20)	<u>Driver_ID_GS</u>	int						
<u>Car_id</u>	int PK														
Car_type	varchar(20)														
<u>Driver_ID_GS</u>	int														

Notification	Notification keeps data in terms of id, time sent, type, msg and account id.	<ul style="list-style-type: none"> notification <ul style="list-style-type: none"> Columns <ul style="list-style-type: none"> NOTIF_id NOTLF_time NOTLF_type NOTIF_msg AID Indexes <ul style="list-style-type: none"> PRIMARY FK_AID_NOTI Foreign Keys <ul style="list-style-type: none"> FK_AID_NOTI Triggers 	<p>Table: notification</p> <p>Columns:</p> <p><u>NOTIF_id</u> int PK NOTLF_time date NOTLF_type varchar(20) NOTIF_msg varchar(500) <u>AID</u> int PK</p>
Payment_transaction	Payment transaction keeps data in terms of payment id, amount, account id and car_id.	<ul style="list-style-type: none"> payment_transaction <ul style="list-style-type: none"> Columns <ul style="list-style-type: none"> Payment_id Payment_amount AID Car_id Indexes <ul style="list-style-type: none"> PRIMARY FK_AID_PT FK_Car_id_PT Foreign Keys <ul style="list-style-type: none"> FK_AID_PT FK_Car_id_PT Triggers 	<p>Table: payment_transaction</p> <p>Columns:</p> <p><u>Payment_id</u> int PK Payment_amount decimal(5,2) <u>AID</u> int PK <u>Car_id</u> int PK</p>

SQL queries

NO	Description	SQL statement										
1	<p>Find the average of payment for all customers.</p> <table><tr><td>Average of payment</td></tr><tr><td>▶ 141.10</td></tr></table>	Average of payment	▶ 141.10	<pre>SELECT ROUND(AVG(Payment_Amount),2) as `Average of payment` FROM Payment_transa</pre>								
Average of payment												
▶ 141.10												
2	<p>List all first and last name of female customer</p> <table><tr><td>Fname</td><td>Lname</td></tr><tr><td>▶ Jatenipat</td><td>Ausanarassamee</td></tr><tr><td>Samira</td><td>Rocha</td></tr><tr><td>Zoe</td><td>Alvarado</td></tr></table>	Fname	Lname	▶ Jatenipat	Ausanarassamee	Samira	Rocha	Zoe	Alvarado	<pre>SELECT Fname, Lname FROM Customer WHERE Gender = "F";</pre>		
Fname	Lname											
▶ Jatenipat	Ausanarassamee											
Samira	Rocha											
Zoe	Alvarado											
3	<p>List all Card name and Order by asc(card name)</p> <table><tr><td>Bank name</td><td>Total</td></tr><tr><td>▶ Bangkok Bank</td><td>2</td></tr><tr><td>Bank of Ayudhya</td><td>1</td></tr><tr><td>Tisco Bank</td><td>1</td></tr><tr><td>TMBThanachat Bank</td><td>1</td></tr></table>	Bank name	Total	▶ Bangkok Bank	2	Bank of Ayudhya	1	Tisco Bank	1	TMBThanachat Bank	1	<pre>SELECT Issuer_bank_name as `Bank name`, COUNT(Issuer_bank_name) as `Total` FROM GROUP BY Issuer_bank_name;</pre>
Bank name	Total											
▶ Bangkok Bank	2											
Bank of Ayudhya	1											
Tisco Bank	1											
TMBThanachat Bank	1											
4	<p>List all Notification message that msgid = 1000000</p> <table><tr><td>Message</td></tr><tr><td>▶ Grab war registration</td></tr></table>	Message	▶ Grab war registration	<pre>SELECT DISTINCT NOTIF_msg as Message FROM Notificat WHERE NOTIF_id = 1000000;</pre>								
Message												
▶ Grab war registration												
5	<p>List a total number that use Debit card</p> <table><tr><td>Debit card</td></tr><tr><td>▶ 3</td></tr></table>	Debit card	▶ 3	<pre>SELECT COUNT(Debit) as `Debit card` FROM Card</pre>								
Debit card												
▶ 3												
6	<p>List all account that receive message id = 1000000 and live in Nonthaburi</p> <table><tr><td>Account_name</td></tr><tr><td>▶ tan</td></tr></table>	Account_name	▶ tan	<pre>SELECT Account_name FROM Account JOIN Notification ON Account.Account_id = Notification. JOIN Address ON Account.CID = Address.CID WHERE NOTIF_id = 1000000 AND City_name="Nonthaburi";</pre>								
Account_name												
▶ tan												

