**Principles of Database Systems, Section B**

# Project\_Part\_1

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## Outline

1. **Description And Assumptions**
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4. **Table Records**
5. **DDL Code**
6. **DML Code**
7. **Trigger Code**
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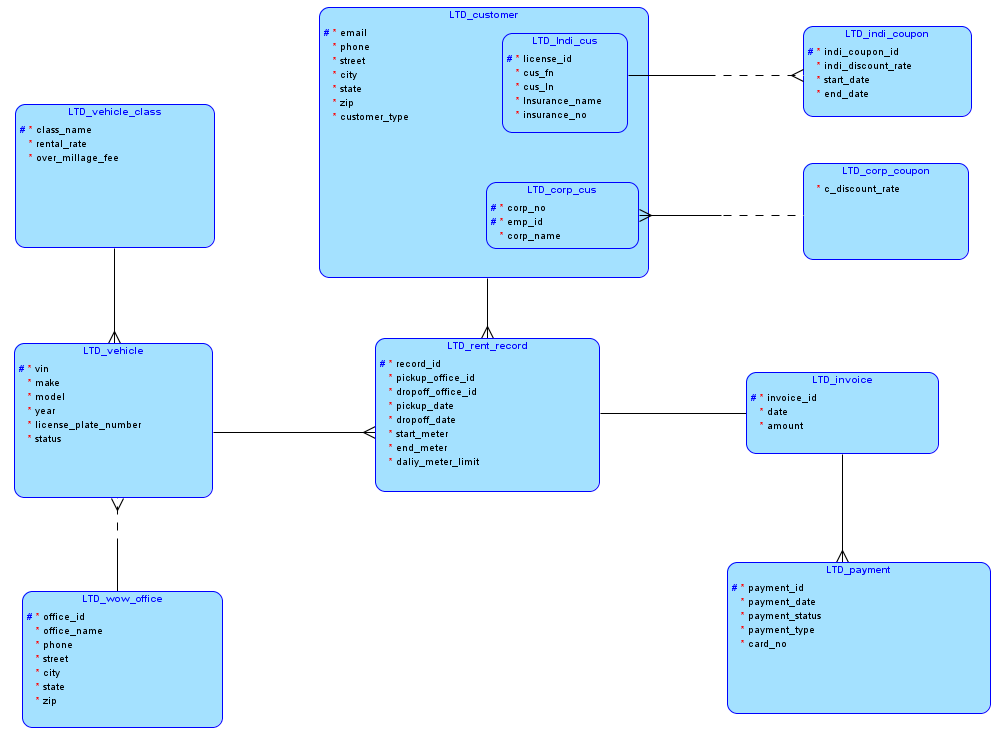
## 1. Description & Assumptions

The business case is to build a data management system for WOW which is a car rental company. Based on this, we conduct two entities called CUSTOMER and VEHHICLE. Since a customer may rent several vehicles for one time and a vehicle may be rent for several times by a same customer, we create an Intersect entity called RENT\_RECORD. Besides, the customer is divided into individual customer and corporation customer, so we add these two as a sub type of customer. Since WOW mails discount coupons to their customer, we also add entities called INDI\_COUPON and CORP\_COUPON connected to INDI\_CUS and CORP\_CUS respectively. Also, vehicle is required to record its class and office location. In order to maintain and update this information in an easier way, we also add these two entities connected to VEHICLE. Finally, we add INVOICE and PAYMENT entity according to the requirements.

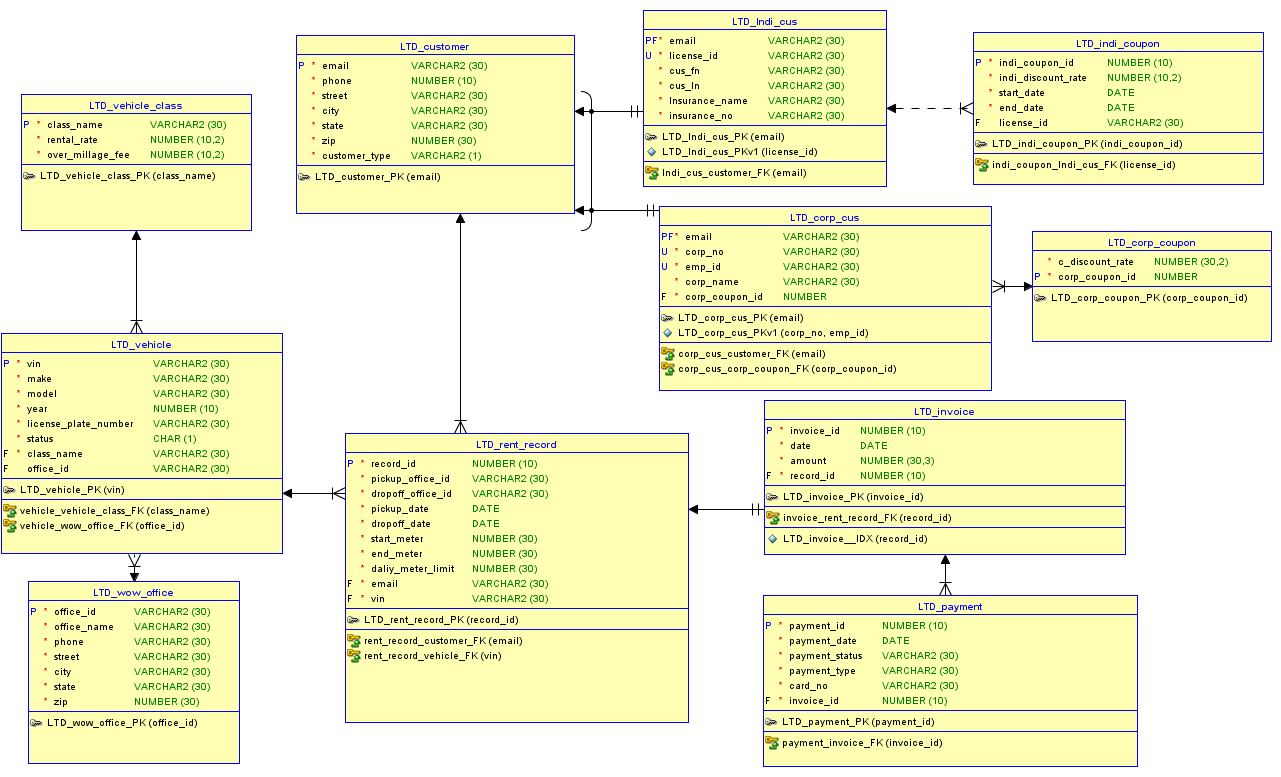
Apart from that, we also make several **assumptions:**

1. neighborhood residents who get discount coupons are include in individual customers.
2. we assume that corporation customers already have insurance provided by their corporation.
3. we added coupon ID, office ID, record ID, invoice ID and payment ID for their entities primary key respectively.
4. we assume payment status is divided into pending, success, fail, so we add payment\_status in PAYMENT
5. office may not have available vehicles.
6. If the daily\_limit attribute in the rent\_record table is -1, that means this vehicle has unlimited daily millage.
7. If the status attribute in vehicle is 1 that means this vehicle is ready to be rent, 0 means it it not.

