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CONTENT

Basic introduction about the scenario

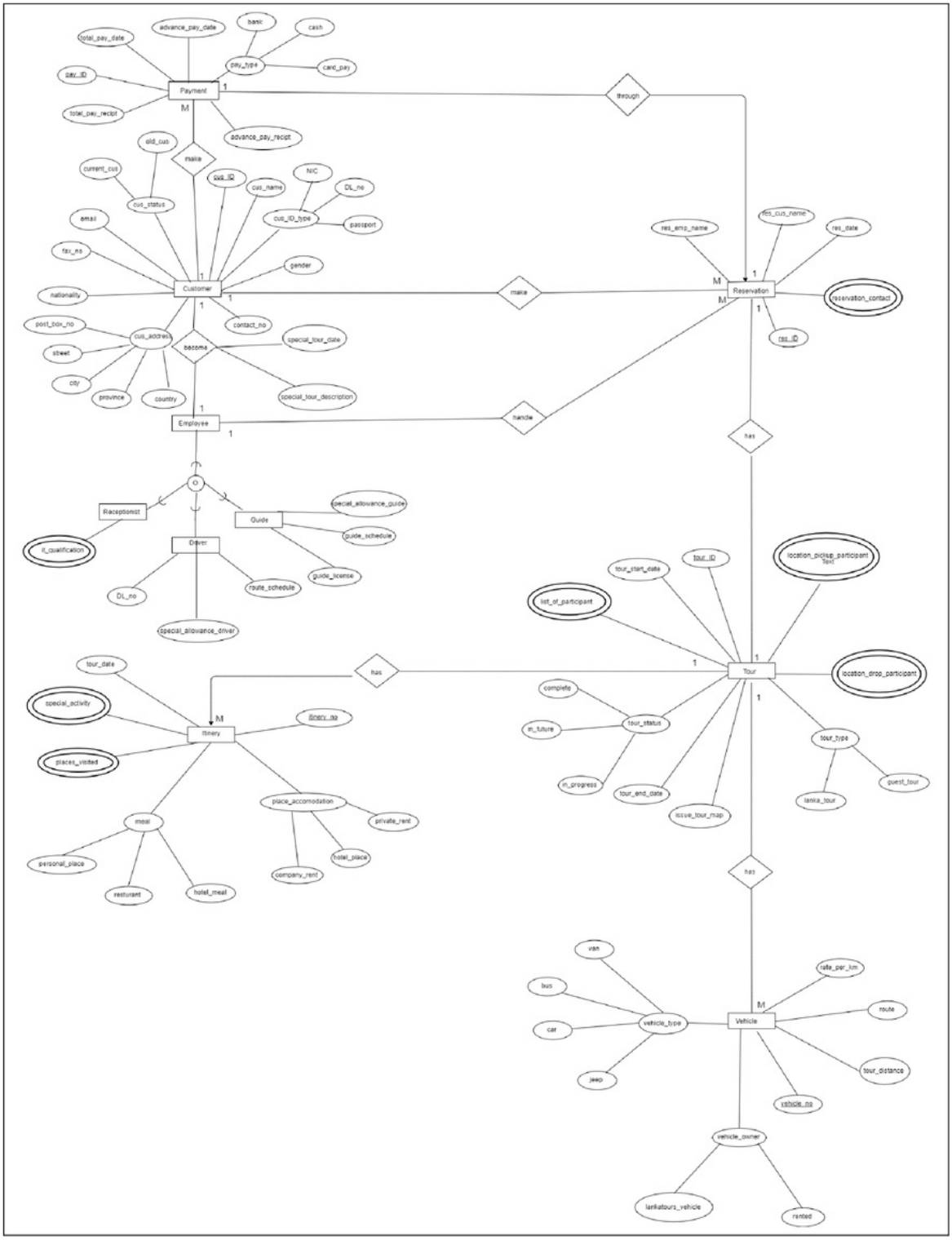
- Lanka Tours is a renowned tour operator in Sri Lanka since 2015.It organic custom private trips to locals and foreigners from individual to large groups.

- Lanka tours needs to implement a new database application to deliver a satisfactory service. They need their system to generate management reports, print customer bills and tour itinerary

  We identified seven entities in the above given scenario.
  - ✓ Payments are directly linked to the customer, both the reservation payment and the full payment.
  - ✓ Reservation process is handled via an employee.
  - ✓ Employees are divided to guides, receptionists, drivers. Sometimes one employee can serve two purposes.
    - i.e. guide and driver both.

✓ There is a possibility of an employee becoming a customer as well.

EER-Diagram


Payment
advance_pay_date
bank
cash
total_pay_date
pay_type
card_pay
pay_ID
total_pay_recipt
advance_pay_recipt
through
make
old_cus
current_cus
cus_status
cus_ID
cus_name
NIC
DL_no
cus_ID_type
passport
email
fax_no
gender
Customer
nationality
contact_no
cus_address
become
post_box_no
street
city
province
country
special_tour_date
special_tour_description
Employee
handle
Reservation
res_emp_name
res_cus_name
res_date
reservation_contact
res_ID
has
O
Receptionist
it_qualification
Guide
special_allowance_guide
guide_schedule
guide_license
Driver
route_schedule
DL_no
special_allowance_driver
Tour
tour_start_date
tour_ID
location_pickup_participant
list_of_participant
location_drop_participant
complete
in_future
tour_status
in_progress
tour_end_date
issue_tour_map
tour_type
guest_tour
lanka_tour
has
tour_date
special_activity
itinery
itinery_no
places_visited
meal
personal_place
resturant
hotel_meal
place_accomodation
private_rent
hotel_place
company_rent
has
van
bus
car
jeep
vehicle_type
Vehicle
rate_per_km
route
tour_distance
vehicle_no
vehicle_owner
lankatours_vehicle
rented

Additional Assumptions

- Vehicle rate per kilometer depends on vehicle type.
- The same person makes the reservation and payment.
- The reservation should be produced, when making the advance payment.
- Employee should be a local resident.
- The pickup and drop location of a foreign can be the airport.
- Employee can also be a customer. We assume as an entity, "Special" in EER-Diagram.
- Customer contact number, fax-no and email can be possible empty.
- Assume that tour-type can be made by Lanka tours or the guest of their interests.
- Each guide is paid Rs5,000 per day and an additional 5% allowance of the total tour package.
- An additional 3% allowance of the total tour-package is paid for the drivers and the vehicle.
- When making reservation, guests must pay an advance payment of the 50% of their tour package.

Cardinality Ratios

1. One payment is relevant for one reservation (1:1)
2. One customer can have many payments(1:M)
3. One employee can become a customer (1:1)
4. One employee can handle many reservations(1:M)
5. Each reservation can have only one tour (1:1)
6. One tour can have many vehicles(1:M)
7. Each tour has more than one itinery(1:M)
8. One customer can make many reservations(1:M)

Relational Mapping

Customer

cus_ID	cus_name	gender	nationality	NIC	DL_no	passport

old_cus	current_cus	email	P.O box	street

city	state	country	contact_no	fax_no

Payment

FK

pay_ID	cus_ID	bank	cash	card	advance_pay_date

total_pay_date	total_pay_recipt	advance_pay_recipt	pay_cus_name

FK

old_cus	current_cus	email	P.O box	street

city	state	country	contact_no	fax_no

Payment

FK

pay_ID	cus_ID	bank	cash	card	advance_pay_date

total_pay_date	total_pay_recipt	advance_pay_recipt	pay_cus_name

FK

tour_end_date	issue_tour_map	complete	inprogress	in_future

Tour_Participant

tour_ID	list_of_participant

Tour_Location

tour_ID	location_pickup_participant	location_drop_participant

Vehicle FK

vehicle_ID	tour_ID	route	tour_distance	rate_per_km

van	car	bus	jeep	rented	vehicle_lanka_tour

Itinery FK

Itinery_no	tour_ID	tour_date	private_rent	company_rent

hotel_place	Personal_place	resturant	hotel_for_meal

Itinery_Activities

Itinery_no	Special_activity

Itinery_Visited

Itinery_no	places_visited

Employee

emp_ID	emp_name	gender	address	salary	contact_no

Emp_Recep

emp_ID	IT_qualification

Emp_Driver

emp_ID	DL_no	driver_special_allowance	route_scedule

Emp_Guide

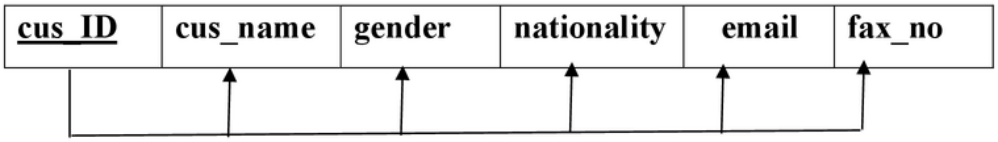
emp_ID	guide_license_no	guide_schedule	guide_special_allowance

Employee_Customer

emp_ID	cus_ID	special_tour_no	special_tour_date

Data Normalization

Customer



1NF

- ✓ There are no repeating groups.
- ✓ No composite attributes.
- ✓ No multi-valued attributes.
- ✓ No nested relations.
- ✓ The attributes are atomic and single valued.

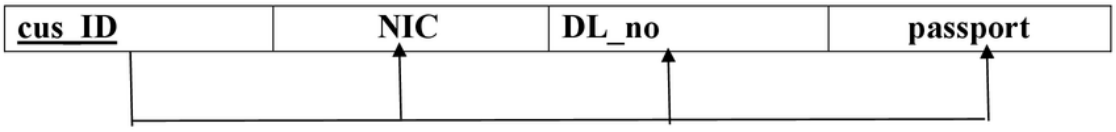
Functional Dependencies

Cus_ID → {cus_name,gender,nationality,email,fax_no}

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies Therefore, this table is in 3NF.

Cus_ID Type



1NF

- ✓ There are no repeating groups.
- ✓ There is a composite attribute therefore it should be in 1NF.
- ✓ No multi-valued attributes.
- ✓ No nested relations.
- ✓ The attributes are atomic and single valued.

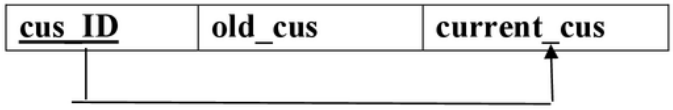
Functional Dependencies

Cus_ID ⟶ {NIC, DL_no , passport}

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Cus_Status



1NF

- ✓ There are no repeating groups.
- ✓ No composite attributes.
- ✓ There is multi-valued attribute therefore it should convert to 1NF.
- ✓ No nested relations.
- ✓ The attributes are atomic and single valued.

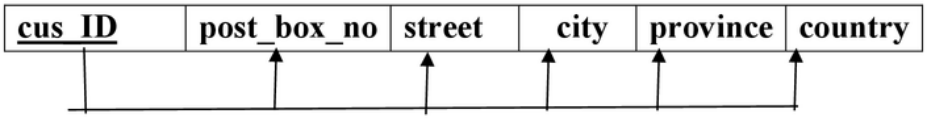
Functional Dependencies

Cus_ID → { old_cus, current_cus}

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Cus_Address



1NF

- ✓ There are no repeating groups.
- ✓ No multivalued attributes.
- ✓ No nested relations.
- ✓ There is composite attribute therefore it should be in 1NF.
- ✓ The attributes are atomic and single valued.

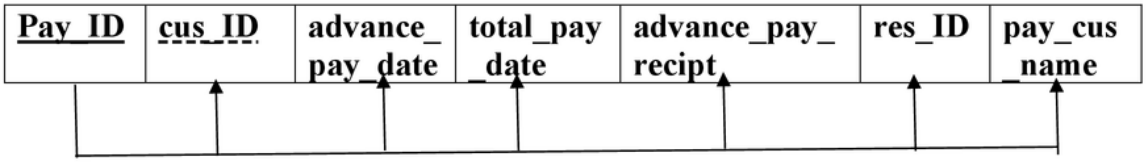
Functional Dependencies

Cus_ID ⟶ { post_box_no , street , city , province ,country}

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Payment



1NF

- ✓ There are no repeating groups.
- ✓ No multivalued attributes.
- ✓ No nested relations.
- ✓ No composite attributes.
- ✓ This table is in 1NF.
- ✓ The attributes are single and atomic.

Functional Dependencies

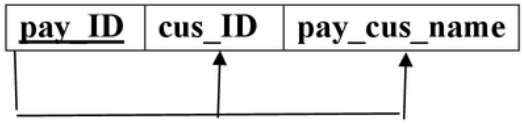
Cus_ID ⟶ { cus_ID , advance_pay_date ,

total_pay_date , advance_pay_recipt , res_ID , pay_cus_name }

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Pay_Customer



1NF

- ✓ There are no repeating groups.
- ✓ No multivalued attributes.
- ✓ No nested relations.
- ✓ No composite attributes.
- ✓ This table is in 1NF.
- ✓ The attributes are atomic and single valued.

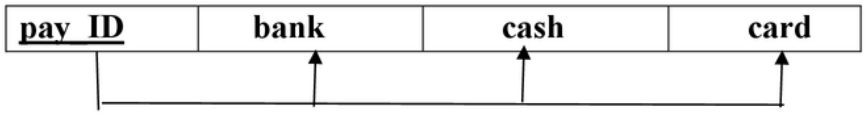
Functional Dependencies

pay_ID → { cus_ID , pay_cus_name }

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Pay Type



1NF

- ✓ There are no repeating groups.
- ✓ There is composite attribute therefore it should be in 1NF.
- ✓ No multivalued attributes.
- ✓ No nested relations.
- ✓ The attributes are atomic and single valued.