7	<p>List all account (name) that Postal_codes = 10110</p> <table><tr><td></td><td>Account_name</td><td>Fname</td><td>Lname</td></tr><tr><td>▶</td><td>Hymmji</td><td>Sirasit</td><td>Puangpathanachai</td></tr><tr><td></td><td>Tannie</td><td>Jatenipat</td><td>Ausanarassamee</td></tr><tr><td></td><td>Elizaza</td><td>Eli</td><td>Reilly</td></tr></table>		Account_name	Fname	Lname	▶	Hymmji	Sirasit	Puangpathanachai		Tannie	Jatenipat	Ausanarassamee		Elizaza	Eli	Reilly	<pre>SELECT Account_name, Fname, Lname FROM Account JOIN Address ON Account.CID = Address.CID JOIN Customer ON Account.CID = Customer_id WHERE Postal_codes = 10110;</pre>		
	Account_name	Fname	Lname																	
▶	Hymmji	Sirasit	Puangpathanachai																	
	Tannie	Jatenipat	Ausanarassamee																	
	Elizaza	Eli	Reilly																	
8	<p>List all account that use JustGrab and pay more than 100.00 baht</p> <table><tr><td></td><td>Account_name</td></tr><tr><td>▶</td><td>Samira</td></tr></table>		Account_name	▶	Samira	<pre>SELECT Account_name FROM Account JOIN Driver ON Account_id = Driver.AID JOIN Grab_Service ON DRIVER.Driver_id = Grab_Service.Driver_ID JOIN Payment_transaction ON Account_id = Payment_transaction.AID WHERE Car_type = "JustGrab" AND Payment_amount > 100.00;</pre>														
	Account_name																			
▶	Samira																			
9	<p>List all account who living in Nakhon Pathom</p> <table><tr><td></td><td>Account Name</td><td>Name</td></tr><tr><td>▶</td><td>Aritsu</td><td>Thanawat Jarusuthirug</td></tr></table>		Account Name	Name	▶	Aritsu	Thanawat Jarusuthirug	<pre>SELECT Account_name as `Account Name`, CONCAT(Customer.Fname, " ", Customer.Lname) as `Name` FROM Customer JOIN Account ON Customer.Customer_id = Account.CID JOIN Address ON Customer.Customer_id = Address.CID WHERE Address.City_name = "Nakhon Pathom";</pre>												
	Account Name	Name																		
▶	Aritsu	Thanawat Jarusuthirug																		
10	<p>List all accounts(name) and Car Type that must change the money.</p> <table><tr><td></td><td>Account_name</td><td>Money_change</td></tr><tr><td>▶</td><td>Aritsu</td><td>30.00</td></tr><tr><td></td><td>tan</td><td>10.00</td></tr><tr><td></td><td>Hymmji</td><td>29.00</td></tr><tr><td></td><td>Tannie</td><td>0.00</td></tr><tr><td></td><td>Samira</td><td>10.00</td></tr></table>		Account_name	Money_change	▶	Aritsu	30.00		tan	10.00		Hymmji	29.00		Tannie	0.00		Samira	10.00	<pre>-- SELECT DISTINCT Account_name, Money_change FROM Account JOIN Payment_transaction ON Account.Account_id = Payment_transaction.Account_id JOIN Cash ON Cash.Payment_id = Payment_transaction.Payment_id;</pre>
	Account_name	Money_change																		
▶	Aritsu	30.00																		
	tan	10.00																		
	Hymmji	29.00																		
	Tannie	0.00																		
	Samira	10.00																		
11	<p>List all first and last name of male customer who have the first letter "S" in his/her firstname</p> <table><tr><td></td><td>Fname</td><td>Lname</td></tr><tr><td>▶</td><td>Sirasit</td><td>Puangpathanachai</td></tr></table>		Fname	Lname	▶	Sirasit	Puangpathanachai	<pre>-- 11 SELECT Fname, Lname FROM customer WHERE Gender = "M" AND Fname LIKE "S%";</pre>												
	Fname	Lname																		
▶	Sirasit	Puangpathanachai																		
12	<p>List a total number of customer whose phone start with 06</p> <table><tr><td></td><td>COUNT(Customer_id)</td></tr><tr><td>▶</td><td>6</td></tr></table>		COUNT(Customer_id)	▶	6	<pre>-- 12 SELECT COUNT(Customer_id) FROM customer WHERE Phone LIKE "06%";</pre>														
	COUNT(Customer_id)																			
▶	6																			
13	<p>List all account name which have the letter "M" or "N" in his/her account name</p>	<pre>-- 13 SELECT Account_name FROM account WHERE Account_name LIKE "%M%" OR Account_name LIKE "%N%";</pre>																		