## 2. Logical Model

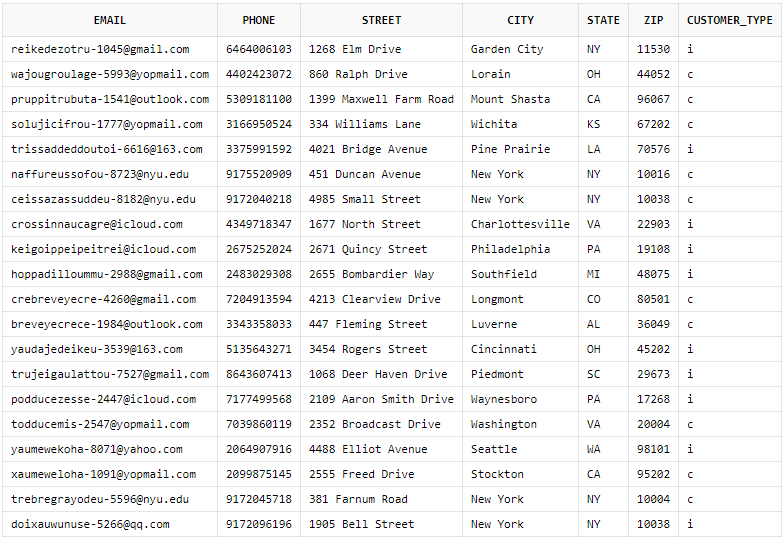


## 3. Relational Model

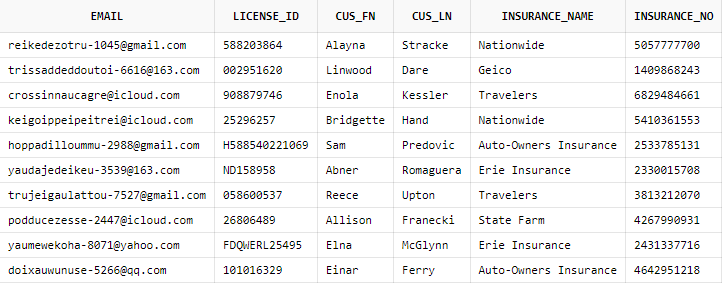


## 4. Table Records

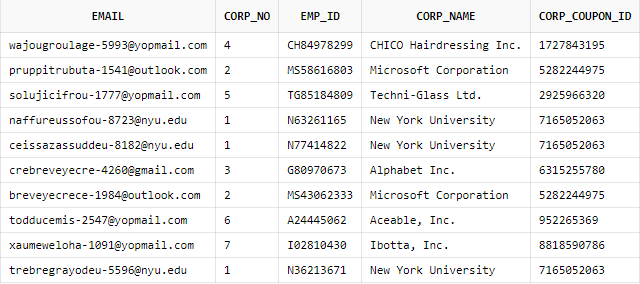
1. LTD\_CUSTOMER



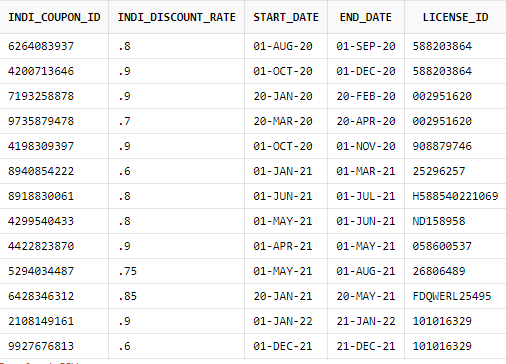
1. LTD\_INDI\_CUS



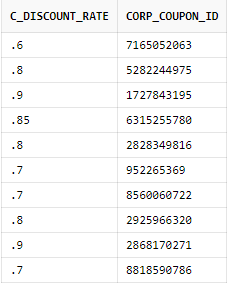
1. LTD\_CORP\_CUS



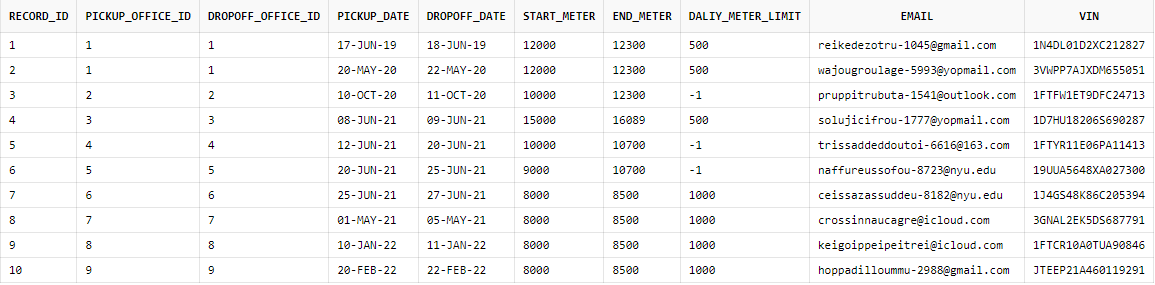
1. LTD\_INDI\_COUPON



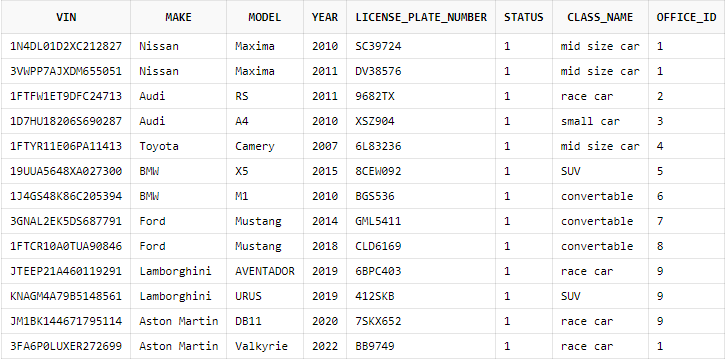
1. LTD\_CORP\_COUPON



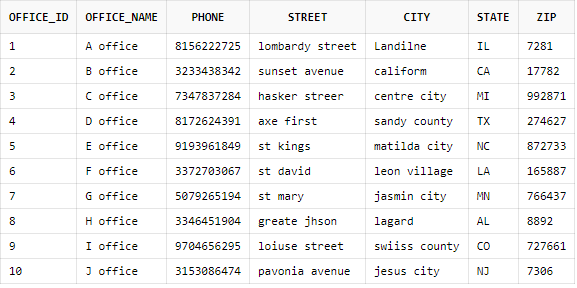
1. LTD\_RENT\_RECORD



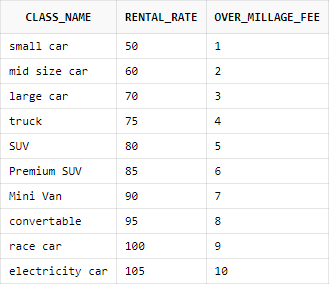
1. LTD\_VEHICLE



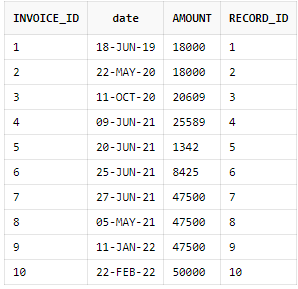
1. LTD\_WOW\_OFFICE



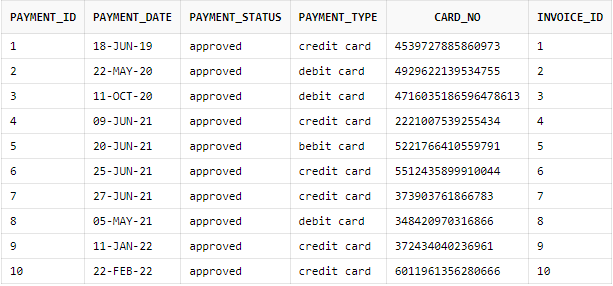
1. LTD\_VEHICLE\_CLASS



1. LTD\_INVOICE



1. LTD\_PAYMENT



## 5. DDL Code

-- Oracle SQL Developer Data Modeler 21.4.2.059.0838

-- Time: 2022-04-02 12:53:59 EDT

-- Version: Oracle Database 21c

-- Type: Oracle Database 21c

-- predefined type, no DDL - MDSYS.SDO\_GEOMETRY

-- predefined type, no DDL - XMLTYPE

CREATE TABLE ltd\_corp\_coupon (

c\_discount\_rate NUMBER(30, 2) NOT NULL,

corp\_coupon\_id NUMBER NOT NULL

);

COMMENT ON COLUMN ltd\_corp\_coupon.c\_discount\_rate IS

'the rate of the discount';

ALTER TABLE ltd\_corp\_coupon ADD CONSTRAINT ltd\_corp\_coupon\_pk PRIMARY KEY ( corp\_coupon\_id );

CREATE TABLE ltd\_corp\_cus (

email VARCHAR2(30) NOT NULL,

corp\_no VARCHAR2(30) NOT NULL,

emp\_id VARCHAR2(30) NOT NULL,

corp\_name VARCHAR2(30) NOT NULL,

corp\_coupon\_id NUMBER NOT NULL

);

COMMENT ON COLUMN ltd\_corp\_cus.email IS

'email of the customer';

COMMENT ON COLUMN ltd\_corp\_cus.corp\_no IS

'the cop registrartion number';

COMMENT ON COLUMN ltd\_corp\_cus.emp\_id IS

'the employee id of the customer';

COMMENT ON COLUMN ltd\_corp\_cus.corp\_name IS

'the name of the corp';

ALTER TABLE ltd\_corp\_cus ADD CONSTRAINT ltd\_corp\_cus\_pk PRIMARY KEY ( email );

ALTER TABLE ltd\_corp\_cus ADD CONSTRAINT ltd\_corp\_cus\_pkv1 UNIQUE ( corp\_no,

emp\_id );