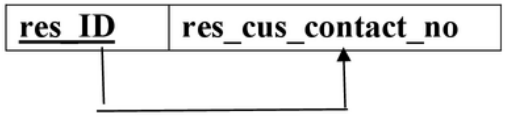
Functional Dependencies

Cus_ID ⟶ { bank, cash, card }

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Reservation_Contact



1NF

- ✓ There are no repeating groups.
- ✓ This is a multivalued attribute therefore it should be in 1NF.
- ✓ No nested relations.
- ✓ No composite attributes.
- ✓ The attributes are atomic and single valued.

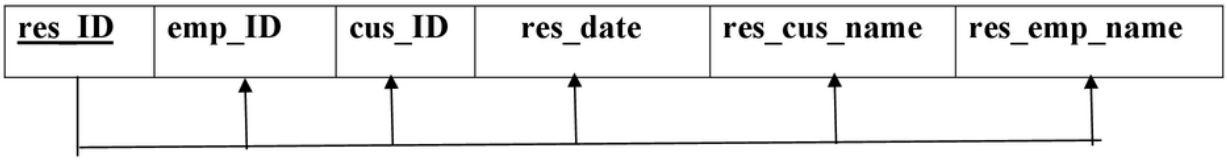
Functional Dependencies

res_ID → { res_cus_contact_no }

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Reservation



1NF

- ✓ There are no repeating groups.
- ✓ No nested relations.
- ✓ No multivalued attributes.
- ✓ No composite attributes.
- ✓ This table is in 1NF.
- ✓ The attributes are atomic and single valued.

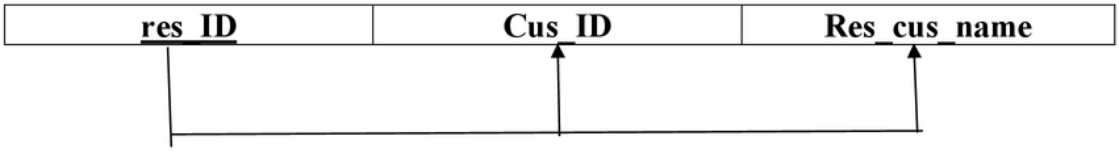
Functional Dependencies

res_ID → { emp_ID , cus_ID , res_date , res_cus_name , res_emp_name }

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Reservation_Customer



1NF

- ✓ There are no repeating groups.
- ✓ No nested relations.
- ✓ No multivalued attributes.
- ✓ No composite attributes.
- ✓ This table is in 1NF.
- ✓ The attributes are atomic and single valued.

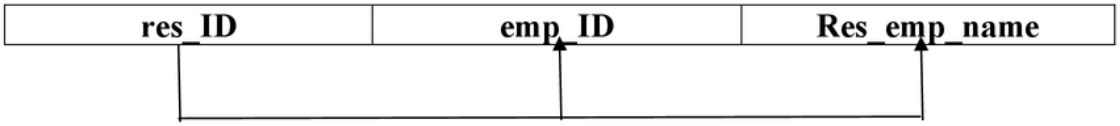
Functional Dependencies

res_ID ⟶ { cus_ID , res_cus_name }

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Reservation_Employee



1NF

- ✓ There are no repeating groups.
- ✓ No nested relations.
- ✓ No multivalued attributes.
- ✓ No composite attributes.
- ✓ This table is in 1NF.
- ✓ The attributes are atomic and single valued.

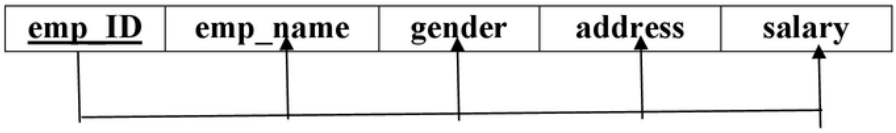
Functional Dependencies

res_ID → { emp_ID , res_emp_name }

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Employee



1NF

- ✓ There are no repeating groups.
- ✓ No nested relations.
- ✓ No multivalued attributes.
- ✓ No composite attributes.
- ✓ This table is in 1NF.
- ✓ The attributes are atomic and single valued.

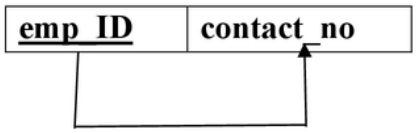
Functional Dependencies

emp_ID ⟶ { emp_name , gender , address , salary }

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Employee_Contact



1NF

- ✓ There are no repeating groups.
- ✓ There is a multivalued attribute therefore, it should be in 1NF.
- ✓ No composite attributes.
- ✓ No nested relations.
- ✓ The attributes are atomic and single valued.

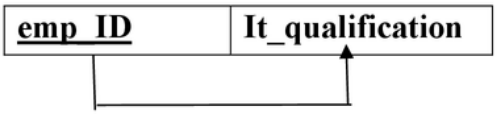
Functional Dependencies

emp_ID → { contact_no }

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Emp_Receptionist



1NF

- ✓ There are no repeating groups.
- ✓ There is a multivalued attribute therefore, it should be in 1NF.
- ✓ No composite attributes.
- ✓ No nested relations.
- ✓ The attributes are atomic and single valued.

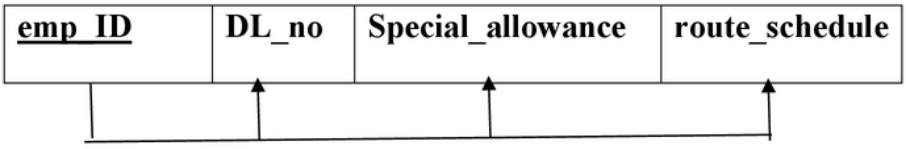
Functional Dependencies

emp_ID → { It_qualification }

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Emp_Driver



1NF

- ✓ There are no repeating groups.
- ✓ No composite attributes.
- ✓ No multivalued attributes.
- ✓ No nested relations.
- ✓ The attributes are atomic and single valued.
- ✓ This table is in 1NF.

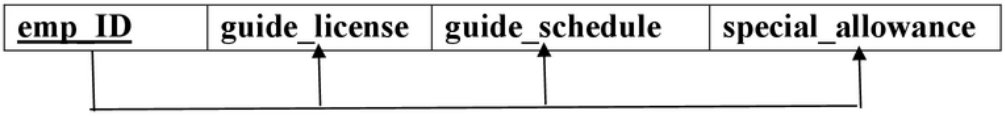
Functional Dependencies

emp_ID ⟶ { Dl_no , Special_allowance , rout_schedule }

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Emp_Guide



1NF

- ✓ There are no repeating group.
- ✓ This table is in 1NF.
- ✓ No multivalued attributes.
- ✓ No composite attributes.
- ✓ No nested relations.
- ✓ The attributes are atomic and single valued.

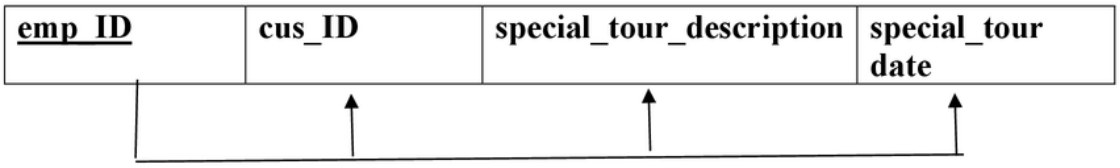
Functional Dependencies

emp_ID ⟶ {guide_license , guide_schedule , guide_allowance}

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Employee_Customer



1NF

- ✓ There are no repeating group.
- ✓ This table is in 1NF.
- ✓ No multivalued attributes.
- ✓ No composite attributes.
- ✓ No nested relations.
- ✓ The attributes are atomic and single valued.

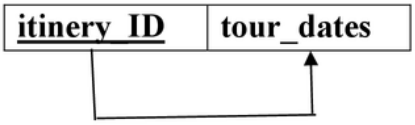
Functional Dependencies

emp_ID ⟶ { cus_ID,special_tour_descrition,special_tour_date}

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Itinery



1NF

- ✓ There are no repeating group.
- ✓ No multivalued attributes.
- ✓ No composite attributes.
- ✓ No nested relations.
- ✓ The attributes are atomic and single valued.
- ✓ This table is in 1NF.

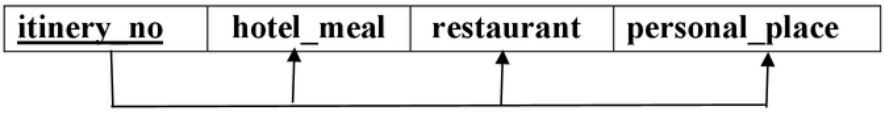
Functional Dependencies

itinery_no ⟶ {tour_date }

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Itinery_Meal



1NF

- ✓ There are no repeating groups.
- ✓ No multivalued attributes.
- ✓ No nested relations.
- ✓ The attributes are atomic and single valued.
- ✓ This table is in 1NF.
- ✓ This is a composite attribute therefore it should convert to 1NF.

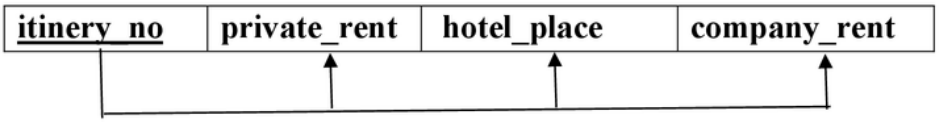
Functional Dependencies

itinery_no ⟶ { hotel_meal, restaurant , personal_place }

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Itinery_Place_Accommodation



1NF

- ✓ There are no repeating group.
- ✓ There is a composite attribute therefore, it should be in 1NF.
- ✓ No multivalued attributes.
- ✓ No nested relations.
- ✓ The attributes are atomic and single valued.

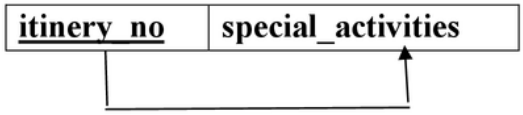
Functional Dependencies

itinery_no ⟶ { private_rent , hotel_place , company_rent}

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Itinery_Special_Activity



1NF

- ✓ There are no repeating group.
- ✓ There is a multivalued attribute therefore, it should be in 1NF.
- ✓ No nested relations.
- ✓ No composite attributes.
- ✓ The attributes are atomic and single valued.

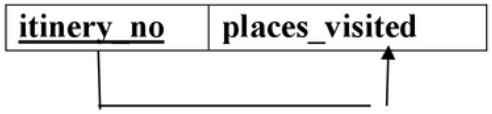
Functional Dependencies

itinery_no → {special_activity}

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Itinery_Places Visited



1NF

- ✓ There are no repeating group.
- ✓ There is a multivalued attribute therefore, it should be in 1NF.
- ✓ No nested relations.
- ✓ No composite attributes.
- ✓ The attributes are atomic and single valued.

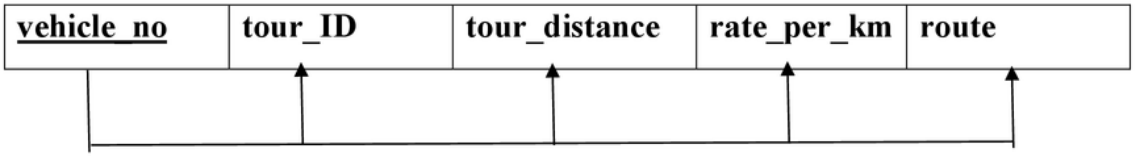
Functional Dependencies

itinery_no → { places_visited }

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Vehicle



1NF

- ✓ There are no repeating group.
- ✓ There is a multivalued attribute therefore, it should be in 1NF.
- ✓ No nested relations.
- ✓ No composite attributes.
- ✓ The attributes are atomic and single valued.

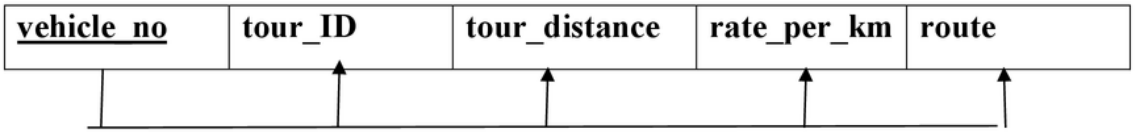
Functional Dependency

vehicle_no → { tour_ID, tour_distance, rate_per_km , route}

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Vehicle Type



1NF

- ✓ There are no repeating groups.
- ✓ No multivalued attributes.
- ✓ No nested relations.
- ✓ The attributes are atomic and single valued.
- ✓ This table is in 1NF.
- ✓ This is a composite attribute therefore it should convert to 1NF.

Functional Dependency

vehicle _no → { tour_ID, tour_distance, rate_per_km , route}

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Vehicle_Own

vehicle_no	rented_vehicle	Lanka_tours_vehicle

1NF

- ✓ There are no repeating groups.
- ✓ No multivalued attributes.
- ✓ No nested relations.
- ✓ The attributes are atomic and single valued.
- ✓ This table is in 1NF.
- ✓ This is a composite attribute therefore it should convert to 1NF.

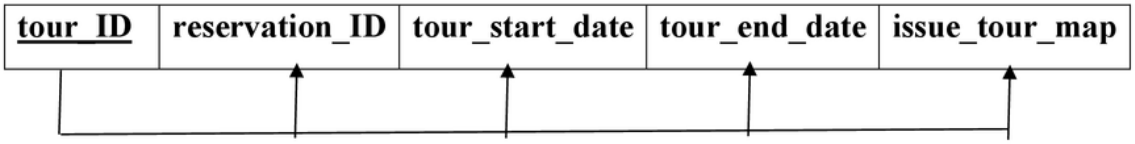
Functional Dependency

vehicle _no → { rented_vehicle , lanka_tours}

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Tour



1NF

- ✓ There are no repeating groups.
- ✓ No multivalued attributes.
- ✓ No nested relations.
- ✓ The attributes are atomic and single valued.
- ✓ This table is in 1NF.
- ✓ This is a composite attribute therefore it should convert to 1NF.