	<table><tr><td></td><td>Account_name</td></tr><tr><td>▶</td><td>tan</td></tr><tr><td></td><td>Hymmji</td></tr><tr><td></td><td>Tannie</td></tr><tr><td></td><td>Samira</td></tr><tr><td></td><td>Eoin</td></tr></table>		Account_name	▶	tan		Hymmji		Tannie		Samira		Eoin																					
	Account_name																																	
▶	tan																																	
	Hymmji																																	
	Tannie																																	
	Samira																																	
	Eoin																																	
14	<p>List all driver id who have the letter "S" in his/her last name</p> <table><tr><td></td><td>Driver_id</td></tr><tr><td>▶</td><td>1041</td></tr><tr><td></td><td>1017</td></tr><tr><td></td><td>1124</td></tr><tr><td></td><td>1321</td></tr></table>		Driver_id	▶	1041		1017		1124		1321	<pre>-- 14 SELECT Driver_id FROM driver WHERE Lname LIKE "%S%";</pre>																						
	Driver_id																																	
▶	1041																																	
	1017																																	
	1124																																	
	1321																																	
15	<p>List a total number of driver location which is Bangkok</p> <table><tr><td></td><td>COUNT(Driver_id)</td></tr><tr><td>▶</td><td>4</td></tr></table>		COUNT(Driver_id)	▶	4	<pre>-- 15 SELECT COUNT(Driver_id) FROM driver_location WHERE driver_location = "Bangkok";</pre>																												
	COUNT(Driver_id)																																	
▶	4																																	
16	<p>List all first, last name and car type of driver who travel to Bangkok or Nonthaburi</p> <table><tr><td></td><td>Fname</td><td>Lname</td><td>Car_type</td></tr><tr><td>▶</td><td>Khakanang</td><td>Sukbunsung</td><td>GrabCarPremium</td></tr><tr><td></td><td>Chatchom</td><td>Thawan</td><td>GrabCar</td></tr><tr><td></td><td>Niwat</td><td>Yoovidhya</td><td>JustGrab</td></tr><tr><td></td><td>Thaksin</td><td>Damrongsak</td><td>GrabTaxi</td></tr><tr><td></td><td>Urairat</td><td>Maleenon</td><td>GrabTaxi</td></tr><tr><td></td><td>Phawta</td><td>Janpong</td><td>GrabBikeWin</td></tr><tr><td></td><td>Kamonrat</td><td>Parnthep</td><td>GrabBikeWin</td></tr></table>		Fname	Lname	Car_type	▶	Khakanang	Sukbunsung	GrabCarPremium		Chatchom	Thawan	GrabCar		Niwat	Yoovidhya	JustGrab		Thaksin	Damrongsak	GrabTaxi		Urairat	Maleenon	GrabTaxi		Phawta	Janpong	GrabBikeWin		Kamonrat	Parnthep	GrabBikeWin	<pre>-- 16 SELECT Fname, Lname, gs.Car_type FROM driver d JOIN driver_location dl ON d.driver_id = dl.driver_id JOIN grab_service gs ON d.driver_id = gs.Driver_ID_GS WHERE dl.driver_location = "Bangkok" OR dl.driver_location = "Nonthaburi";</pre>
	Fname	Lname	Car_type																															
▶	Khakanang	Sukbunsung	GrabCarPremium																															
	Chatchom	Thawan	GrabCar																															
	Niwat	Yoovidhya	JustGrab																															
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	Urairat	Maleenon	GrabTaxi																															
	Phawta	Janpong	GrabBikeWin																															
	Kamonrat	Parnthep	GrabBikeWin																															
17	<p>List all car id, first, last name and driver location of driver whose grab service is GrabCar</p> <table><tr><td></td><td>Car_id</td><td>Fname</td><td>Lname</td><td>Driver_location</td></tr><tr><td>▶</td><td>100000</td><td>Supasampanuwongse</td><td>Plaphol</td><td>Nakhon Pathom</td></tr><tr><td></td><td>100002</td><td>Chatchom</td><td>Thawan</td><td>Bangkok</td></tr><tr><td></td><td>100003</td><td>Pongtham</td><td>Sathianthai</td><td>Nakhon Pathom</td></tr></table>		Car_id	Fname	Lname	Driver_location	▶	100000	Supasampanuwongse	Plaphol	Nakhon Pathom		100002	Chatchom	Thawan	Bangkok		100003	Pongtham	Sathianthai	Nakhon Pathom	<pre>-- 17 SELECT Car_id, Fname, Lname, dl.Driver_location FROM driver d JOIN grab_service gs ON d.driver_id = gs.Driver_ID_GS JOIN driver_location dl ON d.driver_id = dl.Driver_ID_GS WHERE gs.car_type = "GrabCar";</pre>												
	Car_id	Fname	Lname	Driver_location																														
▶	100000	Supasampanuwongse	Plaphol	Nakhon Pathom																														
	100002	Chatchom	Thawan	Bangkok																														
	100003	Pongtham	Sathianthai	Nakhon Pathom																														
18	<p>List all customer id, first, last name, city name and account id of customer who live in Pathum Wan</p> <table><tr><td></td><td>Customer_id</td><td>Fname</td><td>Lname</td><td>City_name</td><td>account_id</td></tr><tr><td>▶</td><td>5</td><td>Samira</td><td>Rocha</td><td>Pathum Wan</td><td>100004</td></tr><tr><td></td><td>8</td><td>Zoe</td><td>Alvarado</td><td>Pathum Wan</td><td>100007</td></tr></table>		Customer_id	Fname	Lname	City_name	account_id	▶	5	Samira	Rocha	Pathum Wan	100004		8	Zoe	Alvarado	Pathum Wan	100007	<pre>-- 18 SELECT Customer_id, Fname, Lname, City_name, ac.account_id FROM customer c JOIN address a ON c.customer_id = a.CID JOIN account ac ON c.customer_id = ac.CID WHERE a.City_name = "Pathum Wan";</pre>														
	Customer_id	Fname	Lname	City_name	account_id																													
▶	5	Samira	Rocha	Pathum Wan	100004																													
	8	Zoe	Alvarado	Pathum Wan	100007																													