CREATE TABLE ltd\_customer (

email VARCHAR2(30) NOT NULL,

phone NUMBER(10) NOT NULL,

street VARCHAR2(30) NOT NULL,

city VARCHAR2(30) NOT NULL,

state VARCHAR2(30) NOT NULL,

zip NUMBER(30) NOT NULL,

customer\_type VARCHAR2(1) NOT NULL

);

ALTER TABLE ltd\_customer

ADD CONSTRAINT ch\_inh\_ltd\_customer CHECK ( customer\_type IN ( 'c', 'i' ) );

COMMENT ON COLUMN ltd\_customer.email IS

'email of the customer';

COMMENT ON COLUMN ltd\_customer.phone IS

'phone number of the customer';

COMMENT ON COLUMN ltd\_customer.street IS

'the street name of the address';

COMMENT ON COLUMN ltd\_customer.city IS

'the city of the address';

COMMENT ON COLUMN ltd\_customer.state IS

'the state of the address';

COMMENT ON COLUMN ltd\_customer.zip IS

'the zip code of the address';

COMMENT ON COLUMN ltd\_customer.customer\_type IS

'the type of the customer';

ALTER TABLE ltd\_customer ADD CONSTRAINT ltd\_customer\_pk PRIMARY KEY ( email );

CREATE TABLE ltd\_indi\_coupon (

indi\_coupon\_id NUMBER(10) NOT NULL,

indi\_discount\_rate NUMBER(10, 2) NOT NULL,

start\_date DATE NOT NULL,

end\_date DATE NOT NULL,

license\_id VARCHAR2(30)

);

COMMENT ON COLUMN ltd\_indi\_coupon.indi\_coupon\_id IS

'the coupon id ';

COMMENT ON COLUMN ltd\_indi\_coupon.indi\_discount\_rate IS

'the rate of the discount';

COMMENT ON COLUMN ltd\_indi\_coupon.start\_date IS

'the start date';

COMMENT ON COLUMN ltd\_indi\_coupon.end\_date IS

'the end date of the coupon';

ALTER TABLE ltd\_indi\_coupon ADD CONSTRAINT ltd\_indi\_coupon\_pk PRIMARY KEY ( indi\_coupon\_id );

ALTER TABLE ltd\_indi\_coupon ADD CONSTRAINT end\_date CHECK (end\_date>=start\_date);

CREATE TABLE ltd\_indi\_cus (

email VARCHAR2(30) NOT NULL,

license\_id VARCHAR2(30) NOT NULL,

cus\_fn VARCHAR2(30) NOT NULL,

cus\_ln VARCHAR2(30) NOT NULL,

insurance\_name VARCHAR2(30) NOT NULL,

insurance\_no VARCHAR2(30) NOT NULL

);

COMMENT ON COLUMN ltd\_indi\_cus.email IS

'email of the customer';

COMMENT ON COLUMN ltd\_indi\_cus.license\_id IS

'the driver license number';

COMMENT ON COLUMN ltd\_indi\_cus.cus\_fn IS

'the first name of the customer';

COMMENT ON COLUMN ltd\_indi\_cus.cus\_ln IS

'the last name of the customer';

COMMENT ON COLUMN ltd\_indi\_cus.insurance\_name IS

'the insurance company name';

COMMENT ON COLUMN ltd\_indi\_cus.insurance\_no IS

'the insrance number';

ALTER TABLE ltd\_indi\_cus ADD CONSTRAINT ltd\_indi\_cus\_pk PRIMARY KEY ( email );

ALTER TABLE ltd\_indi\_cus ADD CONSTRAINT ltd\_indi\_cus\_pkv1 UNIQUE ( license\_id );

CREATE TABLE ltd\_invoice (

invoice\_id NUMBER(10) NOT NULL,

"date" DATE NOT NULL,

amount NUMBER(30, 3) NOT NULL,

record\_id NUMBER(10) NOT NULL

);

COMMENT ON COLUMN ltd\_invoice.invoice\_id IS

'the invoice id';

COMMENT ON COLUMN ltd\_invoice."date" IS

'the invoice date';

COMMENT ON COLUMN ltd\_invoice.amount IS

'the amount of this invoice';

CREATE UNIQUE INDEX ltd\_invoice\_\_idx ON

ltd\_invoice (

record\_id

ASC );

ALTER TABLE ltd\_invoice ADD CONSTRAINT ltd\_invoice\_pk PRIMARY KEY ( invoice\_id );

CREATE TABLE ltd\_payment (

payment\_id NUMBER(10) NOT NULL,

payment\_date DATE NOT NULL,

payment\_status VARCHAR2(30) NOT NULL,

payment\_type VARCHAR2(30) NOT NULL,

card\_no VARCHAR2(30) NOT NULL,

invoice\_id NUMBER(10) NOT NULL

);

COMMENT ON COLUMN ltd\_payment.payment\_id IS

'the payment id';

COMMENT ON COLUMN ltd\_payment.payment\_date IS

'the date of this payment';

COMMENT ON COLUMN ltd\_payment.payment\_status IS

'the status of this payment';

COMMENT ON COLUMN ltd\_payment.payment\_type IS

'the payment type ( credit, debit, gift ) ';

COMMENT ON COLUMN ltd\_payment.card\_no IS

'the card number ';

ALTER TABLE ltd\_payment ADD CONSTRAINT ltd\_payment\_pk PRIMARY KEY ( payment\_id );

CREATE TABLE ltd\_rent\_record (

record\_id NUMBER(10) NOT NULL,

pickup\_office\_id VARCHAR2(30) NOT NULL,

dropoff\_office\_id VARCHAR2(30) NOT NULL,

pickup\_date DATE NOT NULL,

dropoff\_date DATE NOT NULL,

start\_meter NUMBER(30) NOT NULL,

end\_meter NUMBER(30) NOT NULL,

daliy\_meter\_limit NUMBER(30) NOT NULL,

email VARCHAR2(30) NOT NULL,

vin VARCHAR2(30) NOT NULL

);

COMMENT ON COLUMN ltd\_rent\_record.record\_id IS

'the id of the record';

COMMENT ON COLUMN ltd\_rent\_record.pickup\_office\_id IS

'the pick up location';

COMMENT ON COLUMN ltd\_rent\_record.dropoff\_office\_id IS

'the drop off location';

COMMENT ON COLUMN ltd\_rent\_record.pickup\_date IS

'the pick up date';

COMMENT ON COLUMN ltd\_rent\_record.dropoff\_date IS

'the drop off date';

COMMENT ON COLUMN ltd\_rent\_record.start\_meter IS

'the start millage';

COMMENT ON COLUMN ltd\_rent\_record.end\_meter IS

'the end millage';

COMMENT ON COLUMN ltd\_rent\_record.daliy\_meter\_limit IS

'the daily millage limit( if -1 then it''s unlimited)';

ALTER TABLE ltd\_rent\_record ADD CONSTRAINT ltd\_rent\_record\_pk PRIMARY KEY ( record\_id );

CREATE TABLE ltd\_vehicle (

vin VARCHAR2(30) NOT NULL,

make VARCHAR2(30) NOT NULL,

model VARCHAR2(30) NOT NULL,

year NUMBER(10) NOT NULL,

license\_plate\_number VARCHAR2(30) NOT NULL,

status NUMBER NOT NULL,

class\_name VARCHAR2(30) NOT NULL,

office\_id VARCHAR2(30)

);

COMMENT ON COLUMN ltd\_vehicle.vin IS

'the vin number of this vehicle';

COMMENT ON COLUMN ltd\_vehicle.make IS

'the make of this vehicle';

COMMENT ON COLUMN ltd\_vehicle.model IS

'the model of this vehicle';

COMMENT ON COLUMN ltd\_vehicle.year IS

'the year of this vehicle';

COMMENT ON COLUMN ltd\_vehicle.license\_plate\_number IS

'the license plate number';

COMMENT ON COLUMN ltd\_vehicle.status IS

'the renting status of this vehicle';

ALTER TABLE ltd\_vehicle ADD CONSTRAINT ltd\_vehicle\_pk PRIMARY KEY ( vin );

CREATE TABLE ltd\_vehicle\_class (

class\_name VARCHAR2(30) NOT NULL,

rental\_rate NUMBER(10, 2) NOT NULL,

over\_millage\_fee NUMBER(10, 2) NOT NULL

);

COMMENT ON COLUMN ltd\_vehicle\_class.class\_name IS

'the class name';

COMMENT ON COLUMN ltd\_vehicle\_class.rental\_rate IS

'rental rate';

COMMENT ON COLUMN ltd\_vehicle\_class.over\_millage\_fee IS

'the over millage fee';