Functional Dependency

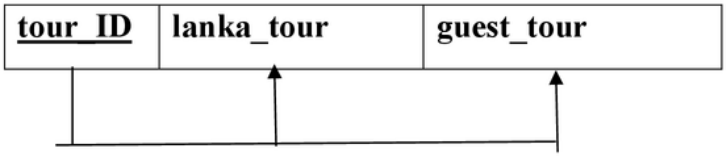
tour_ID ⟶ { reservation_ID ,tour_start_date , tour_end_date ,

issue_tour_map}

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Tour Type



1NF

- ✓ There are no repeating groups.
- ✓ No multivalued attributes.
- ✓ No nested relations.
- ✓ The attributes are atomic and single valued.
- ✓ This table is in 1NF.
- ✓ This is a composite attribute therefore it should convert to 1NF.

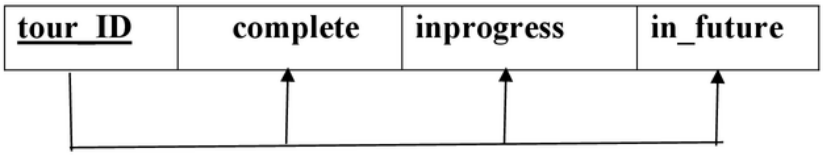
Functional Dependency

tour_ID → {lanka_tour , guest_tour}

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Tour Status



1NF

- ✓ There are no repeating groups.
- ✓ No multivalued attributes.
- ✓ No nested relations.
- ✓ The attributes are atomic and single valued.
- ✓ This table is in 1NF.
- ✓ This is a composite attribute therefore it should convert to 1NF.

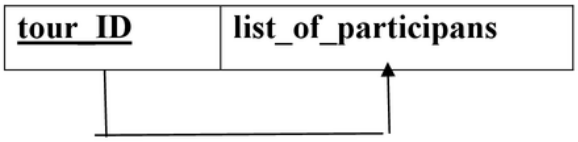
Functional Dependency

tour_ID → {complete , inprogress , in_future}

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Tour Participants



1NF

- ✓ There are no repeating groups.
- ✓ No multivalued attributes.
- ✓ No nested relations.
- ✓ The attributes are atomic and single valued.
- ✓ This table is in 1NF.
- ✓ This is a composite attribute therefore it should convert to 1NF.

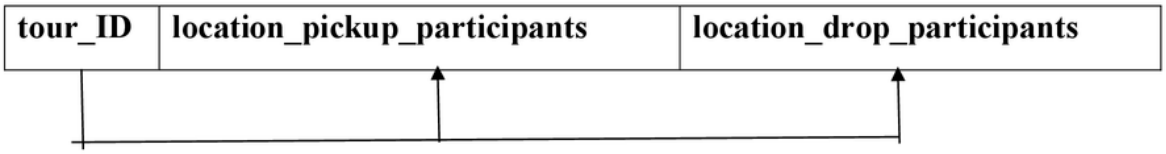
Functional Dependency

tour_ID → {list_of_participans }

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Tour Location



1NF

- ✓ There are no repeating groups.
- ✓ No multivalued attributes.
- ✓ No nested relations.
- ✓ The attributes are atomic and single valued.
- ✓ This table is in 1NF.
- ✓ This is a composite attribute therefore it should convert to 1NF.

Functional Dependency

tour_ID ⟶ {location_pickup_participants, location_drop_participants}

2NF|3NF

- ✓ There are no partial dependencies and transitive dependencies therefore, this table is in 3NF.

Data Dictionary

Customer

Field name	Filed size	Data type	description
cus_Id		bigint	Customer Id of the customer
cus_name	255	Varchar	Customer name of the customer
gender	1	Varchar	Gender of the customer
nationality	45	Varchar	Nationality of customer
Email	250	Varchar	Email of the customer
fax_no	10	int	Fax number of the customer
contact_no	15	int	Contact number of the customer

Customer_Id_type

Field name	Filed size	Data type	description
cus_ID		bigint	Customer id of customer Id type
NIC	10	Varchar	NIC of the customer Id type
Dl_no	8	varchar	Dl_no number of the customer Id type
Passport	8	Varchar	Passport number of the Id type

Cus_Status

Field name	Filed size	Data type	description
cus_ID		bigint	Customer Id of customer status
old_cus	45	varchar	Old customer of customer status
current_cus	45	Varchar	Current customer of customer status

Customer_Address

Field name	Filed size	Data type	description
cus_ID		bigint	Customer Id of customer address
post_box_no	10	Int	Post box of customer address
street	45	Varchar	Street of customer address
city	50	Varchar	City of customer address
state	50	Varchar	State of customer address
country	50	Varchar	Country of customer address

Payment

Field name	Filed size	Data type	description
pay_ID		bigint	Payment Id of payment
advance_pay_date		Date	Advance pay date of payment
total_pay_date		Date	Total payment of payment
total_pay_recipt	45	Varchar	Total pay receipt of payment
advance_pay_recipt	45	Varchar	Advance payment receipt of payment
pay_cus_name	255	Varchar	Payment customer name of payment
reservation_Id		int	Reservation id of payment
Cus_Id		Int	Customer Id of payment

Pay_Type

Field name	Filed size	Data type	description
pay_ID		bigint	Payment Id of payment type
bank	45	Varchar	Bank of payment type
Cash	45	Varchar	Cash of payment type
Card_pay	45	Varchar	Card of payment type

Pay_Customer

Field name	Field size	Data type	Description
Pay_ID		bigint	Payment ID of payment table
Cus_ID		bigint	Customer ID of customer table
Pay_cus_name	255	varchar	Payment customer name

Reservation_contact

Field name	Filed size	Data type	description
res_ID		bigint	Reservation Id of reservation table
res_cus_contact_no	15	Int	Reservation customer contact number of reservation contact

Reservation

Field name	Filed size	Data type	description
res_ID		int	Reservation Id of reservation
res_cus_name	255	Varchar	Reservation customer name of reservation
res_emp_name	255	Varchar	Reservation employee name of reservation
emp_Id		Int	Employee id of reservation
cus_Id		Int	Customer id of reservation
res_date		Date	Reservation date of reservation

Reservation_Customer

Field name	Filed size	Data type	description
res_ID		bigint	Reservation ID of reservation table
Cus_ID		bigint	Customer ID of customer table
res_cus_name	255	varchar	Reservation customer name

Reservation_Employee

Field name	Filed size	Data type	description
Res_ID		bigint	Reservation ID of reservation table
Emp_ID			Employee ID of employee table
Res_emp_name	255	varchar	Reservation employee name

Employee

Field name	Filed size	Data type	description
emp_id		bigint	Employee id of employee
emp_name	255	Varchar	Employee name of employee
gender	1	Varchar	Gender of employee
address	255	Varchar	Address of the employee
salary		Int	Salary of the employee

Employee_Contact

Field name	Filed size	Data type	description
emp_Id		bigint	Employee Id of employee contact
emp_contact_no	10	Int	Employee contact number of employee contact

Emp_Receptionist

Field name	Filed size	Data type	description
emp_Id		Int	Employee id of employee receptionist
It_qualification	255	Varchar	It qualification of employee receptionist

Emp_Driver

Field name	Filed size	Data type	description
emp_Id		bigint	Employee Id of employee driver
DL_no	8	Varchar	Driving license number of employee driver
special_allowance_driver	25	Int	Special allowance of employee driver
route_shedule	255	Varchar	Route schedule of employee driver

Emp_Guide

Field name	Filed size	Data type	description
emp_Id		bigint	Employee Id of employee guide
guide_license	45	Varchar	Guide license of employee driver
guide_schedule	255	Varchar	Guide schedule of employee driver
special_allowance_guide		Int	Special allowance of employee guide

Employee_Customer

Field name	Filed size	Data type	description
emp_Id		bigint	Employee ID of employee table
Cus_ID		bigint	Customer ID of customer table
Special_tour_description	255	varchar	Special tour description about customer as employee
Special_tour_date		date	Special tour dates about customer as employee

Itinery

Field name	Filed size	Data type	description
itinery_no		bigint	Itinery ID of itinery
tour_date		Date	Tour dates of itinery

Itinery_meal

Field name	Filed size	Data type	description
itinery_Id		Int	Itinery Id of itinery meal
hotel_meal	255	Varchar	Hotel meal of itinery meal
restaurant	255	Varchar	Restaurant of itinery meal
personal_place	255	Varchar	Personal place of itinery meal

Itinery_place_accomadation

Field name	Filed size	Data type	description
itinery_Id		bigint	Itinery Id of itinery table
private_rent	255	Varchar	Privte rent of itinery place accommodation
hotel_place	255	Varchar	Hotel place of itinery place accommodation
company_rent	255	Varchar	Company rent of itinery place accommodation

Itinery_Places_Visited

Field name	Filed size	Data type	description
itinery_Id		bigint	Itinery Id of itinery table
places_visited	255	varchar	Visited places of itinery

Itinery_Special_Activity

Field name	Field size	Data type	description
itinery_Id		bigint	Itinery Id of itinery table
Special_activity	255	varchar	Special activities of itinery

TOUR

Field name	Field size	Data type	description
Tour_ID		bigint	Tour ID of the tour table
tour_start_date		date	Tour start dates of tour table
tour_end_date		date	Tour end dates of tour table
tour_end_date		date	Tour end dates of tour table

Tour_Location

Field name	Field size	Data type	description
Tour_ID		bigint	Tour ID of the tour table
location_pickup_participant	255	varchar	Tour location pickup participant
location_drop_participant	255	varchar	Tour location drop participant

Tour_Participant

Field name	Field size	Data type	description
Tour_ID		bigint	Tour ID of the tour table
list_of_participant	255	varchar	Tour list of partcipants

Tour_Status

Field name	Field size	Data type	description
Tour_ID		bigint	Tour ID of the tour table
in_future	255	varchar	In future tours descrition
In_progress	255	varchar	Current tours description
completed	255	varchar	Completed tours decription

Tour_Type

Field name	Field size	Data type	description
Tour_ID		bigint	Tour ID of the tour table
lanka_tours_des	255	varchar	Tour made by lanka_tours description
guest_tour_des	255	varchar	Tour made customer choices description

Vehicle

Field name	Field size	Data type	description
Vehicle_no		bigint	Vehicle number of vehicle table
tour_distance	255	varchar	distance of tour
route_description	255	varchar	Route description of tour
rate_per_km	(5,2)	decimal	Rate _per_km for tour

Vehicle_Own

Field name	Field size	Data type	description
Vehicle_no		bigint	Vehicle number of vehicle table
rented_vehicle	45	varchar	Tour vehicle rented description
lanka_tours_vehicle	45	varchar	Lanka tours vehicle description

Vehicle_Type

Field name	Field size	Data type	description
Vehicle_no		bigint	Vehicle number of vehicle table
car	45	varchar	Vehicle type using for tour
van	45	varchar	Vehicle type using for tour
bus	45	varchar	Vehicle type using for tour
jeep	45	varchar	Vehicle type using for tour

Create Table Statements

Customer Table

```
create table CUSTOMER(
cus_ID bigint not null,
cus_name varchar(255),
gender varchar(1),
nationality varchar(45),
email varchar(250),
fax_no int,
contact_no int);
```

Cus_Address Table

```
create table CUS_ADDRESS(
cus_ID bigint not null,
post_box_no int,
street varchar(45),
city varchar(50),
state varchar(50),
country varchar(50));
```

Cus_Id_Type Table

```
create table CUS_ID_TYPE(
cus_ID bigint not null,
NIC varchar(10),
DL_no varchar(8),
passport varchar(8));
```

Cus_Status Table

```
create table CUS_STATUS(
cus_ID bigint not null,
old_cus varchar(45)
current_cus varchar(45));
```

Employee Table

```
create table EMPLOYEE(
emp_ID bigint not null,
emp_name varchar(255),
gender varchar(1),
address varchar(255),
salary int);
```

Emp_Driver Table

```
create table EMP_DRIVER(
emp_ID bigint not null,
DL_no varchar(8),
special_allowance_driver int,
route_schedule varchar(255));
```

Emp_Guide Table

```
create table EMP_GUIDE(
emp_ID bigint not null,
guide_license varchar(45),
guide_schedule varchar(255),
special_allowance_guide int);
```

Emp_Receptionist Table

```
create table EMP_RECEPTIONIST(
emp_ID bigint not null,
it_qualification varchar(255));
```

Employee_Customer Table

```
Create table EMPLOYEE_CUSTOMER(
emp_ID bigint not null,
cus_ID bigint not null,
special_tour_description varchar(255);
special_tour_date date);
```

Employee_Contact Table

```
create table  EMPLOYEE_CONTACT(
emp_ID bigint not null,
emp_contact_no int);
```

Itinery Table

```
create table ITINERY(
itinery_ID bigint not null,
tour_date date);
```

Itinery_Meal Table

```
create table ITINERY_MEAL(
itinery_ID bigint not null,
hotel_meal varchar(255),
resturant varchar(255),
personal_place varchar(255));
```

Itinery_Place_Accomodation Table

```
create table ITINERY_PLACE_ACCOMODATION(
itinery_ID bigint not null,
private_rent varchar(255),
hotel_place varchar(255),
company_rent varchar(255));
```

Itinery_Place_Visited Table

```
create table ITINERY_PLACES_VISITED(
itinery_ID bigint not null,
places_visited varchar(255));
```