19	<p>List all first and last name of customer who paid less than 100 baht</p> <table><tr><td></td><td>Fname</td><td>Lname</td></tr><tr><td>▶</td><td>Habib</td><td>Witt</td></tr><tr><td></td><td>Zoe</td><td>Alvarado</td></tr></table>		Fname	Lname	▶	Habib	Witt		Zoe	Alvarado	<pre>-- 19 SELECT Fname, Lname FROM account a JOIN payment_transaction p ON a.Account_id = p.AID JOIN customer c ON a.CID = c.customer_id WHERE p.Payment_amount < 100;</pre>																																			
	Fname	Lname																																												
▶	Habib	Witt																																												
	Zoe	Alvarado																																												
20	<p>List all payment amount, driver id and car type for each payment transaction</p> <table><tr><td></td><td>driver_id</td><td>Car_type</td><td>Payment_amount</td></tr><tr><td>▶</td><td>1124</td><td>GrabTaxi</td><td>290.00</td></tr><tr><td></td><td>1123</td><td>GrabBikeWin</td><td>190.00</td></tr><tr><td></td><td>1012</td><td>GrabCar</td><td>170.00</td></tr><tr><td></td><td>1054</td><td>JustGrab</td><td>150.00</td></tr><tr><td></td><td>1512</td><td>GrabBikeWin</td><td>140.00</td></tr><tr><td></td><td>1041</td><td>GrabCarPremium</td><td>130.00</td></tr><tr><td></td><td>1015</td><td>GrabCar</td><td>121.00</td></tr><tr><td></td><td>1017</td><td>GrabCar</td><td>100.00</td></tr><tr><td></td><td>1321</td><td>JustGrab</td><td>80.00</td></tr><tr><td></td><td>1351</td><td>GrabTaxi</td><td>40.00</td></tr></table>		driver_id	Car_type	Payment_amount	▶	1124	GrabTaxi	290.00		1123	GrabBikeWin	190.00		1012	GrabCar	170.00		1054	JustGrab	150.00		1512	GrabBikeWin	140.00		1041	GrabCarPremium	130.00		1015	GrabCar	121.00		1017	GrabCar	100.00		1321	JustGrab	80.00		1351	GrabTaxi	40.00	<pre>-- 20 SELECT d.driver_id, g.Car_type, Payment_amount FROM payment_transaction p JOIN grab_service g ON p.Car_id = g.Car_id JOIN driver d ON g.Driver_ID_GS = d.driver_id ORDER BY Payment_amount DESC;</pre>
	driver_id	Car_type	Payment_amount																																											
▶	1124	GrabTaxi	290.00																																											
	1123	GrabBikeWin	190.00																																											
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	1015	GrabCar	121.00																																											
	1017	GrabCar	100.00																																											
	1321	JustGrab	80.00																																											
	1351	GrabTaxi	40.00																																											
21	<p>List total number of male customer</p> <table><tr><td>Total Male customer</td></tr><tr><td>▶ 7</td></tr></table>	Total Male customer	▶ 7	<pre>-- 21 -- SELECT COUNT(Customer_id) AS "Total Male customer"FROM Customer WHERE Gender = "M" ;</pre>																																										
Total Male customer																																														
▶ 7																																														
22	<p>List total number of female customer</p> <table><tr><td>Total Female customer</td></tr><tr><td>▶ 3</td></tr></table>	Total Female customer	▶ 3	<pre>-- 22 -- SELECT COUNT(Customer_id) AS "Total Female customer" FROM Customer WHERE Gender = "F" ;</pre>																																										
Total Female customer																																														
▶ 3																																														
23	<p>List car id ,type of the service that have "car" in that service</p> <table><tr><td></td><td>Car_id</td><td>Car_type</td></tr><tr><td>▶</td><td>100000</td><td>GrabCar</td></tr><tr><td></td><td>100001</td><td>GrabCarPremium</td></tr><tr><td></td><td>100002</td><td>GrabCar</td></tr><tr><td></td><td>100003</td><td>GrabCar</td></tr><tr><td>*</td><td>NULL</td><td>NULL</td></tr></table>		Car_id	Car_type	▶	100000	GrabCar		100001	GrabCarPremium		100002	GrabCar		100003	GrabCar	*	NULL	NULL	<pre>-- 23 -- SELECT Car_id , Car_type FROM Grab_Service WHERE Car_type LIKE "%Car%";</pre>																										
	Car_id	Car_type																																												
▶	100000	GrabCar																																												
	100001	GrabCarPremium																																												
	100002	GrabCar																																												
	100003	GrabCar																																												
*	NULL	NULL																																												
24	<p>List date , type and the message that is recommend message</p>	<pre>-- 24-- SELECT NOTLF_time AS Date , NOTLF_type AS Type, NOTIF_MSG AS Message FROM Notification WHERE NOTLF_type = "Recommend" ;</pre>																																												