ALTER TABLE ltd\_vehicle\_class ADD CONSTRAINT ltd\_vehicle\_class\_pk PRIMARY KEY ( class\_name );

CREATE TABLE ltd\_wow\_office (

office\_id VARCHAR2(30) NOT NULL,

office\_name VARCHAR2(30) NOT NULL,

phone VARCHAR2(30) NOT NULL,

street VARCHAR2(30) NOT NULL,

city VARCHAR2(30) NOT NULL,

state VARCHAR2(30) NOT NULL,

zip NUMBER(30) NOT NULL

);

COMMENT ON COLUMN ltd\_wow\_office.office\_id IS

'the office id ';

COMMENT ON COLUMN ltd\_wow\_office.office\_name IS

'the name of this office';

COMMENT ON COLUMN ltd\_wow\_office.phone IS

'the phone number of this office';

COMMENT ON COLUMN ltd\_wow\_office.street IS

'the street of this office';

COMMENT ON COLUMN ltd\_wow\_office.city IS

'the city of this office';

COMMENT ON COLUMN ltd\_wow\_office.state IS

'the state of this office';

COMMENT ON COLUMN ltd\_wow\_office.zip IS

'the zip code of this office';

ALTER TABLE ltd\_wow\_office ADD CONSTRAINT ltd\_wow\_office\_pk PRIMARY KEY ( office\_id );

ALTER TABLE ltd\_corp\_cus

ADD CONSTRAINT corp\_cus\_corp\_coupon\_fk FOREIGN KEY ( corp\_coupon\_id )

REFERENCES ltd\_corp\_coupon ( corp\_coupon\_id );

ALTER TABLE ltd\_corp\_cus

ADD CONSTRAINT corp\_cus\_customer\_fk FOREIGN KEY ( email )

REFERENCES ltd\_customer ( email );

ALTER TABLE ltd\_indi\_coupon

ADD CONSTRAINT indi\_coupon\_indi\_cus\_fk FOREIGN KEY ( license\_id )

REFERENCES ltd\_indi\_cus ( license\_id );

ALTER TABLE ltd\_indi\_cus

ADD CONSTRAINT indi\_cus\_customer\_fk FOREIGN KEY ( email )

REFERENCES ltd\_customer ( email );

ALTER TABLE ltd\_invoice

ADD CONSTRAINT invoice\_rent\_record\_fk FOREIGN KEY ( record\_id )

REFERENCES ltd\_rent\_record ( record\_id );

ALTER TABLE ltd\_payment

ADD CONSTRAINT payment\_invoice\_fk FOREIGN KEY ( invoice\_id )

REFERENCES ltd\_invoice ( invoice\_id );

ALTER TABLE ltd\_rent\_record

ADD CONSTRAINT rent\_record\_customer\_fk FOREIGN KEY ( email )

REFERENCES ltd\_customer ( email );

ALTER TABLE ltd\_rent\_record

ADD CONSTRAINT rent\_record\_vehicle\_fk FOREIGN KEY ( vin )

REFERENCES ltd\_vehicle ( vin );

ALTER TABLE LTD\_rent\_record

ADD CONSTRAINT dropoff\_date CHECK (dropoff\_date>=pickup\_date);

ALTER TABLE ltd\_vehicle

ADD CONSTRAINT vehicle\_vehicle\_class\_fk FOREIGN KEY ( class\_name )

REFERENCES ltd\_vehicle\_class ( class\_name );

ALTER TABLE ltd\_vehicle

ADD CONSTRAINT vehicle\_wow\_office\_fk FOREIGN KEY ( office\_id )

REFERENCES ltd\_wow\_office ( office\_id );

CREATE OR REPLACE TRIGGER arc\_fkarc\_1\_ltd\_corp\_cus BEFORE

INSERT OR UPDATE OF email ON ltd\_corp\_cus

FOR EACH ROW

DECLARE

d VARCHAR2(1);

BEGIN

SELECT

a.customer\_type

INTO d

FROM

ltd\_customer a

WHERE

a.email = :new.email;

IF ( d IS NULL OR d <> 'c' ) THEN

raise\_application\_error(-20223, 'FK corp\_cus\_customer\_FK in Table LTD\_corp\_cus violates Arc constraint on Table LTD\_customer - discriminator column customer\_type doesn''t have value ''c''');

END IF;

EXCEPTION

WHEN no\_data\_found THEN

NULL;

WHEN OTHERS THEN

RAISE;

END;

/

CREATE OR REPLACE TRIGGER arc\_fkarc\_1\_ltd\_indi\_cus BEFORE

INSERT OR UPDATE OF email ON ltd\_indi\_cus

FOR EACH ROW

DECLARE

d VARCHAR2(1);

BEGIN

SELECT

a.customer\_type

INTO d

FROM

ltd\_customer a

WHERE

a.email = :new.email;

IF ( d IS NULL OR d <> 'i' ) THEN

raise\_application\_error(-20223, 'FK Indi\_cus\_customer\_FK in Table LTD\_Indi\_cus violates Arc constraint on Table LTD\_customer - discriminator column customer\_type doesn''t have value ''i''');

END IF;

EXCEPTION

WHEN no\_data\_found THEN

NULL;

WHEN OTHERS THEN

RAISE;

END;

/

CREATE SEQUENCE LTD\_corp\_coupon\_corp\_coupon\_id

START WITH 1

NOCACHE

ORDER ;

CREATE OR REPLACE TRIGGER LTD\_corp\_coupon\_corp\_coupon\_id

BEFORE INSERT ON LTD\_corp\_coupon

FOR EACH ROW

WHEN (NEW.corp\_coupon\_id IS NULL)

BEGIN

:new.corp\_coupon\_id := ltd\_corp\_coupon\_corp\_coupon\_id.nextval;

end;

/

CREATE SEQUENCE LTD\_invoice\_invoice\_id\_SEQ

START WITH 1

NOCACHE

ORDER ;

CREATE OR REPLACE TRIGGER LTD\_invoice\_invoice\_id\_TRG

BEFORE INSERT ON LTD\_invoice

FOR EACH ROW

WHEN (NEW.invoice\_id IS NULL)

BEGIN

:new.invoice\_id := ltd\_invoice\_invoice\_id\_seq.nextval;

end;

/

CREATE SEQUENCE LTD\_payment\_payment\_id\_SEQ

START WITH 1

NOCACHE

ORDER ;

CREATE OR REPLACE TRIGGER LTD\_payment\_payment\_id\_TRG

BEFORE INSERT ON LTD\_payment

FOR EACH ROW

WHEN (NEW.payment\_id IS NULL)

BEGIN

:new.payment\_id := ltd\_payment\_payment\_id\_seq.nextval;

end;

/

CREATE SEQUENCE LTD\_rent\_record\_record\_id\_SEQ

START WITH 1

NOCACHE

ORDER ;

CREATE OR REPLACE TRIGGER LTD\_rent\_record\_record\_id\_TRG

BEFORE INSERT ON LTD\_rent\_record

FOR EACH ROW

WHEN (NEW.record\_id IS NULL)

BEGIN

:new.record\_id := ltd\_rent\_record\_record\_id\_seq.nextval;

end;

/

-- trigger for invoice

CREATE OR REPLACE TRIGGER invoice\_trigger

AFTER INSERT ON LTD\_rent\_record FOR EACH ROW

DECLARE

amount NUMBER;

overamount NUMBER;

extramile NUMBER;

totalmiles NUMBER;

BEGIN

extramile := :NEW.end\_meter - :NEW.start\_meter - :NEW.daliy\_meter\_limit;

totalmiles := :NEW.end\_meter - :NEW.start\_meter;

SELECT SUM(LTD\_vehicle\_class.rental\_rate \* totalmiles)

INTO amount

FROM LTD\_vehicle\_class

INNER JOIN LTD\_vehicle

ON LTD\_vehicle.class\_name = LTD\_vehicle\_class.class\_name

WHERE :NEW.vin = LTD\_vehicle.vin;

SELECT SUM(LTD\_vehicle\_class.rental\_rate \* (:NEW.daliy\_meter\_limit) + (extramile \* LTD\_vehicle\_class.over\_millage\_fee))

INTO overamount

FROM LTD\_vehicle\_class

INNER JOIN LTD\_vehicle

ON LTD\_vehicle.class\_name = LTD\_vehicle\_class.class\_name

WHERE :NEW.vin = LTD\_vehicle.vin;

IF extramile > 0 THEN

INSERT INTO LTD\_invoice VALUES(default, :NEW.dropoff\_date, overamount, :NEW.record\_id);