Itinery_Special_Activity Table

```
create table ITINERY_SPECIAL_ACTIVITY(
itinery_ID bigint not null,
special_activity  varchar(255));
```

Payment Table

```
create table PAYMENT(
pay_ID bigint not null,
total_pay_recipt varchar(45),
advance_pay_recipt varchar(45),
total_pay_date date,
advance_pay_date date);
```

Pay_Customer Table

```
Create table PAY_CUSTOMER(
pay_ID bigint not null,
cus_ID bigint not null,
```

Pay_Type Table

```
Create table PAY_TYPE(
pay_ID bigint not null,
bank varchar(45),
cash varchar(45),
card_pay varchar(45));
```

Reservation Table

```
create table RESERVATION(
res_ID bigint not null,
emp_ID bigint not null,
cus_ID bigint not null,
res_date date);
```

Reservation_Customer Table

```
create table RESERVATION_CUSTOMER(
res_ID bigint not null,
cus_ID bigint not null,
res_cus_name varchar(255),
constraint PK_Reservation_Cus primary key (res_ID,cus_ID));
```

Reservation_Employee Table

```
create table RESERVATION_EMPLOYEE(
res_ID bigint not null,
emp_ID bigint not null,
res_emp_name varchar(255),
constraint PK_Reservation_Emp primary key (res_ID,emp_ID));
```

Reservation_Contact Table

```
create table RESERVATION_CONTACT(
res_ID bigint not null,
res_cus_contact_no int);
```

Tour Table

```
create table TOUR(
tour_ID bigint not null,
tour_start_date date,
tour_end_date date);
```

Tour_Location Table

```
create table TOUR_LOCATION(
tour_ID bigint not null,
location_pickup_participant varchar(255),
location_drop_participant varchar(255));
```

Tour_Participant Table

```
create table TOUR_PARTICIPANT(
tour_ID bigint not null,
list_of_participant varchar(255));
```

Tour_Status Table

```
create table TOUR_STATUS(
tour_ID bigint not null,
in_future varchar(255),
in_progress varchar(255),
completed varchar(255));
```

Tour_Type Table

```
create table TOUR_TYPE(
tour_ID bigint not null,
lanka_tours_des varchar(255),
guest_tour_des varchar(255));
```

Vehicle Table

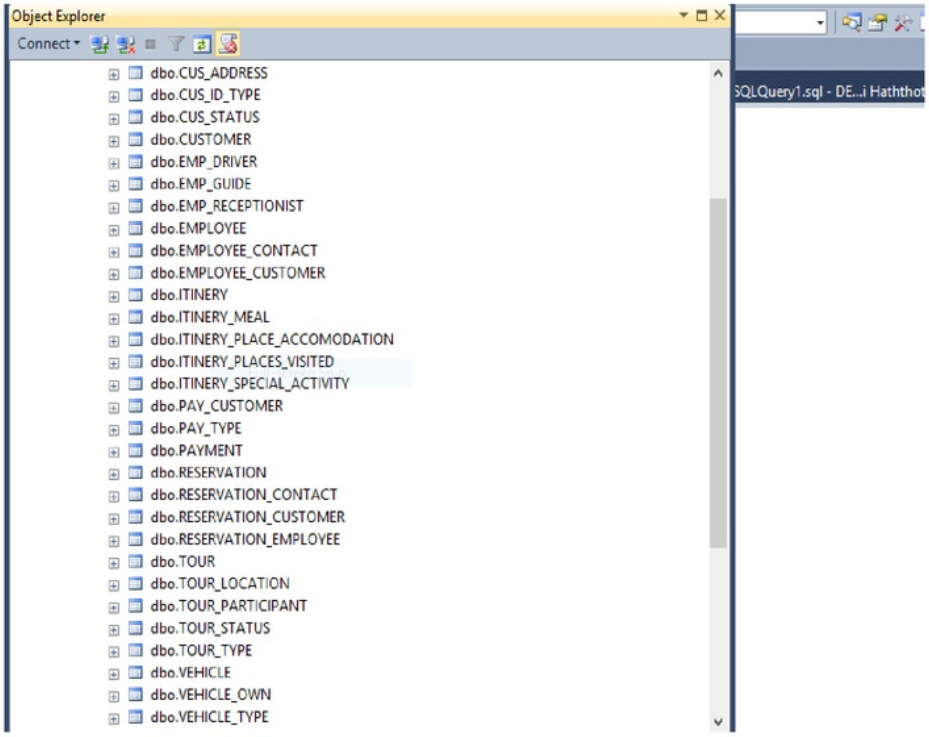
```
create table VEHICLE(
vehicle_NO bigint not null,
tour_distance varchar(255),
route_description varchar(255),
rate_per_km decimal(5,2));
```

Vehicle_Own Table

```
create table VEHICLE_OWN(
vehicle_NO bigint not null,
rented_vehicle varchar(45),
lanka_tours_vehicle varchar(45));
```

Vehicle_Type Table

```
create table VEHICLE_TYPE(
vehicle_NO bigint not null,
car varchar(45),
van varchar(45),
bus varchar(45),
jeep varchar(45));
```


Object Explorer
Connect
dbo.CUS_ADDRESS
dbo.CUS_ID_TYPE
dbo.CUS_STATUS
dbo.CUSTOMER
dbo.EMP_DRIVER
dbo.EMP_GUIDE
dbo.EMP_RECEPTIONIST
dbo.EMPLOYEE
dbo.EMPLOYEE_CONTACT
dbo.EMPLOYEE_CUSTOMER
dbo.ITINERY
dbo.ITINERY_MEAL
dbo.ITINERY_PLACE_ACCOMODATION
dbo.ITINERY_PLACES_VISITED
dbo.ITINERY_SPECIAL_ACTIVITY
dbo.PAY_CUSTOMER
dbo.PAY_TYPE
dbo.PAYMENT
dbo.RESERVATION
dbo.RESERVATION_CONTACT
dbo.RESERVATION_CUSTOMER
dbo.RESERVATION_EMPLOYEE
dbo.TOUR
dbo.TOUR_LOCATION
dbo.TOUR_PARTICIPANT
dbo.TOUR_STATUS
dbo.TOUR_TYPE
dbo.VEHICLE
dbo.VEHICLE_OWN
dbo.VEHICLE_TYPE
SQLQuery1.sql - DE...i Haththot

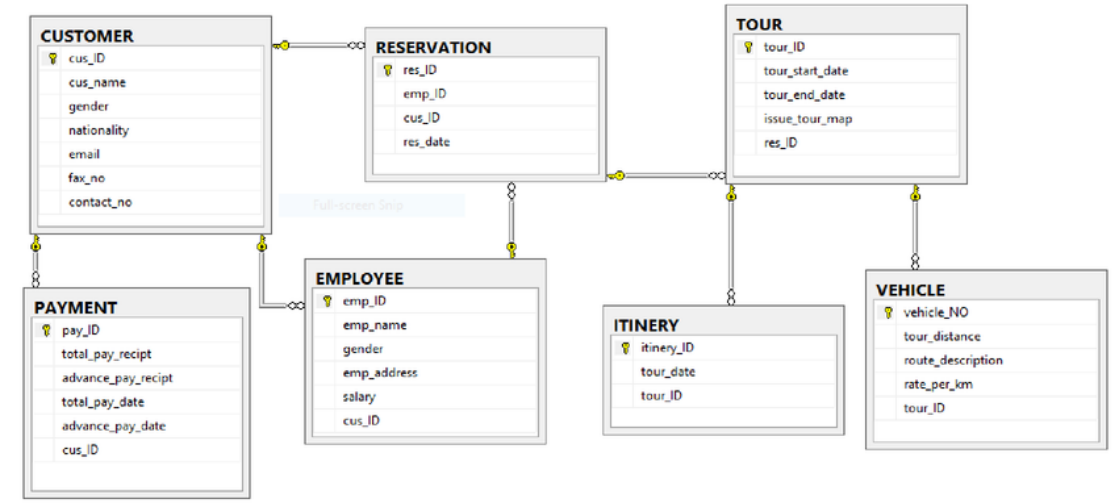
CONSTRAINTS

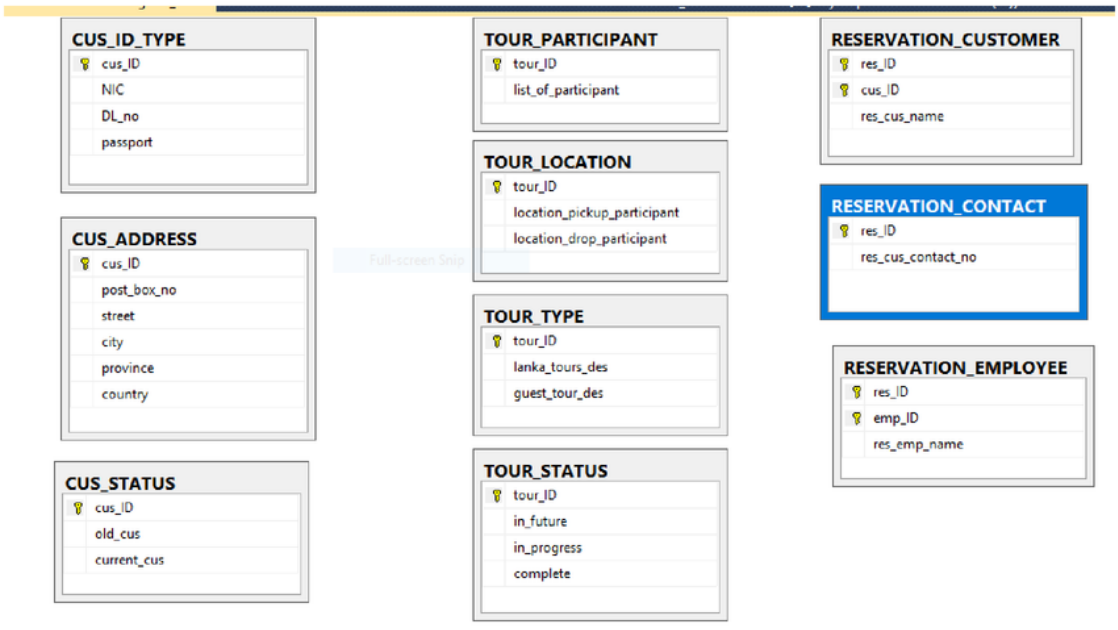
Foreign key constraints

4

```
ALTER TABLE EMPLOYEE
ADD FOREIGN KEY (cus_ID) REFERENCES CUSTOMER(cus_ID);

ALTER TABLE ITINERY
ADD FOREIGN KEY (tour_ID) REFERENCES  TOUR(tour_ID);

ALTER TABLE PAYMENT
ADD FOREIGN KEY (cus_ID) REFERENCES CUSTOMER(cus_ID);

ALTER TABLE RESERVATION
ADD FOREIGN KEY (emp_ID) REFERENCES EMPLOYEE(emp_ID);

ALTER TABLE  TOUR
ADD FOREIGN KEY (res_ID) REFERENCES RESERVATION(res_ID);

ALTER TABLE  VEHICLE
ADD FOREIGN KEY (tour_ID) REFERENCES TOUR(tour_ID);

ALTER TABLE RESERVATION
ADD FOREIGN KEY (cus_ID) REFERENCES CUSTOMER(cus_ID);
```

Database Diagram





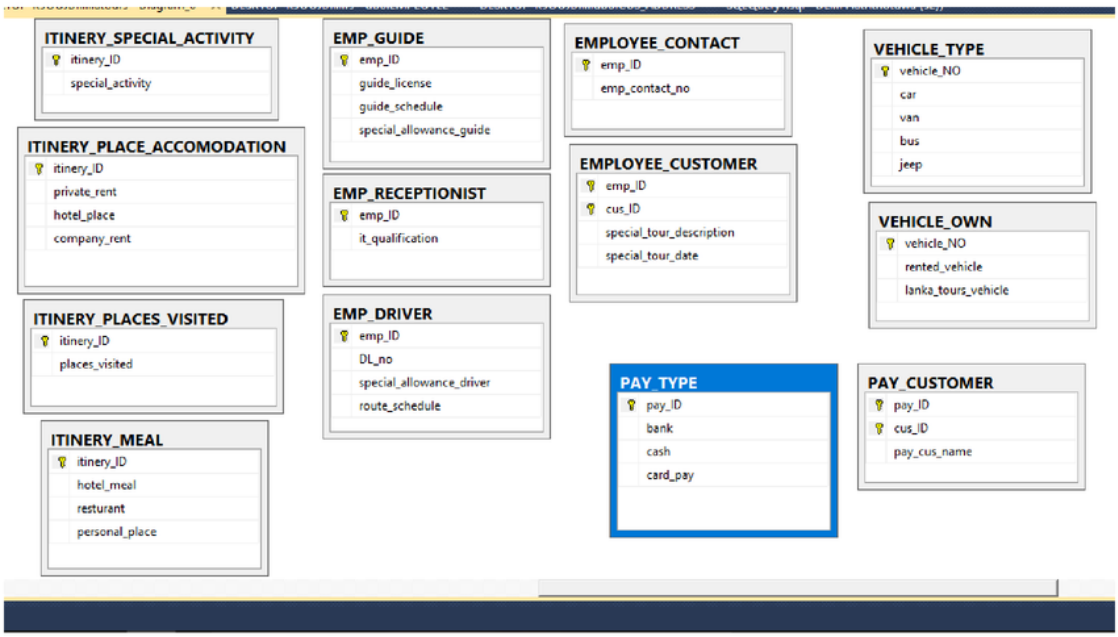
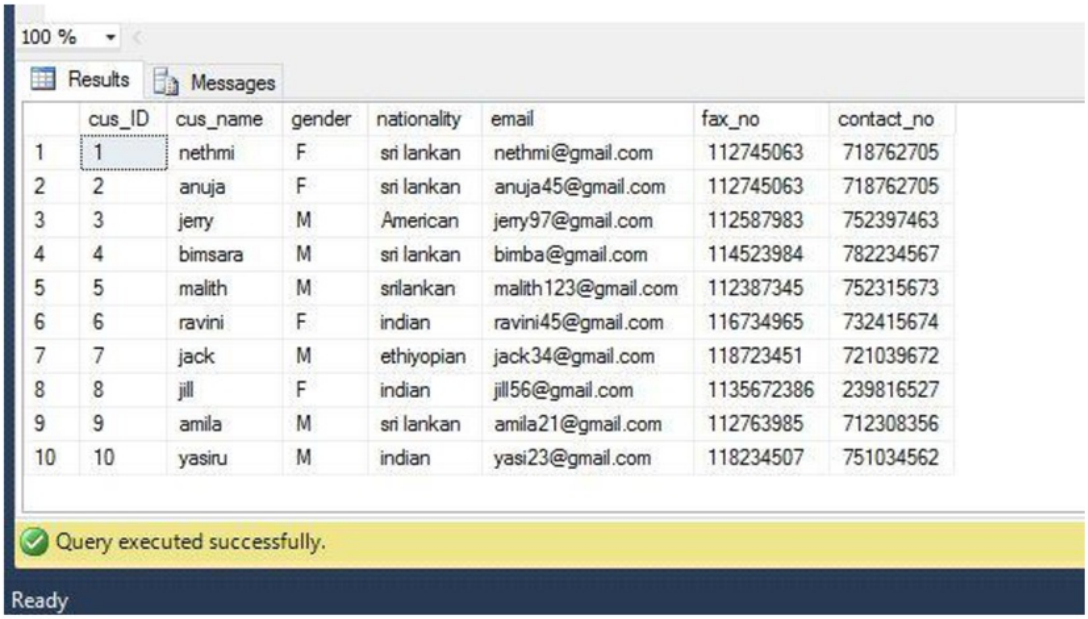