	<table><tr><th>Date</th><th>Type</th><th>Message</th></tr><tr><td>2022-11-12</td><td>Recommend</td><td>For you 'Back' code reduce price 20%</td></tr><tr><td>2022-11-12</td><td>Recommend</td><td>'Flash11' code</td></tr><tr><td>2022-11-12</td><td>Recommend</td><td>Get 80 Baht off code for grabbike</td></tr><tr><td>2022-11-12</td><td>Recommend</td><td>Get 100 Baht off code for grabcar</td></tr><tr><td>2022-11-12</td><td>Recommend</td><td>Get 80 Baht off code for grabbike</td></tr><tr><td>2022-11-12</td><td>Recommend</td><td>Get 10 Baht off code for grabcar</td></tr><tr><td>2022-11-12</td><td>Recommend</td><td>Get 20 Baht off code for grabbike</td></tr><tr><td>2022-11-12</td><td>Recommend</td><td>Get 40 Baht off code for grabcar</td></tr><tr><td>2022-11-12</td><td>Recommend</td><td>Get 90 Baht off code for grabbike</td></tr><tr><td>2022-11-12</td><td>Recommend</td><td>Get 80 Baht off code for grabwin</td></tr></table>	Date	Type	Message	2022-11-12	Recommend	For you 'Back' code reduce price 20%	2022-11-12	Recommend	'Flash11' code	2022-11-12	Recommend	Get 80 Baht off code for grabbike	2022-11-12	Recommend	Get 100 Baht off code for grabcar	2022-11-12	Recommend	Get 80 Baht off code for grabbike	2022-11-12	Recommend	Get 10 Baht off code for grabcar	2022-11-12	Recommend	Get 20 Baht off code for grabbike	2022-11-12	Recommend	Get 40 Baht off code for grabcar	2022-11-12	Recommend	Get 90 Baht off code for grabbike	2022-11-12	Recommend	Get 80 Baht off code for grabwin												
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25	<p>List total of credit card that customer use</p> <table><tr><th>Credit card</th></tr><tr><td>2</td></tr></table>	Credit card	2	<pre>-- 25 -- SELECT COUNT(Credit) AS "Credit card" FROM Card;</pre>																																										
Credit card																																														
2																																														
26	<p>List all first name , last name , driver location and Car type that driver service</p> <table><tr><th>Fname</th><th>Lname</th><th>Driver_location</th><th>Car_type</th></tr><tr><td>Supsampanuwongse</td><td>Plaphol</td><td>Nakhon Pathom</td><td>GrabCar</td></tr><tr><td>Khakanang</td><td>Sukbunsung</td><td>Nonthaburi</td><td>GrabCarPremium</td></tr><tr><td>Chatchom</td><td>Thawan</td><td>Bangkok</td><td>GrabCar</td></tr><tr><td>Pongtham</td><td>Sathianthai</td><td>Nakhon Pathom</td><td>GrabCar</td></tr><tr><td>Niwat</td><td>Yoovidhya</td><td>Bangkok</td><td>JustGrab</td></tr><tr><td>Thaksin</td><td>Damrongsak</td><td>Bangkok</td><td>GrabTaxi</td></tr><tr><td>Piyawat</td><td>Kaewburesai</td><td>Nakhon Pathom</td><td>JustGrab</td></tr><tr><td>Urairat</td><td>Maleenon</td><td>Bangkok</td><td>GrabTaxi</td></tr><tr><td>Phawta</td><td>Janpong</td><td>Nonthaburi</td><td>GrabBikeWin</td></tr><tr><td>Kamonrat</td><td>Parnthep</td><td>Nonthaburi</td><td>GrabBikeWin</td></tr></table>	Fname	Lname	Driver_location	Car_type	Supsampanuwongse	Plaphol	Nakhon Pathom	GrabCar	Khakanang	Sukbunsung	Nonthaburi	GrabCarPremium	Chatchom	Thawan	Bangkok	GrabCar	Pongtham	Sathianthai	Nakhon Pathom	GrabCar	Niwat	Yoovidhya	Bangkok	JustGrab	Thaksin	Damrongsak	Bangkok	GrabTaxi	Piyawat	Kaewburesai	Nakhon Pathom	JustGrab	Urairat	Maleenon	Bangkok	GrabTaxi	Phawta	Janpong	Nonthaburi	GrabBikeWin	Kamonrat	Parnthep	Nonthaburi	GrabBikeWin	<pre>-- 26-- SELECT Fname, Lname , Driver_location ,Car_type From Driver d Join Driver_location dl ON d.Driver_id = dl.Driver_id Join Grab_Service GS ON d.Driver_id = GS.Driver_ID_GS;</pre>
Fname	Lname	Driver_location	Car_type																																											
Supsampanuwongse	Plaphol	Nakhon Pathom	GrabCar																																											
Khakanang	Sukbunsung	Nonthaburi	GrabCarPremium																																											
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Pongtham	Sathianthai	Nakhon Pathom	GrabCar																																											
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27	<p>List all first name , last name ,and Car type that customer use</p> <table><tr><th>Fname</th><th>Lname</th><th>Car_type</th></tr><tr><td>Thanawat</td><td>Jarusuthirug</td><td>GrabCar</td></tr><tr><td>Kamin</td><td>Dechopanyakul</td><td>GrabCarPremium</td></tr><tr><td>Sirasit</td><td>Puangpathanachai</td><td>GrabCar</td></tr><tr><td>Jatenipat</td><td>Ausanarassamee</td><td>GrabCar</td></tr><tr><td>Samira</td><td>Rocha</td><td>JustGrab</td></tr><tr><td>Eoin</td><td>Nieves</td><td>GrabTaxi</td></tr><tr><td>Habib</td><td>Witt</td><td>JustGrab</td></tr><tr><td>Zoe</td><td>Alvarado</td><td>GrabTaxi</td></tr><tr><td>Eli</td><td>Reilly</td><td>GrabBikeWin</td></tr><tr><td>Dhruv</td><td>Alvarado</td><td>GrabBikeWin</td></tr></table>	Fname	Lname	Car_type	Thanawat	Jarusuthirug	GrabCar	Kamin	Dechopanyakul	GrabCarPremium	Sirasit	Puangpathanachai	GrabCar	Jatenipat	Ausanarassamee	GrabCar	Samira	Rocha	JustGrab	Eoin	Nieves	GrabTaxi	Habib	Witt	JustGrab	Zoe	Alvarado	GrabTaxi	Eli	Reilly	GrabBikeWin	Dhruv	Alvarado	GrabBikeWin	<pre>-- 27 -- SELECT Fname, Lname , Car_type FROM Customer c Join Account a ON c.Customer_id = a.CID Join Grab_Service GS ON a.Account_id = GS.Car_id;</pre>											
Fname	Lname	Car_type																																												
Thanawat	Jarusuthirug	GrabCar																																												
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Eli	Reilly	GrabBikeWin																																												
Dhruv	Alvarado	GrabBikeWin																																												
28	<p>List customer first name , last name and bank name that use debit card</p> <table><tr><th>Fname</th><th>Lname</th><th>Issuer_bank_name</th><th>Debit</th></tr><tr><td>Habib</td><td>Witt</td><td>Bank of Ayudhya</td><td>Y</td></tr><tr><td>Zoe</td><td>Alvarado</td><td>Tisco Bank</td><td>Y</td></tr><tr><td>Dhruv</td><td>Alvarado</td><td>TMBThanachat Bank</td><td>Y</td></tr></table>	Fname	Lname	Issuer_bank_name	Debit	Habib	Witt	Bank of Ayudhya	Y	Zoe	Alvarado	Tisco Bank	Y	Dhruv	Alvarado	TMBThanachat Bank	Y	<pre>-- 28 -- SELECT c.Fname, c.Lname , Issuer_bank_name ,Debit FROM Custome Join Account a ON c.Customer_id = a.CID Join Payment_transaction pt ON a.Account_id = pt.AID Join Card ca ON pt.Payment_id = ca.Payment_id WHERE Debit = "Y";</pre>																												
Fname	Lname	Issuer_bank_name	Debit																																											
Habib	Witt	Bank of Ayudhya	Y																																											
Zoe	Alvarado	Tisco Bank	Y																																											
Dhruv	Alvarado	TMBThanachat Bank	Y																																											