ELSE

INSERT INTO LTD\_invoice VALUES(default, :NEW.dropoff\_date, amount, :NEW.record\_id);

END IF;

END;

/

-- Oracle SQL Developer Data Modeler:

--

-- CREATE TABLE 11

-- CREATE INDEX 1

-- ALTER TABLE 24

-- CREATE VIEW 0

-- ALTER VIEW 0

-- CREATE PACKAGE 0

-- CREATE PACKAGE BODY 0

-- CREATE PROCEDURE 0

-- CREATE FUNCTION 0

-- CREATE TRIGGER 6

-- ALTER TRIGGER 0

-- CREATE COLLECTION TYPE 0

-- CREATE STRUCTURED TYPE 0

-- CREATE STRUCTURED TYPE BODY 0

-- CREATE CLUSTER 0

-- CREATE CONTEXT 0

-- CREATE DATABASE 0

-- CREATE DIMENSION 0

-- CREATE DIRECTORY 0

-- CREATE DISK GROUP 0

-- CREATE ROLE 0

-- CREATE ROLLBACK SEGMENT 0

-- CREATE SEQUENCE 4

-- CREATE MATERIALIZED VIEW 0

-- CREATE MATERIALIZED VIEW LOG 0

-- CREATE SYNONYM 0

-- CREATE TABLESPACE 0

-- CREATE USER 0

--

-- DROP TABLESPACE 0

-- DROP DATABASE 0

--

-- REDACTION POLICY 0

--

-- ORDS DROP SCHEMA 0

-- ORDS ENABLE SCHEMA 0

-- ORDS ENABLE OBJECT 0

--

-- ERRORS 0

-- WARNINGS 0

## 6. DML Code

**-- LTD\_CUSTOMER**

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('reikedezotru-1045@gmail.com',6464006103,'1268 Elm Drive','Garden City', 'NY', 11530, 'i');

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('wajougroulage-5993@yopmail.com',4402423072,'860 Ralph Drive','Lorain', 'OH', 44052, 'c');

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('pruppitrubuta-1541@outlook.com',5309181100,'1399 Maxwell Farm Road','Mount Shasta', 'CA', 96067, 'c');

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('solujicifrou-1777@yopmail.com',3166950524,'334 Williams Lane','Wichita', 'KS', 67202, 'c');

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('trissaddeddoutoi-6616@163.com',3375991592,'4021 Bridge Avenue','Pine Prairie', 'LA', 70576, 'i');

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('naffureussofou-8723@nyu.edu',9175520909,'451 Duncan Avenue','New York', 'NY', 10016, 'c');

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('ceissazassuddeu-8182@nyu.edu',9172040218,'4985 Small Street','New York', 'NY', 10038, 'c');

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('crossinnaucagre@icloud.com',4349718347,'1677 North Street','Charlottesville', 'VA', 22903, 'i');

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('keigoippeipeitrei@icloud.com',2675252024,'2671 Quincy Street','Philadelphia', 'PA', 19108, 'i');

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('hoppadilloummu-2988@gmail.com',2483029308,'2655 Bombardier Way','Southfield', 'MI', 48075, 'i');

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('crebreveyecre-4260@gmail.com',7204913594,'4213 Clearview Drive','Longmont', 'CO', 80501, 'c');

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('breveyecrece-1984@outlook.com',3343358033,'447 Fleming Street','Luverne', 'AL', 36049, 'c');

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('yaudajedeikeu-3539@163.com',5135643271,'3454 Rogers Street','Cincinnati', 'OH', 45202, 'i');

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('trujeigaulattou-7527@gmail.com',8643607413,'1068 Deer Haven Drive','Piedmont', 'SC', 29673, 'i');

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('podducezesse-2447@icloud.com',7177499568,'2109 Aaron Smith Drive','Waynesboro', 'PA', 17268, 'i');

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('todducemis-2547@yopmail.com',7039860119,'2352 Broadcast Drive','Washington', 'VA', 20004, 'c');

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('yaumewekoha-8071@yahoo.com',2064907916,'4488 Elliot Avenue','Seattle', 'WA', 98101, 'i');

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('xaumeweloha-1091@yopmail.com',2099875145,'2555 Freed Drive','Stockton', 'CA', 95202, 'c');

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('trebregrayodeu-5596@nyu.edu',9172045718,'381 Farnum Road','New York', 'NY', 10004, 'c');

insert into ltd\_customer (email, phone, street, city, state, zip, customer\_type) values ('doixauwunuse-5266@qq.com',9172096196,'1905 Bell Street','New York', 'NY', 10038, 'i');

commit;

**-- LTD\_INDI\_CUS**

insert into ltd\_indi\_cus (email, license\_id, cus\_fn, cus\_ln, insurance\_name, insurance\_no) values ('reikedezotru-1045@gmail.com','588203864','Alayna','Stracke', 'Nationwide', '5057777700');

insert into ltd\_indi\_cus (email, license\_id, cus\_fn, cus\_ln, insurance\_name, insurance\_no) values ('trissaddeddoutoi-6616@163.com','002951620','Linwood','Dare', 'Geico', '1409868243');

insert into ltd\_indi\_cus (email, license\_id, cus\_fn, cus\_ln, insurance\_name, insurance\_no) values ('crossinnaucagre@icloud.com','908879746','Enola','Kessler', 'Travelers', '6829484661');

insert into ltd\_indi\_cus (email, license\_id, cus\_fn, cus\_ln, insurance\_name, insurance\_no) values ('keigoippeipeitrei@icloud.com','25296257','Bridgette','Hand', 'Nationwide', '5410361553');

insert into ltd\_indi\_cus (email, license\_id, cus\_fn, cus\_ln, insurance\_name, insurance\_no) values ('hoppadilloummu-2988@gmail.com','H588540221069','Sam','Predovic', 'Auto-Owners Insurance', '2533785131');

insert into ltd\_indi\_cus (email, license\_id, cus\_fn, cus\_ln, insurance\_name, insurance\_no) values ('yaudajedeikeu-3539@163.com','ND158958','Abner','Romaguera', 'Erie Insurance', '2330015708');

insert into ltd\_indi\_cus (email, license\_id, cus\_fn, cus\_ln, insurance\_name, insurance\_no) values ('trujeigaulattou-7527@gmail.com','058600537','Reece','Upton', 'Travelers', '3813212070');

insert into ltd\_indi\_cus (email, license\_id, cus\_fn, cus\_ln, insurance\_name, insurance\_no) values ('podducezesse-2447@icloud.com','26806489','Allison','Franecki', 'State Farm', '4267990931');

insert into ltd\_indi\_cus (email, license\_id, cus\_fn, cus\_ln, insurance\_name, insurance\_no) values ('yaumewekoha-8071@yahoo.com','FDQWERL25495','Elna','McGlynn', 'Erie Insurance', '2431337716');

insert into ltd\_indi\_cus (email, license\_id, cus\_fn, cus\_ln, insurance\_name, insurance\_no) values ('doixauwunuse-5266@qq.com','101016329','Einar','Ferry', 'Auto-Owners Insurance', '4642951218');

commit;

**-- LTD\_INDI\_COUPON**

insert into ltd\_indi\_coupon (indi\_coupon\_id, indi\_discount\_rate, start\_date, end\_date, license\_id) values (6264083937,0.8,to\_date('01-AUG-20','DD-MON-RR'),to\_date('01-SEP-20','DD-MON-RR'), '588203864');

insert into ltd\_indi\_coupon (indi\_coupon\_id, indi\_discount\_rate, start\_date, end\_date, license\_id) values (4200713646,0.9,to\_date('01-OCT-20','DD-MON-RR'),to\_date('01-DEC-20','DD-MON-RR'), '588203864');

insert into ltd\_indi\_coupon (indi\_coupon\_id, indi\_discount\_rate, start\_date, end\_date, license\_id) values (7193258878,0.9,to\_date('20-JAN-20','DD-MON-RR'),to\_date('20-FEB-20','DD-MON-RR'), '002951620');

insert into ltd\_indi\_coupon (indi\_coupon\_id, indi\_discount\_rate, start\_date, end\_date, license\_id) values (9735879478,0.7,to\_date('20-MAR-20','DD-MON-RR'),to\_date('20-APR-20','DD-MON-RR'), '002951620');

insert into ltd\_indi\_coupon (indi\_coupon\_id, indi\_discount\_rate, start\_date, end\_date, license\_id) values (4198309397,0.9,to\_date('01-OCT-20','DD-MON-RR'),to\_date('01-NOV-20','DD-MON-RR'), '908879746');