ITINERY_SPECIAL_ACTIVITY
itinery_ID
special_activity
ITINERY_PLACE_ACCOMODATION
itinery_ID
private_rent
hotel_place
company_rent
ITINERY_PLACES_VISITED
itinery_ID
places_visited
ITINERY_MEAL
itinery_ID
hotel_meal
resturant
personal_place
EMP_GUIDE
emp_ID
guide_license
guide_schedule
special_allowance_guide
EMP_RECEPTIONIST
emp_ID
it_qualification
EMP_DRIVER
emp_ID
DL_no
special_allowance_driver
route_schedule
EMPLOYEE_CONTACT
emp_ID
emp_contact_no
EMPLOYEE_CUSTOMER
emp_ID
cus_ID
special_tour_description
special_tour_date
PAY_TYPE
pay_ID
bank
cash
card_pay
VEHICLE_TYPE
vehicle_NO
car
van
bus
jeep
VEHICLE_OWN
vehicle_NO
rented_vehicle
lanka_tours_vehicle
PAY_CUSTOMER
pay_ID
cus_ID
pay_cus_name

Table with sample rocords

CUSTOMER Table



100 %

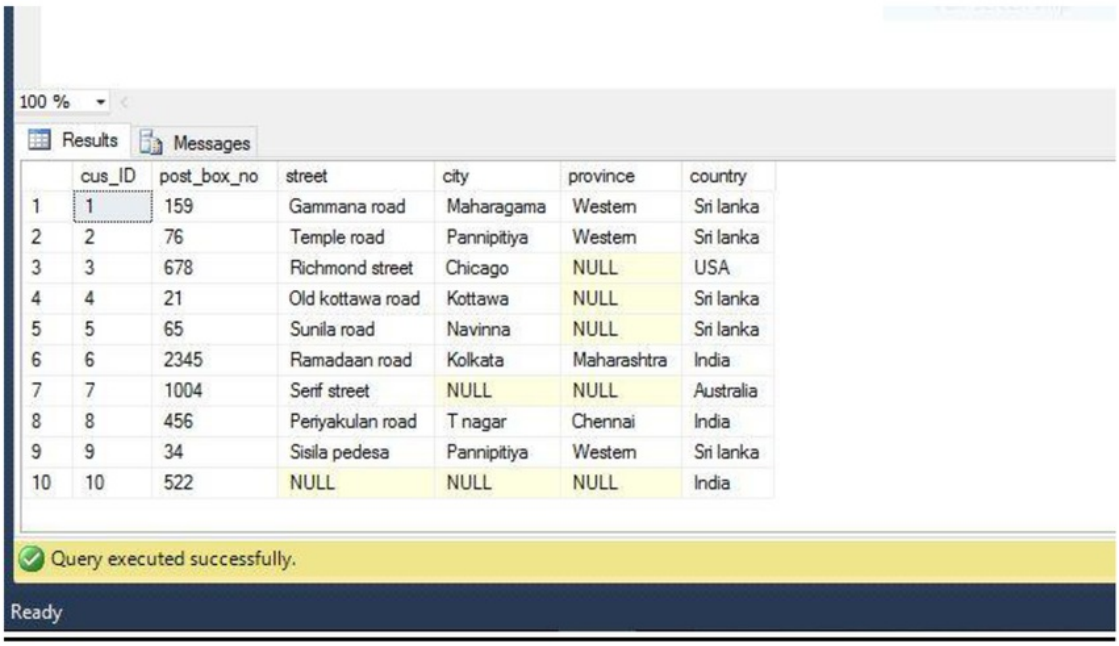
Results | Messages

	cus_ID	cus_name	gender	nationality	email	fax_no	contact_no
1	1	nethmi	F	sri lankan	nethmi@gmail.com	112745063	718762705
2	2	anuja	F	sri lankan	anuja45@gmail.com	112745063	718762705
3	3	jerry	M	American	jerry97@gmail.com	112587983	752397463
4	4	bimsara	M	sri lankan	bimba@gmail.com	114523984	782234567
5	5	malith	M	srilankan	malith123@gmail.com	112387345	752315673
6	6	ravini	F	indian	ravini45@gmail.com	116734965	732415674
7	7	jack	M	ethiyopian	jack34@gmail.com	118723451	721039672
8	8	jill	F	indian	jill56@gmail.com	1135672386	239816527
9	9	amila	M	sri lankan	amila21@gmail.com	112763985	712308356
10	10	yasiru	M	indian	yasi23@gmail.com	118234507	751034562

Query executed successfully.

Ready

CUS_ADDRESS Table



100 %

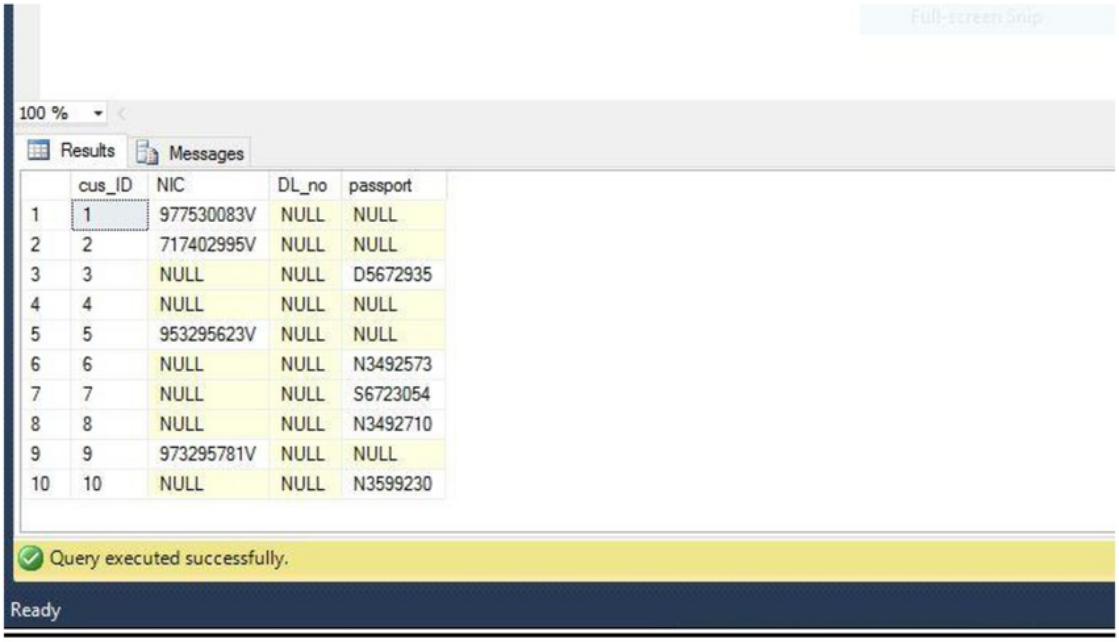
Results | Messages

	cus_ID	post_box_no	street	city	province	country
1	1	159	Gammana road	Maharagama	Western	Sri lanka
2	2	76	Temple road	Pannipitiya	Western	Sri lanka
3	3	678	Richmond street	Chicago	NULL	USA
4	4	21	Old kottawa road	Kottawa	NULL	Sri lanka
5	5	65	Sunila road	Navinna	NULL	Sri lanka
6	6	2345	Ramadaan road	Kolkata	Maharashtra	India
7	7	1004	Serif street	NULL	NULL	Australia
8	8	456	Periyakulan road	T nagar	Chennai	India
9	9	34	Sisila pedesa	Pannipitiya	Western	Sri lanka
10	10	522	NULL	NULL	NULL	India

Query executed successfully.

Ready

CUS_ID_TYPE Table



100 %

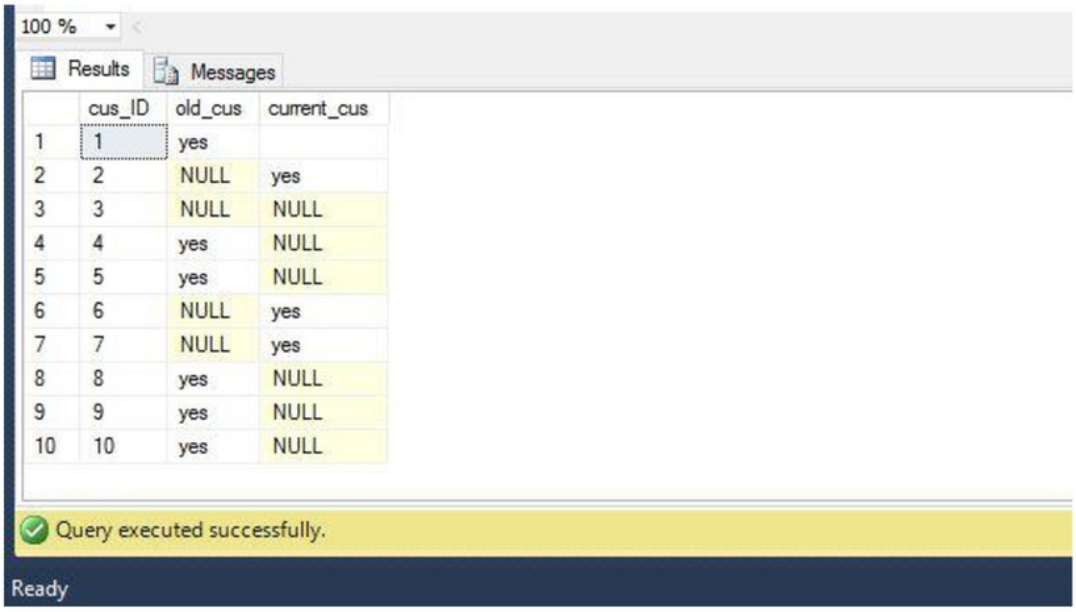
Results | Messages

	cus_ID	NIC	DL_no	passport
1	1	977530083V	NULL	NULL
2	2	717402995V	NULL	NULL
3	3	NULL	NULL	D5672935
4	4	NULL	NULL	NULL
5	5	953295623V	NULL	NULL
6	6	NULL	NULL	N3492573
7	7	NULL	NULL	S6723054
8	8	NULL	NULL	N3492710
9	9	973295781V	NULL	NULL
10	10	NULL	NULL	N3599230

Query executed successfully.

Ready

CUS_STATUS Table



100 %

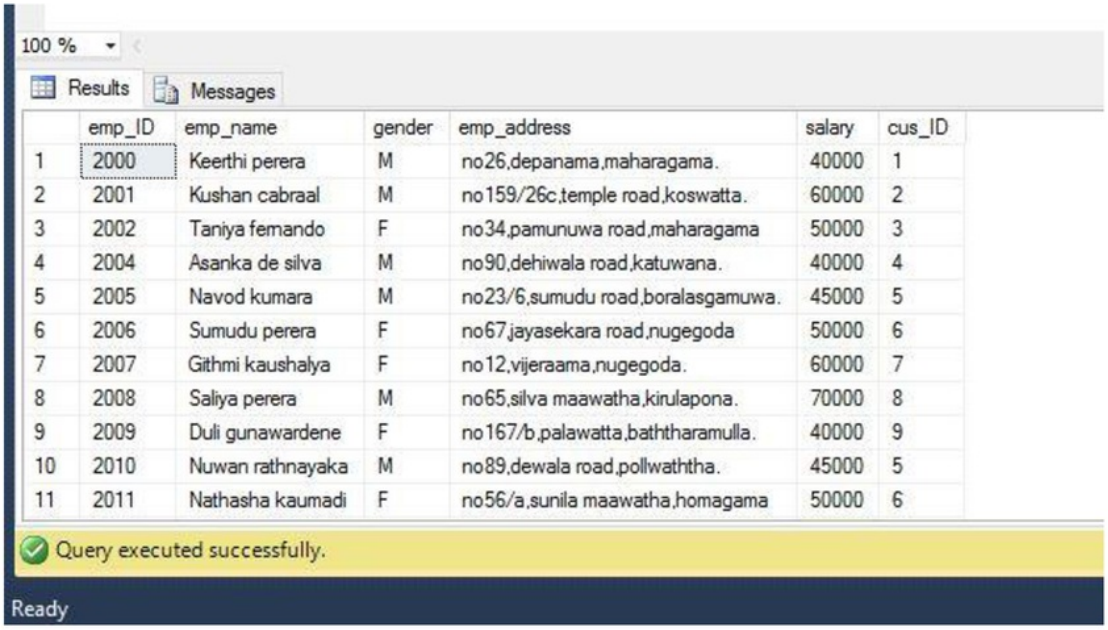
Results | Messages

	cus_ID	old_cus	current_cus
1	1	yes	
2	2	NULL	yes
3	3	NULL	NULL
4	4	yes	NULL
5	5	yes	NULL
6	6	NULL	yes
7	7	NULL	yes
8	8	yes	NULL
9	9	yes	NULL
10	10	yes	NULL

Query executed successfully.