29

List driver id and name that place they are going to drive customer to home

Driver_id	Full name	Build_no	City_name
1012	Supsampantuwongse Plaphol	16/1	Nakhon Pathom
1041	Khakanang Sukbunsung	15/5	Nonthaburi
1015	Chatchom Thawan	11/9	Khlong Toei
1017	Pongtham Sathianthai	2/1	Watthana
1054	Niwat Yoovidhya	1/12	Pathum Wan
1124	Thaksin Damrongsak	16/5	Suan Luang
1321	Piyawat Kaewburesai	6/1	Suan Luang
1351	Urairat Maleenon	1/3	Pathum Wan
1512	Phawta Janpong	3/14	Khlong Toei
1123	Kamonrat Parnthep	6/11	Khlong San

```
-- 29--
SELECT Driver_id , CONCAT(d.Fname," ",d.Lname) as "Full name" ,Build_no , City_
FROM Driver d
Join Account a ON d.AID = a.Account_id
Join Customer c ON a.CID = c.Customer_id
Join Address ad ON c.Customer_id = ad.CID;
```

30

List account id ,name and full name of the account who living in Khlong Toei

Account_id	Account Name	Full Name
100002	Hymmji	Sirasit Puangpathanachai
100008	Elizaza	Eli Reilly

```
-- 30--
SELECT Account_id ,Account_name as "Account Name", CONCAT(Customer.Fname, " ", Customer.Lname) as "Full
FROM Customer
JOIN Account ON Customer.Customer_id = Account.CID
JOIN Address ON Customer.Customer_id = Address.CID
WHERE Address.City_name = "Khlong Toei";
```