insert into ltd\_indi\_coupon (indi\_coupon\_id, indi\_discount\_rate, start\_date, end\_date, license\_id) values (8940854222,0.6,to\_date('01-JAN-21','DD-MON-RR'),to\_date('01-MAR-21','DD-MON-RR'), '25296257');

insert into ltd\_indi\_coupon (indi\_coupon\_id, indi\_discount\_rate, start\_date, end\_date, license\_id) values (8918830061,0.8,to\_date('01-JUN-21','DD-MON-RR'),to\_date('01-JUL-21','DD-MON-RR'), 'H588540221069');

insert into ltd\_indi\_coupon (indi\_coupon\_id, indi\_discount\_rate, start\_date, end\_date, license\_id) values (4299540433,0.8,to\_date('01-MAY-21','DD-MON-RR'),to\_date('01-JUN-21','DD-MON-RR'), 'ND158958');

insert into ltd\_indi\_coupon (indi\_coupon\_id, indi\_discount\_rate, start\_date, end\_date, license\_id) values (4422823870,0.9,to\_date('01-APR-21','DD-MON-RR'),to\_date('01-MAY-21','DD-MON-RR'), '058600537');

insert into ltd\_indi\_coupon (indi\_coupon\_id, indi\_discount\_rate, start\_date, end\_date, license\_id) values (5294034487,0.75,to\_date('01-MAY-21','DD-MON-RR'),to\_date('01-AUG-21','DD-MON-RR'), '26806489');

insert into ltd\_indi\_coupon (indi\_coupon\_id, indi\_discount\_rate, start\_date, end\_date, license\_id) values (6428346312,0.85,to\_date('20-JAN-21','DD-MON-RR'),to\_date('20-MAY-21','DD-MON-RR'), 'FDQWERL25495');

insert into ltd\_indi\_coupon (indi\_coupon\_id, indi\_discount\_rate, start\_date, end\_date, license\_id) values (2108149161,0.9,to\_date('01-JAN-22','DD-MON-RR'),to\_date('21-JAN-22','DD-MON-RR'), '101016329');

insert into ltd\_indi\_coupon (indi\_coupon\_id, indi\_discount\_rate, start\_date, end\_date, license\_id) values (9927676813,0.6,to\_date('01-DEC-21','DD-MON-RR'),to\_date('21-DEC-21','DD-MON-RR'), '101016329');

commit;

**-- LTD\_CORP\_COUPON**

insert into ltd\_corp\_coupon (c\_discount\_rate, corp\_coupon\_id) values (0.6,7165052063);

insert into ltd\_corp\_coupon (c\_discount\_rate, corp\_coupon\_id) values (0.8,5282244975);

insert into ltd\_corp\_coupon (c\_discount\_rate, corp\_coupon\_id) values (0.9,1727843195);

insert into ltd\_corp\_coupon (c\_discount\_rate, corp\_coupon\_id) values (0.85,6315255780);

insert into ltd\_corp\_coupon (c\_discount\_rate, corp\_coupon\_id) values (0.8,2828349816);

insert into ltd\_corp\_coupon (c\_discount\_rate, corp\_coupon\_id) values (0.7,952265369);

insert into ltd\_corp\_coupon (c\_discount\_rate, corp\_coupon\_id) values (0.7,8560060722);

insert into ltd\_corp\_coupon (c\_discount\_rate, corp\_coupon\_id) values (0.8,2925966320);

insert into ltd\_corp\_coupon (c\_discount\_rate, corp\_coupon\_id) values (0.9,2868170271);

insert into ltd\_corp\_coupon (c\_discount\_rate, corp\_coupon\_id) values (0.7,8818590786);

commit;

**-- LTD\_CORP\_CUS**

insert into ltd\_corp\_cus (email, corp\_no, emp\_id, corp\_name, corp\_coupon\_id) values ('wajougroulage-5993@yopmail.com','4','CH84978299','CHICO Hairdressing Inc.',1727843195);

insert into ltd\_corp\_cus (email, corp\_no, emp\_id, corp\_name, corp\_coupon\_id) values ('pruppitrubuta-1541@outlook.com','2','MS58616803','Microsoft Corporation',5282244975);

insert into ltd\_corp\_cus (email, corp\_no, emp\_id, corp\_name, corp\_coupon\_id) values ('solujicifrou-1777@yopmail.com','5','TG85184809','Techni-Glass Ltd.',2925966320);

insert into ltd\_corp\_cus (email, corp\_no, emp\_id, corp\_name, corp\_coupon\_id) values ('naffureussofou-8723@nyu.edu','1','N63261165','New York University',7165052063);

insert into ltd\_corp\_cus (email, corp\_no, emp\_id, corp\_name, corp\_coupon\_id) values ('ceissazassuddeu-8182@nyu.edu','1','N77414822','New York University',7165052063);

insert into ltd\_corp\_cus (email, corp\_no, emp\_id, corp\_name, corp\_coupon\_id) values ('crebreveyecre-4260@gmail.com','3','G80970673','Alphabet Inc.',6315255780);

insert into ltd\_corp\_cus (email, corp\_no, emp\_id, corp\_name, corp\_coupon\_id) values ('breveyecrece-1984@outlook.com','2','MS43062333','Microsoft Corporation',5282244975);

insert into ltd\_corp\_cus (email, corp\_no, emp\_id, corp\_name, corp\_coupon\_id) values ('todducemis-2547@yopmail.com','6','A24445062','Aceable, Inc.',952265369);

insert into ltd\_corp\_cus (email, corp\_no, emp\_id, corp\_name, corp\_coupon\_id) values ('xaumeweloha-1091@yopmail.com','7','I02810430','Ibotta, Inc.',8818590786);

insert into ltd\_corp\_cus (email, corp\_no, emp\_id, corp\_name, corp\_coupon\_id) values ('trebregrayodeu-5596@nyu.edu','1','N36213671','New York University',7165052063);

commit;

**-- LTD\_VEHICLE\_CLASS**

insert into LTD\_vehicle\_class

(class\_name, rental\_rate, over\_millage\_fee)

values

('small car', 50, 1);

insert into LTD\_vehicle\_class

(class\_name, rental\_rate, over\_millage\_fee)

values

('mid size car', 60, 2);

insert into LTD\_vehicle\_class

(class\_name, rental\_rate, over\_millage\_fee)

values

('large car', 70, 3);

insert into LTD\_vehicle\_class

(class\_name, rental\_rate, over\_millage\_fee)

values

('truck', 75, 4);

insert into LTD\_vehicle\_class

(class\_name, rental\_rate, over\_millage\_fee)

values

('SUV', 80, 5);

insert into LTD\_vehicle\_class

(class\_name, rental\_rate, over\_millage\_fee)

values

('Premium SUV', 85, 6);

insert into LTD\_vehicle\_class

(class\_name, rental\_rate, over\_millage\_fee)

values

('Mini Van', 90, 7);

insert into LTD\_vehicle\_class

(class\_name, rental\_rate, over\_millage\_fee)

values

('convertable', 95, 8);

insert into LTD\_vehicle\_class

(class\_name, rental\_rate, over\_millage\_fee)

values

('race car', 100, 9);

insert into LTD\_vehicle\_class

(class\_name, rental\_rate, over\_millage\_fee)

values

('electricity car', 105, 10);

commit;

**-- LTD\_WOW\_OFFICE**

insert into LTD\_wow\_office (office\_id, office\_name, phone, street, city, state, zip) values (1, 'A office', 8156222725, 'lombardy street', 'Landilne', 'IL', 07281);

insert into LTD\_wow\_office (office\_id, office\_name, phone, street, city, state, zip) values (2, 'B office', 3233438342, 'sunset avenue', 'caliform', 'CA', 17782);

insert into LTD\_wow\_office (office\_id, office\_name, phone, street, city, state, zip) values (3, 'C office', 7347837284, 'hasker streer', 'centre city', 'MI', 992871);

insert into LTD\_wow\_office (office\_id, office\_name, phone, street, city, state, zip) values (4, 'D office', 8172624391, 'axe first', 'sandy county', 'TX', 274627);

insert into LTD\_wow\_office (office\_id, office\_name, phone, street, city, state, zip) values (5, 'E office', 9193961849, 'st kings', 'matilda city', 'NC', 872733);

insert into LTD\_wow\_office (office\_id, office\_name, phone, street, city, state, zip) values (6, 'F office', 3372703067, 'st david', 'leon village', 'LA', 165887);

insert into LTD\_wow\_office (office\_id, office\_name, phone, street, city, state, zip) values (7, 'G office', 5079265194, 'st mary', 'jasmin city', 'MN', 766437);

insert into LTD\_wow\_office (office\_id, office\_name, phone, street, city, state, zip) values (8, 'H office', 3346451904, 'greate jhson', 'lagard', 'AL', 08892);

insert into LTD\_wow\_office (office\_id, office\_name, phone, street, city, state, zip) values (9, 'I office', 9704656295, 'loiuse street', 'swiiss county', 'CO', 727661);

insert into LTD\_wow\_office (office\_id, office\_name, phone, street, city, state, zip) values (10, 'J office', 3153086474, 'pavonia avenue', 'jesus city', 'NJ', 07306);

commit;