Ready

EMPLOYEE Table



100 %

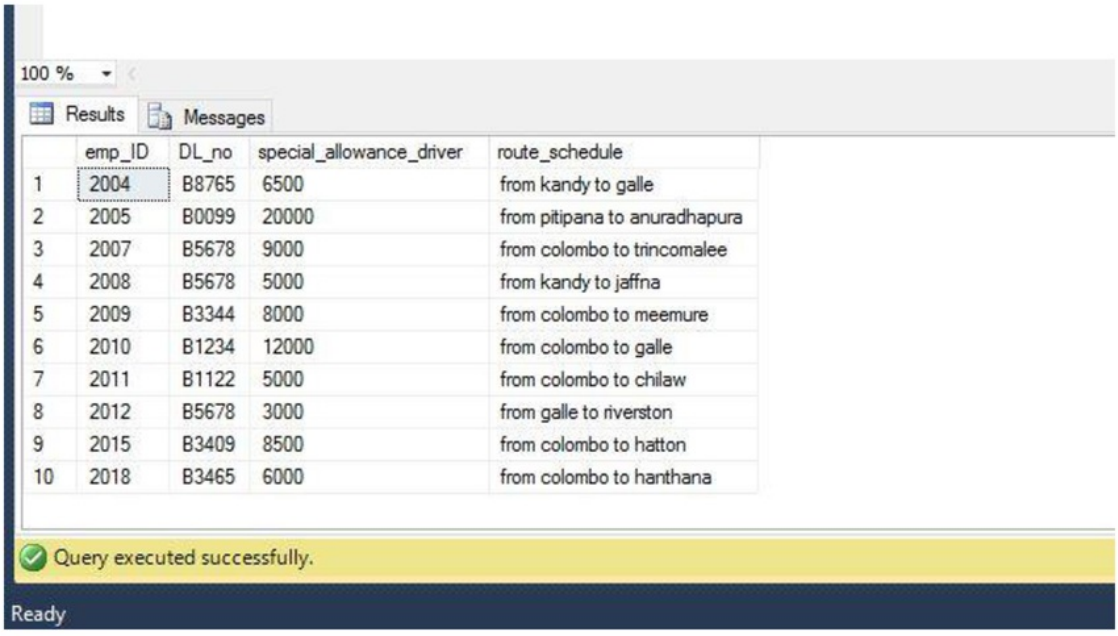
Results | Messages

	emp_ID	emp_name	gender	emp_address	salary	cus_ID
1	2000	Keerthi perera	M	no26,depanama,maharagama.	40000	1
2	2001	Kushan cabraal	M	no159/26c,temple road,koswatta.	60000	2
3	2002	Taniya fernando	F	no34,pamunuwa road,maharagama	50000	3
4	2004	Asanka de silva	M	no90,dehiwala road,katuwana.	40000	4
5	2005	Navod kumara	M	no23/6,sumudu road,boralasgamuwa.	45000	5
6	2006	Sumudu perera	F	no67,jayasekara road,nugegoda	50000	6
7	2007	Githmi kaushalya	F	no12,vijeraama,nugegoda.	60000	7
8	2008	Saliya perera	M	no65,silva maawatha,kirulapona.	70000	8
9	2009	Duli gunawardene	F	no167/b,palawatta,baththaramulla.	40000	9
10	2010	Nuwan rathnayaka	M	no89,dewala road,pollwaththa.	45000	5
11	2011	Nathasha kaumadi	F	no56/a,sunila maawatha,homagama	50000	6

Query executed successfully.

Ready

EMP_DRIVER Table



100 %

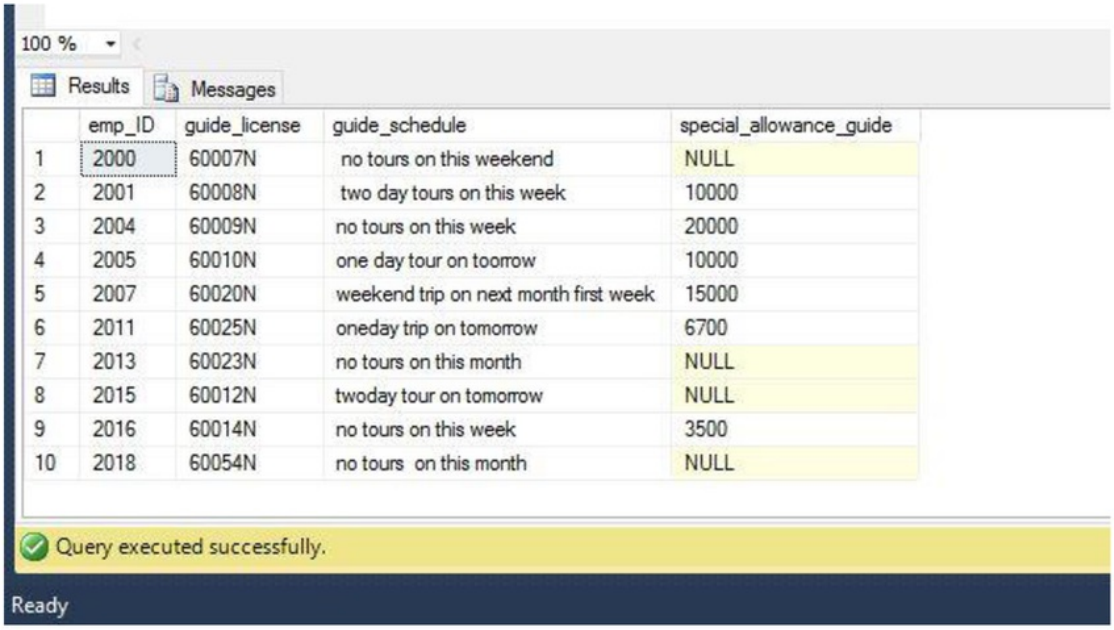
Results | Messages

	emp_ID	DL_no	special_allowance_driver	route_schedule
1	2004	B8765	6500	from kandy to galle
2	2005	B0099	20000	from pitipana to anuradhapura
3	2007	B5678	9000	from colombo to trincomalee
4	2008	B5678	5000	from kandy to jaffna
5	2009	B3344	8000	from colombo to meemure
6	2010	B1234	12000	from colombo to galle
7	2011	B1122	5000	from colombo to chilaw
8	2012	B5678	3000	from galle to riverston
9	2015	B3409	8500	from colombo to hatton
10	2018	B3465	6000	from colombo to hanthana

Query executed successfully.

Ready

EMP_GUIDE Table



100 %

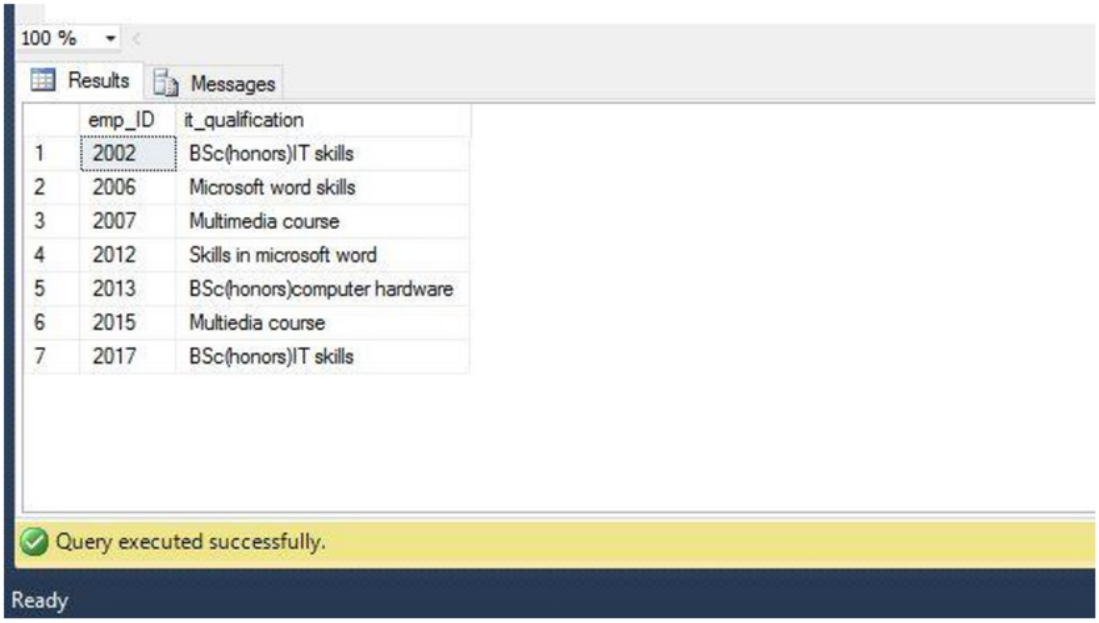
Results | Messages

	emp_ID	guide_license	guide_schedule	special_allowance_guide
1	2000	60007N	no tours on this weekend	NULL
2	2001	60008N	two day tours on this week	10000
3	2004	60009N	no tours on this week	20000
4	2005	60010N	one day tour on toorrow	10000
5	2007	60020N	weekend trip on next month first week	15000
6	2011	60025N	oneday trip on tomorrow	6700
7	2013	60023N	no tours on this month	NULL
8	2015	60012N	twoday tour on tomorrow	NULL
9	2016	60014N	no tours on this week	3500
10	2018	60054N	no tours on this month	NULL

Query executed successfully.

Ready

EMP_RECEPTIONIST Table



100 %

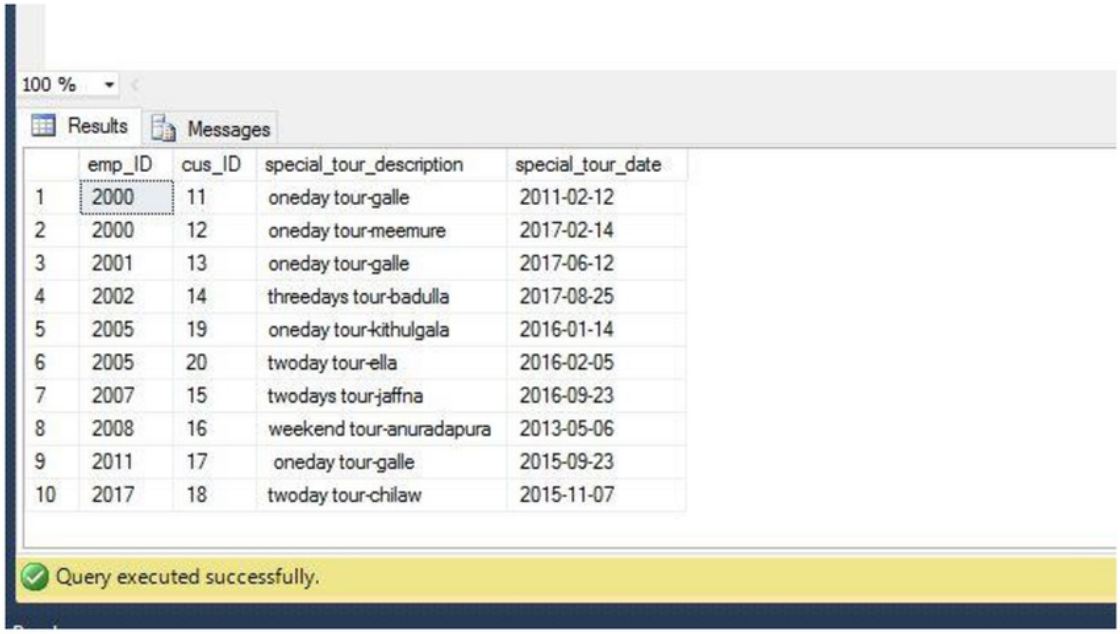
Results | Messages

	emp_ID	it_qualification
1	2002	BSc(honors)IT skills
2	2006	Microsoft word skills
3	2007	Multimedia course
4	2012	Skills in microsoft word
5	2013	BSc(honors)computer hardware
6	2015	Multiedia course
7	2017	BSc(honors)IT skills

Query executed successfully.