31

List a total number of customer whose phone start with 09

Customer_id	Fname	Lname	Email	Phone	Gender
2	Kamin	Dechopanyakul	kamin@gmail.com	0927104131	M
10	Dhruv	Alvarado	dhruvhruv@gmail.com	0928741634	M

```
-- 31
SELECT* FROM customer
WHERE Phone LIKE "09%";
```

32

List all address that city name is Suan luang

Build_no	note	Postal_codes	Organization_name	City_name	Country	District	Road	Alley	CID
16/5	NULL	10250	NULL	Suan Luang	Thailand	NULL	NULL	NULL	6
6/1	NULL	10250	NULL	Suan Luang	Thailand	NULL	NULL	NULL	7

```
-- 32
SELECT* FROM address
WHERE City_name = "Suan Luang";
```

33

List all driver who have first name start with letter "P"

Driver_id	Fname	Lname	AID
1017	Pongtham	Sathianthai	100003
1321	Piyawat	Kaewburesai	100006
1512	Phawta	Janpong	100008

```
-- 33
SELECT* FROM Driver
WHERE Fname LIKE "P%";
```

34	<p>List all card number that contain number 1 in CVV</p> <table><tr><th>Payment_id</th><th>Credit</th><th>Debit</th><th>Issuer_bank_name</th><th>Issuer_bank_country</th><th>Fname</th><th>Lname</th><th>Expiry_date</th><th>Card_number</th><th>CVV</th></tr><tr><td>1000005</td><td>Y</td><td>NULL</td><td>Bangkok Bank</td><td>Thailand</td><td>Eoin</td><td>Nieves</td><td>12/22</td><td>5111451142125392</td><td>123</td></tr><tr><td>1000006</td><td>NULL</td><td>Y</td><td>Bank of Ayudhya</td><td>Thailand</td><td>Habib</td><td>Witt</td><td>06/24</td><td>5112512250240668</td><td>516</td></tr><tr><td>1000007</td><td>NULL</td><td>Y</td><td>Tisco Bank</td><td>Thailand</td><td>Zoe</td><td>Alvarado</td><td>09/26</td><td>5104713732070000</td><td>107</td></tr><tr><td>1000008</td><td>Y</td><td>NULL</td><td>Bangkok Bank</td><td>Thailand</td><td>Eli</td><td>Relly</td><td>03/23</td><td>5110801937381728</td><td>813</td></tr><tr><td>1000009</td><td>NULL</td><td>Y</td><td>TMBThanachart Bank</td><td>Thailand</td><td>Dhruv</td><td>Alvarado</td><td>01/23</td><td>5110801937381521</td><td>103</td></tr></table>	Payment_id	Credit	Debit	Issuer_bank_name	Issuer_bank_country	Fname	Lname	Expiry_date	Card_number	CVV	1000005	Y	NULL	Bangkok Bank	Thailand	Eoin	Nieves	12/22	5111451142125392	123	1000006	NULL	Y	Bank of Ayudhya	Thailand	Habib	Witt	06/24	5112512250240668	516	1000007	NULL	Y	Tisco Bank	Thailand	Zoe	Alvarado	09/26	5104713732070000	107	1000008	Y	NULL	Bangkok Bank	Thailand	Eli	Relly	03/23	5110801937381728	813	1000009	NULL	Y	TMBThanachart Bank	Thailand	Dhruv	Alvarado	01/23	5110801937381521	103	<pre>-- 34 SELECT* FROM Card WHERE CVV LIKE "%1%";</pre>
Payment_id	Credit	Debit	Issuer_bank_name	Issuer_bank_country	Fname	Lname	Expiry_date	Card_number	CVV																																																					
1000005	Y	NULL	Bangkok Bank	Thailand	Eoin	Nieves	12/22	5111451142125392	123																																																					
1000006	NULL	Y	Bank of Ayudhya	Thailand	Habib	Witt	06/24	5112512250240668	516																																																					
1000007	NULL	Y	Tisco Bank	Thailand	Zoe	Alvarado	09/26	5104713732070000	107																																																					
1000008	Y	NULL	Bangkok Bank	Thailand	Eli	Relly	03/23	5110801937381728	813																																																					
1000009	NULL	Y	TMBThanachart Bank	Thailand	Dhruv	Alvarado	01/23	5110801937381521	103																																																					
35	<p>List all car type that contain "Taxi" word</p> <table><tr><th>Car_id</th><th>Car_type</th><th>Driver_ID_GS</th></tr><tr><td>100005</td><td>GrabTaxi</td><td>1124</td></tr><tr><td>100007</td><td>GrabTaxi</td><td>1351</td></tr></table>	Car_id	Car_type	Driver_ID_GS	100005	GrabTaxi	1124	100007	GrabTaxi	1351	<pre>-- 35 SELECT* FROM Grab_Service WHERE Car_type LIKE "%Taxi%";</pre>																																																			
Car_id	Car_type	Driver_ID_GS																																																												
100005	GrabTaxi	1124																																																												
100007	GrabTaxi	1351																																																												
36	<p>List all customer id, account's name, customer's first name, and customer's last name who live in Muang district, ordered by customer id ascending.</p> <table><tr><th>Customer_id</th><th>Account_name</th><th>Fname</th><th>Lname</th></tr><tr><td>1</td><td>Aritsu</td><td>Thanawat</td><td>Jarusuthirug</td></tr><tr><td>2</td><td>tan</td><td>Kamin</td><td>Dechopanyakul</td></tr></table>	Customer_id	Account_name	Fname	Lname	1	Aritsu	Thanawat	Jarusuthirug	2	tan	Kamin	Dechopanyakul	<pre>-- 36 SELECT Customer_id, ac.Account_name, Fname, Lname FROM Customer c JOIN Account ac ON c.Customer_id = ac.CID JOIN Address ad ON c.Customer_id = ad.CID WHERE ad.District = "Muang" ORDER BY Customer_id ASC;</pre>																																																
Customer_id	Account_name	Fname	Lname																																																											
1	Aritsu	Thanawat	Jarusuthirug																																																											
2	tan	Kamin	Dechopanyakul																																																											
37	<p>List all the account's name, customer's first name, customer's last name, and city's name where the account name is equal to "Tannie".</p> <table><tr><th>Account_name</th><th>Fname</th><th>Lname</th><th>City_name</th></tr><tr><td>Tannie</td><td>Jatenipat</td><td>Ausanarassamee</td><td>Watthana</td></tr></table>	Account_name	Fname	Lname	City_name	Tannie	Jatenipat	Ausanarassamee	Watthana	<pre>-- 37 SELECT ac.Account_name, Fname, Lname, ad.City_name FROM Customer c JOIN Account ac ON c.Customer_id = ac.CID JOIN Address ad ON c.Customer_id = ad.CID WHERE ac.Account_name = "Tannie";</pre>																																																				
Account_name	Fname	Lname	City_name																																																											
Tannie	Jatenipat	Ausanarassamee	Watthana																																																											
38	<p>List all driver's firstname, driver's lastname, and driver's location where car type equal to "JustGrab".</p> <table><tr><th>Fname</th><th>Lname</th><th>Driver_location</th></tr><tr><td>Niwat</td><td>Yoovidhya</td><td>Bangkok</td></tr><tr><td>Piyawat</td><td>Kaewburesai</td><td>Nakhon Pathom</td></tr></table>	Fname	Lname	Driver_location	Niwat	Yoovidhya	Bangkok	Piyawat	Kaewburesai	Nakhon Pathom	<pre>-- 38 SELECT Fname, Lname, lc.Driver_location FROM Driver d JOIN Driver_location lc ON d.Driver_id = lc.Driver_id JOIN Grab_Service ct ON d.Driver_id = ct.Driver_ID_GS WHERE ct.Car_type = "JustGrab";</pre>																																																			
Fname	Lname	Driver_location																																																												
Niwat	Yoovidhya	Bangkok																																																												
Piyawat	Kaewburesai	Nakhon Pathom																																																												