**-- LTD\_VEHICLE**

insert into LTD\_vehicle (vin, make, model, year, license\_plate\_number, status, class\_name, office\_id) values ('1N4DL01D2XC212827'

, 'Nissan', 'Maxima', 2010, 'SC39724', 1, 'mid size car', 1);

insert into LTD\_vehicle (vin, make, model, year, license\_plate\_number, status, class\_name, office\_id) values ('3VWPP7AJXDM655051'

, 'Nissan', 'Maxima', 2011, 'DV38576', 1, 'mid size car', 1);

insert into LTD\_vehicle (vin, make, model, year, license\_plate\_number, status, class\_name, office\_id) values ('1FTFW1ET9DFC24713'

, 'Audi', 'RS', 2011, '9682TX', 1, 'race car', 2);

insert into LTD\_vehicle (vin, make, model, year, license\_plate\_number, status, class\_name, office\_id) values ('1D7HU18206S690287'

, 'Audi', 'A4', 2010, 'XSZ904', 1, 'small car', 3);

insert into LTD\_vehicle (vin, make, model, year, license\_plate\_number, status, class\_name, office\_id) values ('1FTYR11E06PA11413'

, 'Toyota', 'Camery', 2007, '6L83236', 1, 'mid size car', 4);

insert into LTD\_vehicle (vin, make, model, year, license\_plate\_number, status, class\_name, office\_id) values ('19UUA5648XA027300'

, 'BMW', 'X5', 2015, '8CEW092', 1, 'SUV', 5);

insert into LTD\_vehicle (vin, make, model, year, license\_plate\_number, status, class\_name, office\_id) values ('1J4GS48K86C205394'

, 'BMW', 'M1', 2010, 'BGS536', 1, 'convertable', 6);

insert into LTD\_vehicle (vin, make, model, year, license\_plate\_number, status, class\_name, office\_id) values ('3GNAL2EK5DS687791'

, 'Ford', 'Mustang', 2014, 'GML5411', 1, 'convertable', 7);

insert into LTD\_vehicle (vin, make, model, year, license\_plate\_number, status, class\_name, office\_id) values ('1FTCR10A0TUA90846'

, 'Ford', 'Mustang', 2018, 'CLD6169', 1, 'convertable', 8);

insert into LTD\_vehicle (vin, make, model, year, license\_plate\_number, status, class\_name, office\_id) values ('JTEEP21A460119291'

, 'Lamborghini', 'AVENTADOR', 2019, '6BPC403', 1, 'race car', 9);

insert into LTD\_vehicle (vin, make, model, year, license\_plate\_number, status, class\_name, office\_id) values ('KNAGM4A79B5148561'

, 'Lamborghini', 'URUS', 2019, '412SKB', 1, 'SUV', 9);

insert into LTD\_vehicle (vin, make, model, year, license\_plate\_number, status, class\_name, office\_id) values ('JM1BK144671795114'

, 'Aston Martin', 'DB11', 2020, '7SKX652', 1, 'race car', 9);

insert into LTD\_vehicle (vin, make, model, year, license\_plate\_number, status, class\_name, office\_id) values ('3FA6P0LUXER272699'

, 'Aston Martin', 'Valkyrie', 2022, 'BB9749', 1, 'race car', 1);

commit;

**-- LTD\_RENT\_RECORD**

insert into LTD\_rent\_record (record\_id, pickup\_office\_id, dropoff\_office\_id, pickup\_date, dropoff\_date, start\_meter, end\_meter, daliy\_meter\_limit, email, vin)

values

(default, 1, 1, to\_date('17-JUN-19','DD-MON-RR'), to\_date('18-JUN-19','DD-MON-RR'), 12000, 12300, 500, 'reikedezotru-1045@gmail.com', '1N4DL01D2XC212827');

insert into LTD\_rent\_record (record\_id, pickup\_office\_id, dropoff\_office\_id, pickup\_date, dropoff\_date, start\_meter, end\_meter, daliy\_meter\_limit, email, vin)

values

(default, 1, 1, to\_date('20-MAY-20','DD-MON-RR'), to\_date('22-MAY-20','DD-MON-RR'), 12000, 12300, 500, 'wajougroulage-5993@yopmail.com', '3VWPP7AJXDM655051');

insert into LTD\_rent\_record (record\_id, pickup\_office\_id, dropoff\_office\_id, pickup\_date, dropoff\_date, start\_meter, end\_meter, daliy\_meter\_limit, email, vin)

values

(default, 2, 2, to\_date('10-OCT-20','DD-MON-RR'), to\_date('11-OCT-20','DD-MON-RR'), 10000, 12300, -1, 'pruppitrubuta-1541@outlook.com', '1FTFW1ET9DFC24713');

insert into LTD\_rent\_record (record\_id, pickup\_office\_id, dropoff\_office\_id, pickup\_date, dropoff\_date, start\_meter, end\_meter, daliy\_meter\_limit, email, vin)

values

(default, 3, 3, to\_date('08-JUN-21','DD-MON-RR'), to\_date('09-JUN-21','DD-MON-RR'), 15000, 16089, 500, 'solujicifrou-1777@yopmail.com', '1D7HU18206S690287');

insert into LTD\_rent\_record (record\_id, pickup\_office\_id, dropoff\_office\_id, pickup\_date, dropoff\_date, start\_meter, end\_meter, daliy\_meter\_limit, email, vin)

values

(default, 4, 4, to\_date('12-JUN-21','DD-MON-RR'), to\_date('20-JUN-21','DD-MON-RR'), 10000, 10700, -1, 'trissaddeddoutoi-6616@163.com', '1FTYR11E06PA11413');

insert into LTD\_rent\_record (record\_id, pickup\_office\_id, dropoff\_office\_id, pickup\_date, dropoff\_date, start\_meter, end\_meter, daliy\_meter\_limit, email, vin)

values

(default, 5, 5, to\_date('20-JUN-21','DD-MON-RR'), to\_date('25-JUN-21','DD-MON-RR'), 9000, 10700, -1, 'naffureussofou-8723@nyu.edu', '19UUA5648XA027300');

insert into LTD\_rent\_record (record\_id, pickup\_office\_id, dropoff\_office\_id, pickup\_date, dropoff\_date, start\_meter, end\_meter, daliy\_meter\_limit, email, vin)

values

(default, 6, 6, to\_date('25-JUN-21','DD-MON-RR'), to\_date('27-JUN-21','DD-MON-RR'), 8000, 8500, 1000, 'ceissazassuddeu-8182@nyu.edu', '1J4GS48K86C205394');

insert into LTD\_rent\_record (record\_id, pickup\_office\_id, dropoff\_office\_id, pickup\_date, dropoff\_date, start\_meter, end\_meter, daliy\_meter\_limit, email, vin)

values

(default, 7, 7, to\_date('01-MAY-21','DD-MON-RR'), to\_date('05-MAY-21','DD-MON-RR'), 8000, 8500, 1000, 'crossinnaucagre@icloud.com', '3GNAL2EK5DS687791');

insert into LTD\_rent\_record (record\_id, pickup\_office\_id, dropoff\_office\_id, pickup\_date, dropoff\_date, start\_meter, end\_meter, daliy\_meter\_limit, email, vin)

values

(default, 8, 8, to\_date('10-JAN-22','DD-MON-RR'), to\_date('11-JAN-22','DD-MON-RR'), 8000, 8500, 1000, 'keigoippeipeitrei@icloud.com', '1FTCR10A0TUA90846');

insert into LTD\_rent\_record (record\_id, pickup\_office\_id, dropoff\_office\_id, pickup\_date, dropoff\_date, start\_meter, end\_meter, daliy\_meter\_limit, email, vin)

values

(default, 9, 9, to\_date('20-FEB-22','DD-MON-RR'), to\_date('22-FEB-22','DD-MON-RR'), 8000, 8500, 1000, 'hoppadilloummu-2988@gmail.com', 'JTEEP21A460119291');

commit;