Ready

EMPLOYEE_CUSTOMER



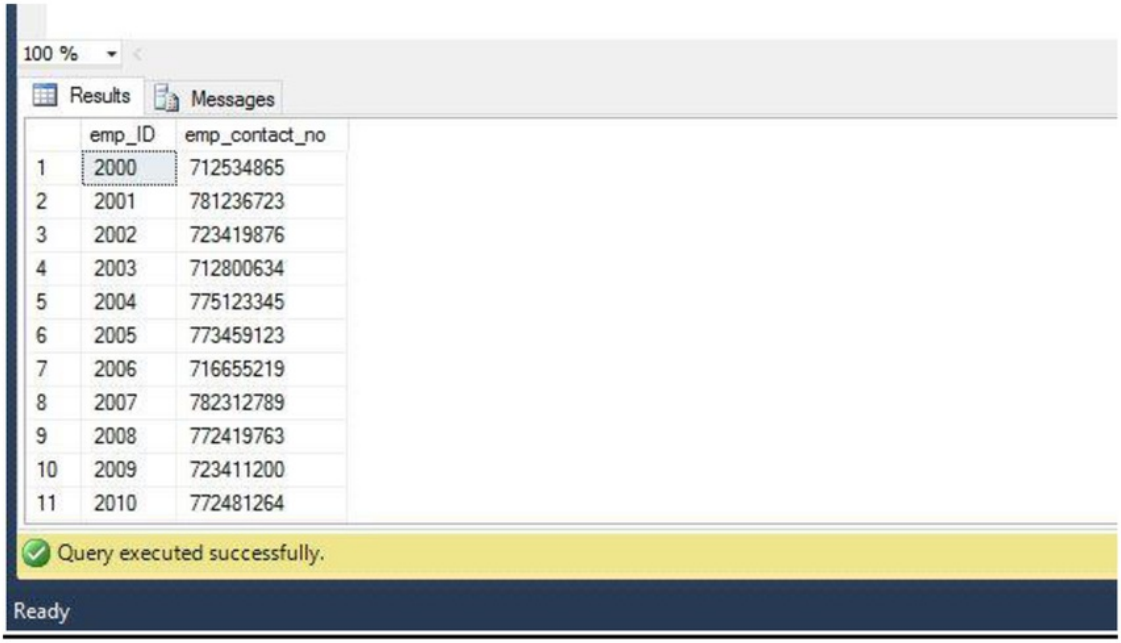
100 %

Results | Messages

	emp_ID	cus_ID	special_tour_description	special_tour_date
1	2000	11	oneday tour-galle	2011-02-12
2	2000	12	oneday tour-meemure	2017-02-14
3	2001	13	oneday tour-galle	2017-06-12
4	2002	14	threedays tour-badulla	2017-08-25
5	2005	19	oneday tour-kithulgala	2016-01-14
6	2005	20	twoday tour-ella	2016-02-05
7	2007	15	twodays tour-jaffna	2016-09-23
8	2008	16	weekend tour-anuradapura	2013-05-06
9	2011	17	oneday tour-galle	2015-09-23
10	2017	18	twoday tour-chilaw	2015-11-07

Query executed successfully.

EMPLOYEE_CONTACT



100 %

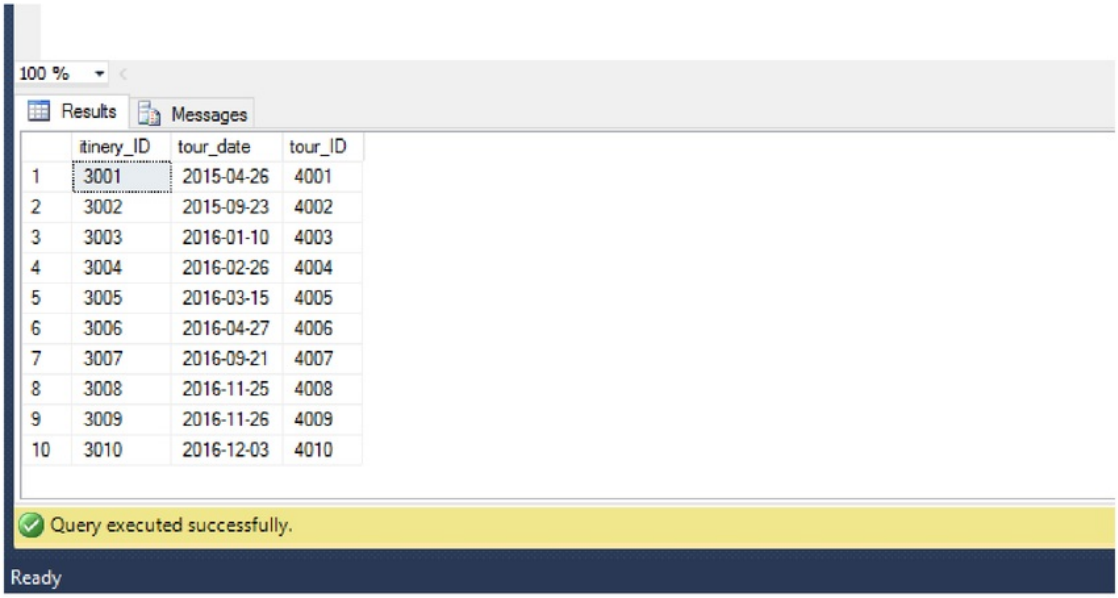
Results | Messages

	emp_ID	emp_contact_no
1	2000	712534865
2	2001	781236723
3	2002	723419876
4	2003	712800634
5	2004	775123345
6	2005	773459123
7	2006	716655219
8	2007	782312789
9	2008	772419763
10	2009	723411200
11	2010	772481264

Query executed successfully.

Ready

ITINERY Table



100 %

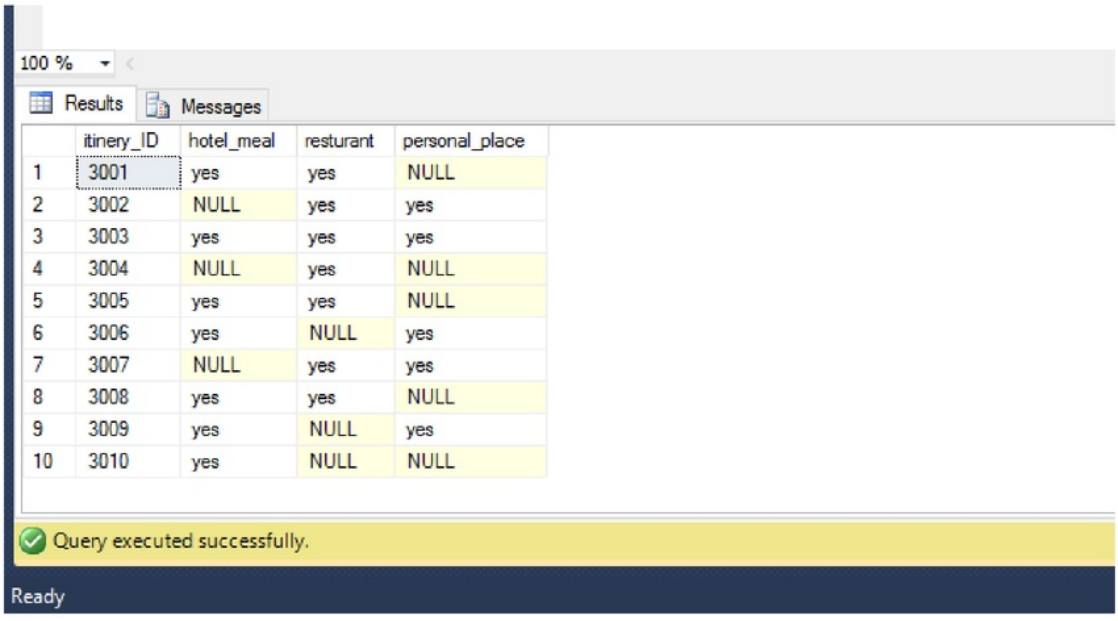
Results | Messages

	itinery_ID	tour_date	tour_ID
1	3001	2015-04-26	4001
2	3002	2015-09-23	4002
3	3003	2016-01-10	4003
4	3004	2016-02-26	4004
5	3005	2016-03-15	4005
6	3006	2016-04-27	4006
7	3007	2016-09-21	4007
8	3008	2016-11-25	4008
9	3009	2016-11-26	4009
10	3010	2016-12-03	4010

Query executed successfully.

Ready

ITINERY_MEAL Table



100 %

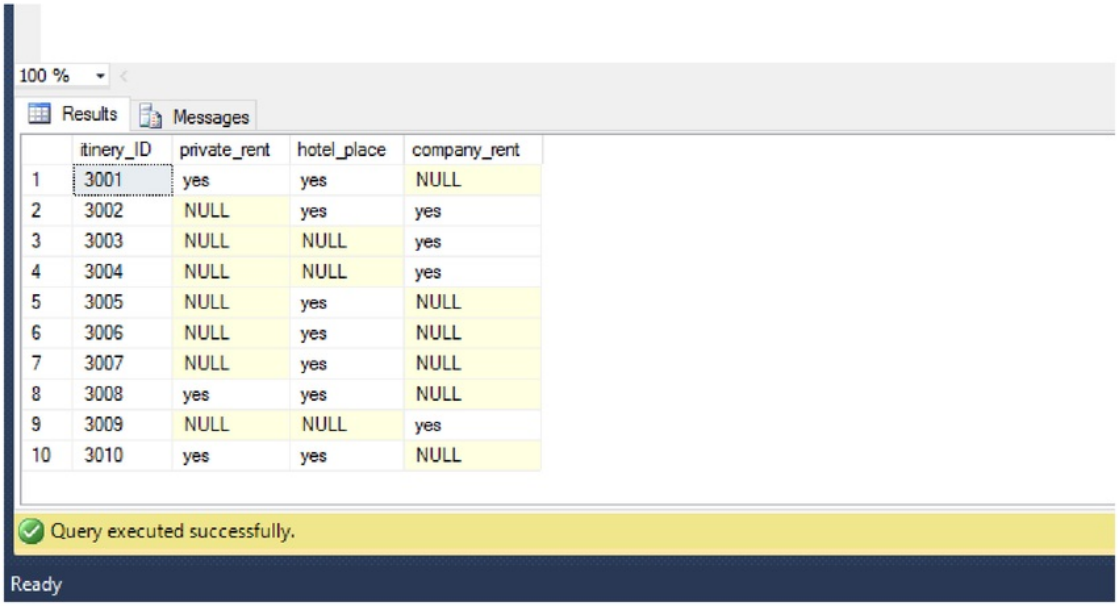
Results | Messages

	itinery_ID	hotel_meal	resturant	personal_place
1	3001	yes	yes	NULL
2	3002	NULL	yes	yes
3	3003	yes	yes	yes
4	3004	NULL	yes	NULL
5	3005	yes	yes	NULL
6	3006	yes	NULL	yes
7	3007	NULL	yes	yes
8	3008	yes	yes	NULL
9	3009	yes	NULL	yes
10	3010	yes	NULL	NULL

Query executed successfully.

Ready

ITINERY_PLACE_ACCOMODATION Table



100 %

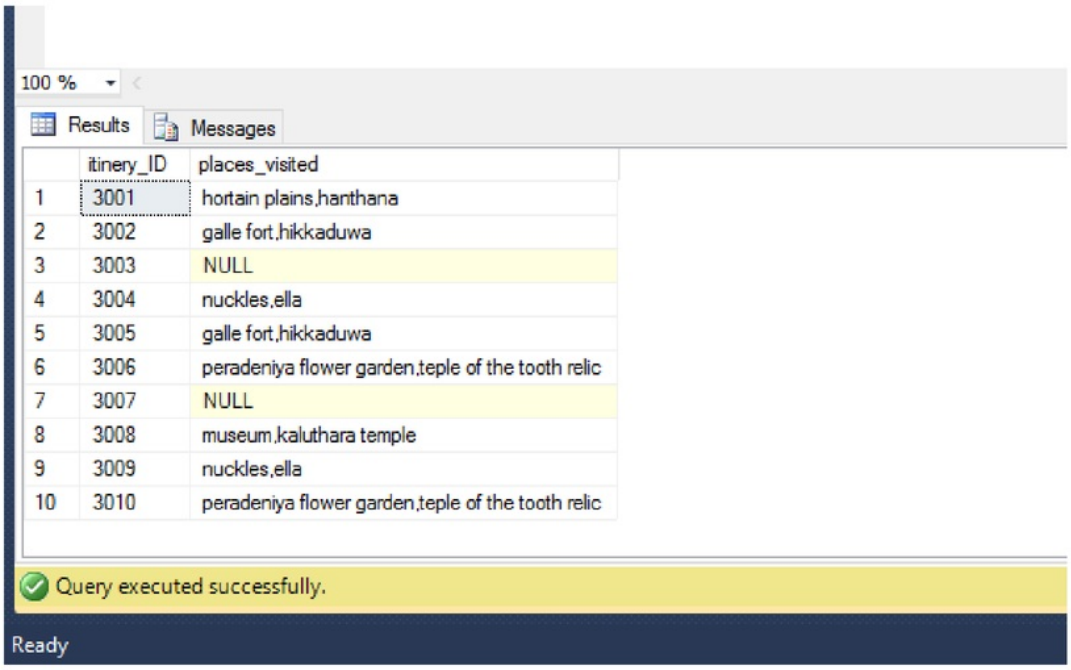
Results | Messages

	itinery_ID	private_rent	hotel_place	company_rent
1	3001	yes	yes	NULL
2	3002	NULL	yes	yes
3	3003	NULL	NULL	yes
4	3004	NULL	NULL	yes
5	3005	NULL	yes	NULL
6	3006	NULL	yes	NULL
7	3007	NULL	yes	NULL
8	3008	yes	yes	NULL
9	3009	NULL	NULL	yes
10	3010	yes	yes	NULL

Query executed successfully.