39

List all **car's ID, driver's firstname, driver's lastname, and car's type** where the driver's location is equal to "Bangkok".

	Car_id	Fname	Lname	Car_type
►	100002	Chatchom	Thawan	GrabCar
	100004	Niwat	Yoovidhya	JustGrab
	100005	Thaksin	Damrongsak	GrabTaxi
	100007	Urairat	Maleenon	GrabTaxi

```
-- 39
```

```
SELECT Car_id, Fname, Lname, ct.Car_type
FROM Driver d
JOIN Driver_location lc ON d.Driver_id = lc.Driver_id
JOIN Grab_Service ct ON d.Driver_id = ct.Driver_ID_GS
WHERE lc.Driver_location = "Bangkok";
```

40

List all **account's name, payment amount, driver's ID, and driver's firstname** where payment amount is less than 200.

	Account_name	Payment_amount	Driver_ID	Fname
►	Aritsu	170.00	1012	Suppantuwongse
	tan	130.00	1041	Khakanang
	Hymmji	121.00	1015	Chatchom
	Tannie	100.00	1017	Pongtham
	Samira	150.00	1054	Niwat

```
-- 40
```

```
SELECT Account_name, pt.Payment_amount, d.Driver_ID, Fname
FROM Account ac
JOIN Driver d ON ac.Account_id = d.AID
JOIN Payment_transaction pt ON ac.Account_id = pt.AID
WHERE pt.Payment_amount < 200;
```

References

1. Transport [Internet]. Grab TH. [cited 2022Oct10]. Available from:
<https://www.grab.com/th/en/transport/>
2. About Us [Internet]. Grab TH. [cited 2022Oct10]. Available from:
<https://www.grab.com/th/en/about/>
3. Grab success story [Internet]. Success Story. [cited 2022Oct10]. Available from:
<https://successstory.com/companies/grab>

Appendix

E-presentation for our group have saved in google drive:

<https://youtu.be/HmXsd1PW1Bs>

(Video Backup):

https://drive.google.com/file/d/1ifoqu4cpqZIOwgfeT4oLR8bxkIlyaz7W/view?usp=share_link

(ALL FILE BACKUP):

https://drive.google.com/drive/folders/16xqtBcp79_t1rWCyHEz_aezyZlIXa1AV?usp=share_link