**-- LTD\_PAYMENT**

insert into LTD\_payment (payment\_id, payment\_date, payment\_status, payment\_type, card\_no, invoice\_id)

values

(default, to\_date('18-JUN-19','DD-MON-RR'), 'approved', 'credit card', '4539727885860973', 1);

insert into LTD\_payment (payment\_id, payment\_date, payment\_status, payment\_type, card\_no, invoice\_id)

values

(default, to\_date('22-MAY-20','DD-MON-RR'), 'approved', 'debit card', '4929622139534755', 2);

insert into LTD\_payment (payment\_id, payment\_date, payment\_status, payment\_type, card\_no, invoice\_id)

values

(default, to\_date('11-OCT-20','DD-MON-RR'), 'approved', 'debit card', '4716035186596478613', 3);

insert into LTD\_payment (payment\_id, payment\_date, payment\_status, payment\_type, card\_no, invoice\_id)

values

(default, to\_date('09-JUN-21','DD-MON-RR'), 'approved', 'credit card', '2221007539255434', 4);

insert into LTD\_payment (payment\_id, payment\_date, payment\_status, payment\_type, card\_no, invoice\_id)

values

(default, to\_date('20-JUN-21','DD-MON-RR'), 'approved', 'bebit card', '5221766410559791', 5);

insert into LTD\_payment (payment\_id, payment\_date, payment\_status, payment\_type, card\_no, invoice\_id)

values

(default, to\_date('25-JUN-21','DD-MON-RR'), 'approved', 'credit card', '5512435899910044', 6);

insert into LTD\_payment (payment\_id, payment\_date, payment\_status, payment\_type, card\_no, invoice\_id)

values

(default, to\_date('27-JUN-21','DD-MON-RR'), 'approved', 'credit card', '373903761866783', 7);

insert into LTD\_payment (payment\_id, payment\_date, payment\_status, payment\_type, card\_no, invoice\_id)

values

(default, to\_date('05-MAY-21','DD-MON-RR'), 'approved', 'debit card', '348420970316866', 8);

insert into LTD\_payment (payment\_id, payment\_date, payment\_status, payment\_type, card\_no, invoice\_id)

values

(default, to\_date('11-JAN-22','DD-MON-RR'), 'approved', 'credit card', '372434040236961', 9);

insert into LTD\_payment (payment\_id, payment\_date, payment\_status, payment\_type, card\_no, invoice\_id)

values

(default, to\_date('22-FEB-22','DD-MON-RR'), 'approved', 'credit card', '6011961356280666', 10);

## 7. Trigger Code

**-- trigger for invoice**

CREATE OR REPLACE TRIGGER invoice\_trigger

AFTER INSERT ON LTD\_rent\_record FOR EACH ROW

DECLARE

amount NUMBER;

overamount NUMBER;

extramile NUMBER;

totalmiles NUMBER;

BEGIN

extramile := :NEW.end\_meter - :NEW.start\_meter - :NEW.daliy\_meter\_limit;

totalmiles := :NEW.end\_meter - :NEW.start\_meter;

SELECT SUM(LTD\_vehicle\_class.rental\_rate \* totalmiles)

INTO amount

FROM LTD\_vehicle\_class

INNER JOIN LTD\_vehicle

ON LTD\_vehicle.class\_name = LTD\_vehicle\_class.class\_name

WHERE :NEW.vin = LTD\_vehicle.vin;

SELECT SUM(LTD\_vehicle\_class.rental\_rate \* (:NEW.daliy\_meter\_limit) + (extramile \* LTD\_vehicle\_class.over\_millage\_fee))

INTO overamount

FROM LTD\_vehicle\_class

INNER JOIN LTD\_vehicle

ON LTD\_vehicle.class\_name = LTD\_vehicle\_class.class\_name

WHERE :NEW.vin = LTD\_vehicle.vin;

IF extramile > 0 THEN

INSERT INTO LTD\_invoice VALUES(default, :NEW.dropoff\_date, overamount, :NEW.record\_id);

ELSE

INSERT INTO LTD\_invoice VALUES(default, :NEW.dropoff\_date, amount, :NEW.record\_id);

END IF;

END;

/

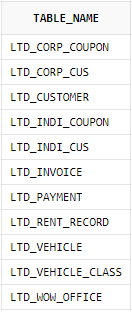
## 8. Queries Results

1. **REM: List of Tables**

select table\_name

from user\_tables

where table\_name like 'LTD%';



1. **REM: List of Table Columns**

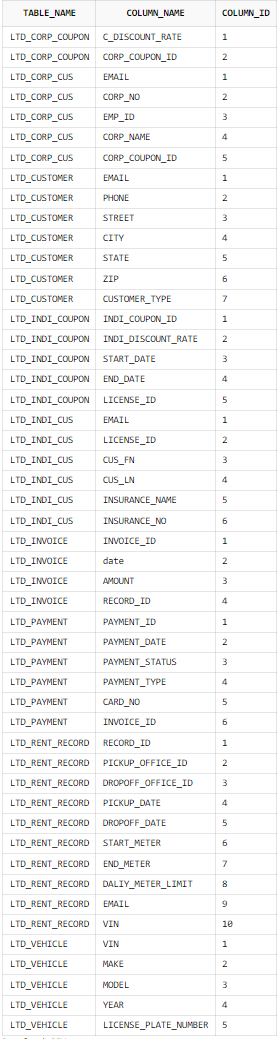
select

table\_name, column\_name,column\_id

from user\_tab\_columns

where table\_name like 'LTD%'

order by table\_name,column\_id;

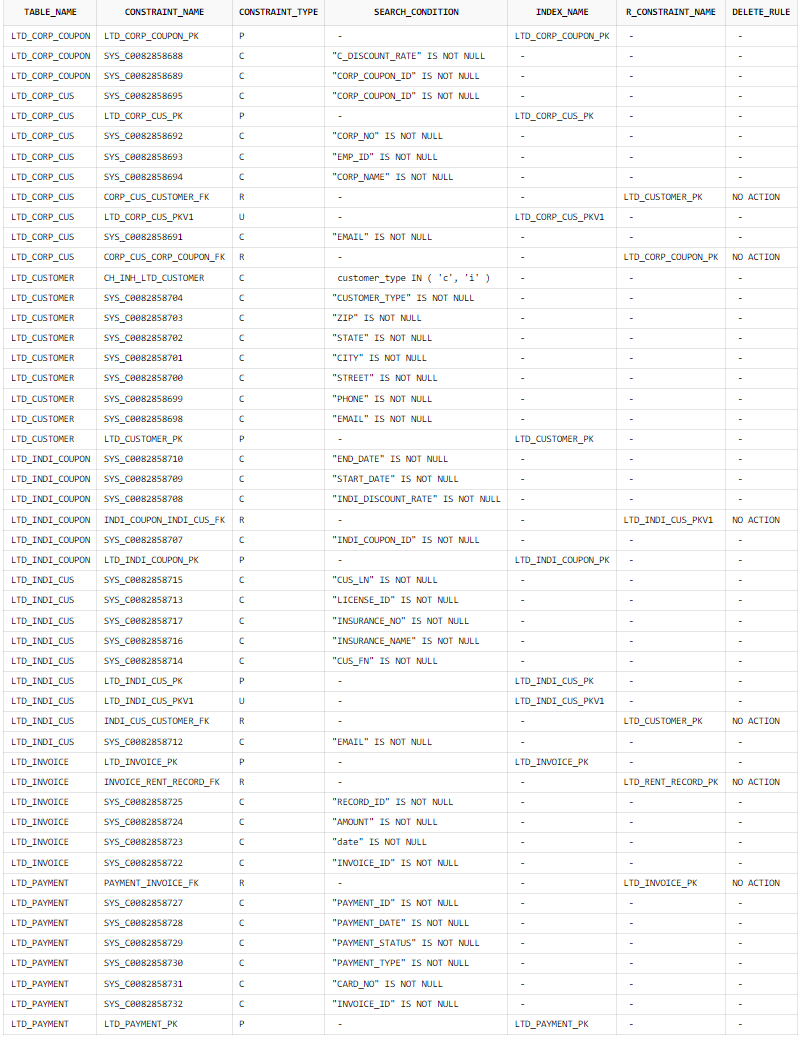


1. **REM: List of Table Column Constraints**

Select table\_name,constraint\_name,constraint\_type,search\_condition,index\_name,r\_constraint\_name,delete\_rule

from user\_constraints

where table\_name like LTD%' order by table\_name;



1. **REM: List of Table Column Comments**

select

table\_name,column\_name,comments

from user\_col\_comments

where table\_name like ‘LTD%'

order by table\_name;