Ready

ITINERY_PLACES_VISITED Table



100 %

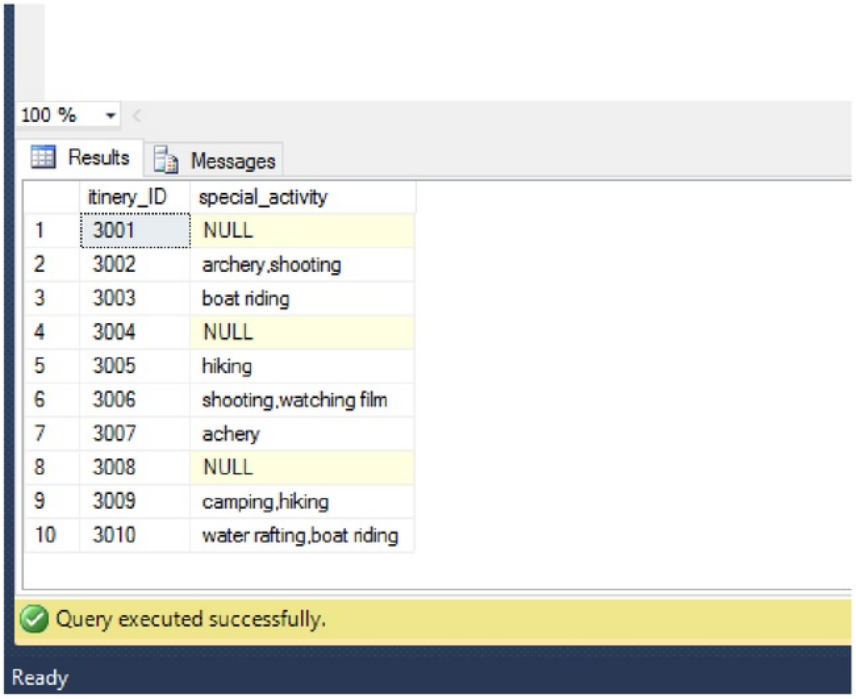
Results | Messages

	itinery_ID	places_visited
1	3001	hortain plains,hanthana
2	3002	galle fort,hikkaduwa
3	3003	NULL
4	3004	nuckles,ella
5	3005	galle fort,hikkaduwa
6	3006	peradeniya flower garden,teple of the tooth relic
7	3007	NULL
8	3008	museum,kaluthara temple
9	3009	nuckles,ella
10	3010	peradeniya flower garden,teple of the tooth relic

Query executed successfully.

Ready

ITINERY_SPECIAL_ACTIVITY Table



100 %

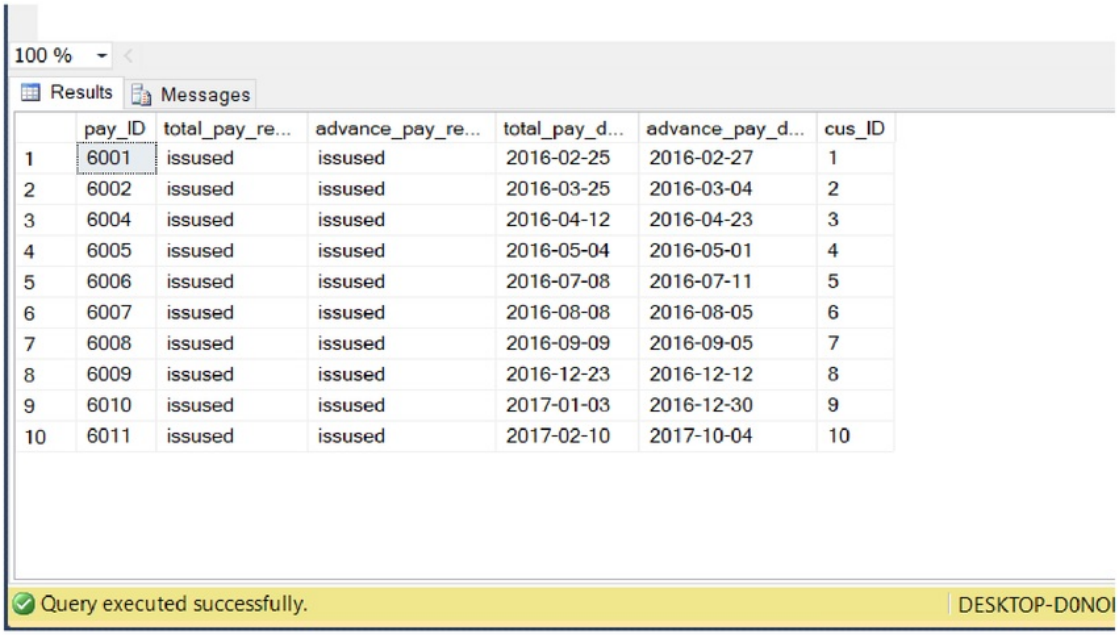
Results | Messages

	itinery_ID	special_activity
1	3001	NULL
2	3002	archery,shooting
3	3003	boat riding
4	3004	NULL
5	3005	hiking
6	3006	shooting,watching film
7	3007	achery
8	3008	NULL
9	3009	camping,hiking
10	3010	water rafting,boat riding

Query executed successfully.

Ready

PAYMENT Table



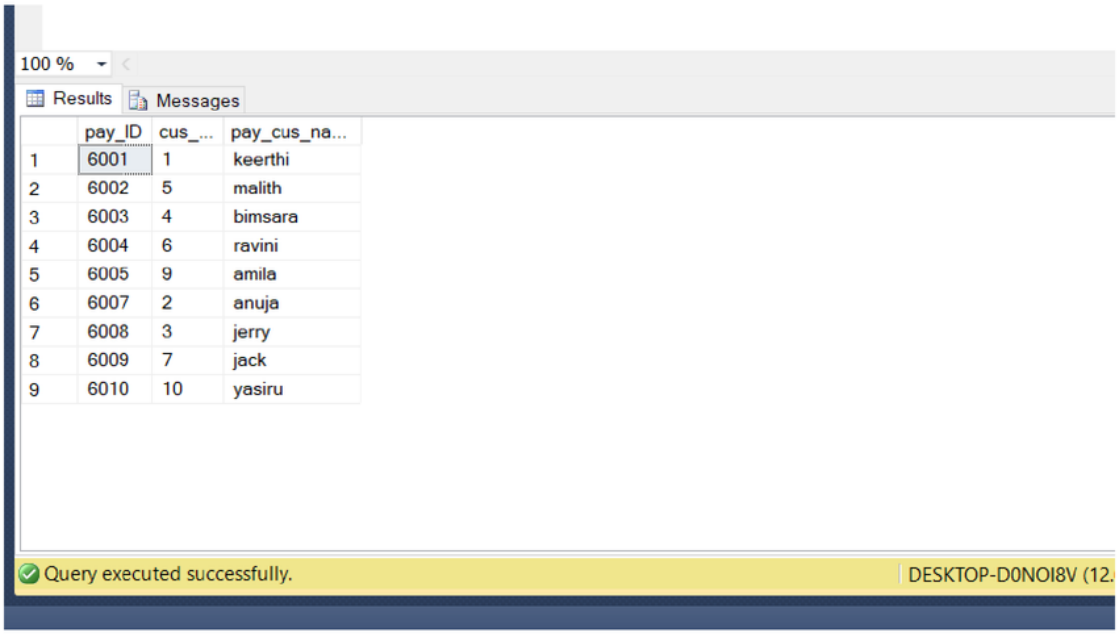
100 %

Results | Messages

	pay_ID	total_pay_re...	advance_pay_re...	total_pay_d...	advance_pay_d...	cus_ID
1	6001	issused	issused	2016-02-25	2016-02-27	1
2	6002	issused	issused	2016-03-25	2016-03-04	2
3	6004	issused	issused	2016-04-12	2016-04-23	3
4	6005	issused	issused	2016-05-04	2016-05-01	4
5	6006	issused	issused	2016-07-08	2016-07-11	5
6	6007	issused	issused	2016-08-08	2016-08-05	6
7	6008	issused	issused	2016-09-09	2016-09-05	7
8	6009	issused	issused	2016-12-23	2016-12-12	8
9	6010	issused	issused	2017-01-03	2016-12-30	9
10	6011	issused	issused	2017-02-10	2017-10-04	10

Query executed successfully. DESKTOP-D0NOI

PAY_CUSTOMER Table



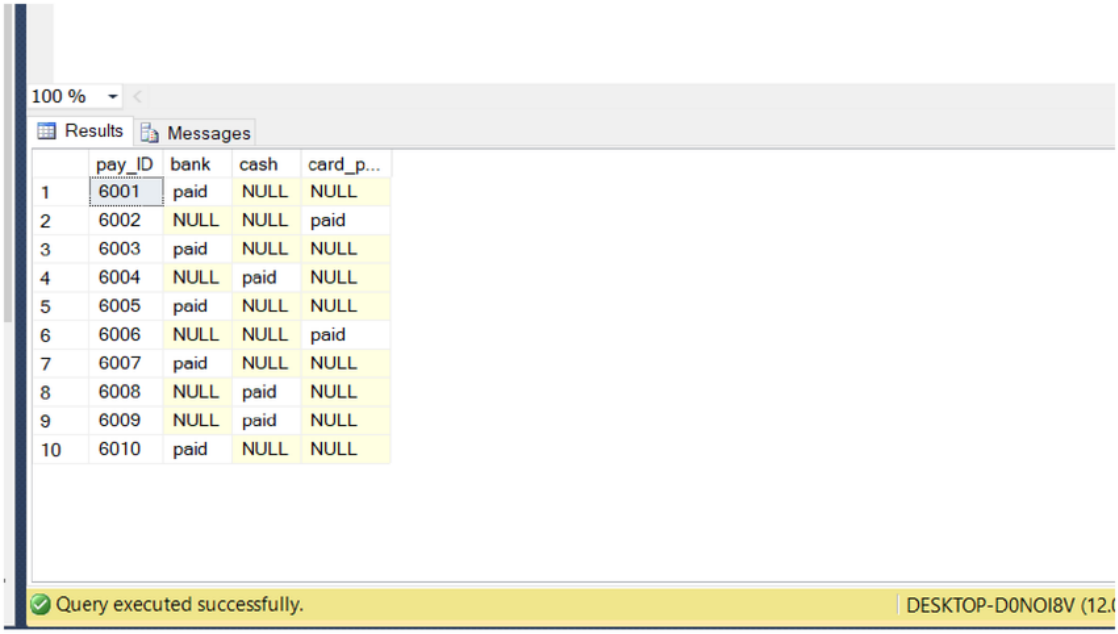
100 %

Results | Messages

	pay_ID	cus_...	pay_cus_na...
1	6001	1	keerthi
2	6002	5	malith
3	6003	4	bimsara
4	6004	6	ravini
5	6005	9	amila
6	6007	2	anuja
7	6008	3	jerry
8	6009	7	jack
9	6010	10	yasiru

Query executed successfully. DESKTOP-D0NOI8V (12.

PAY_TYPE Table



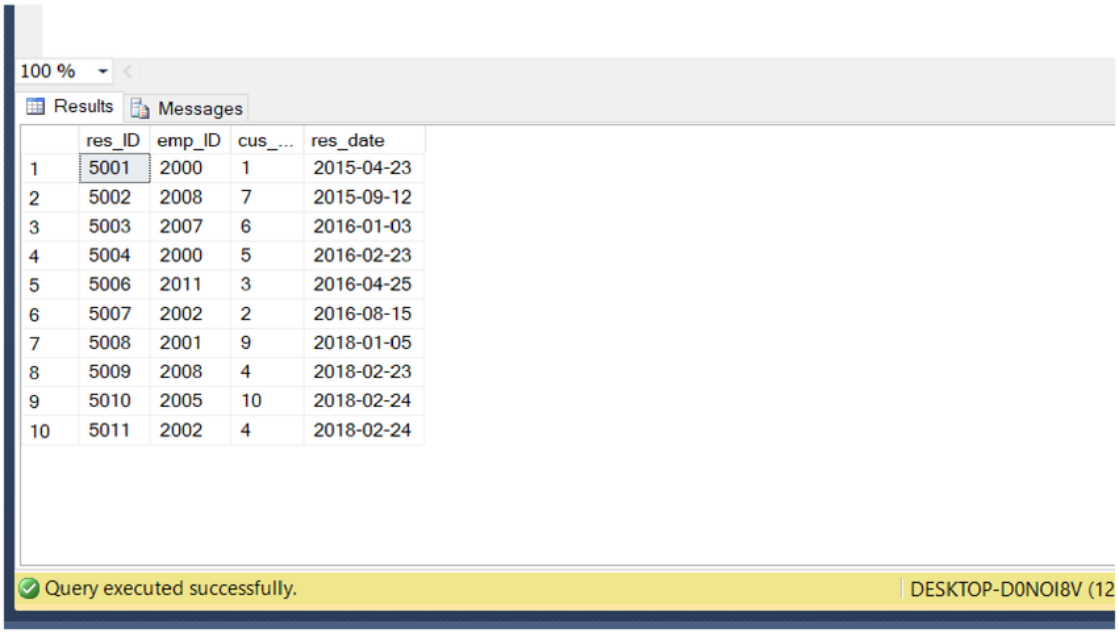
100 %

Results | Messages

	pay_ID	bank	cash	card_p...
1	6001	paid	NULL	NULL
2	6002	NULL	NULL	paid
3	6003	paid	NULL	NULL
4	6004	NULL	paid	NULL
5	6005	paid	NULL	NULL
6	6006	NULL	NULL	paid
7	6007	paid	NULL	NULL
8	6008	NULL	paid	NULL
9	6009	NULL	paid	NULL
10	6010	paid	NULL	NULL

Query executed successfully. DESKTOP-D0NOI8V (12.

RESERVATION Table



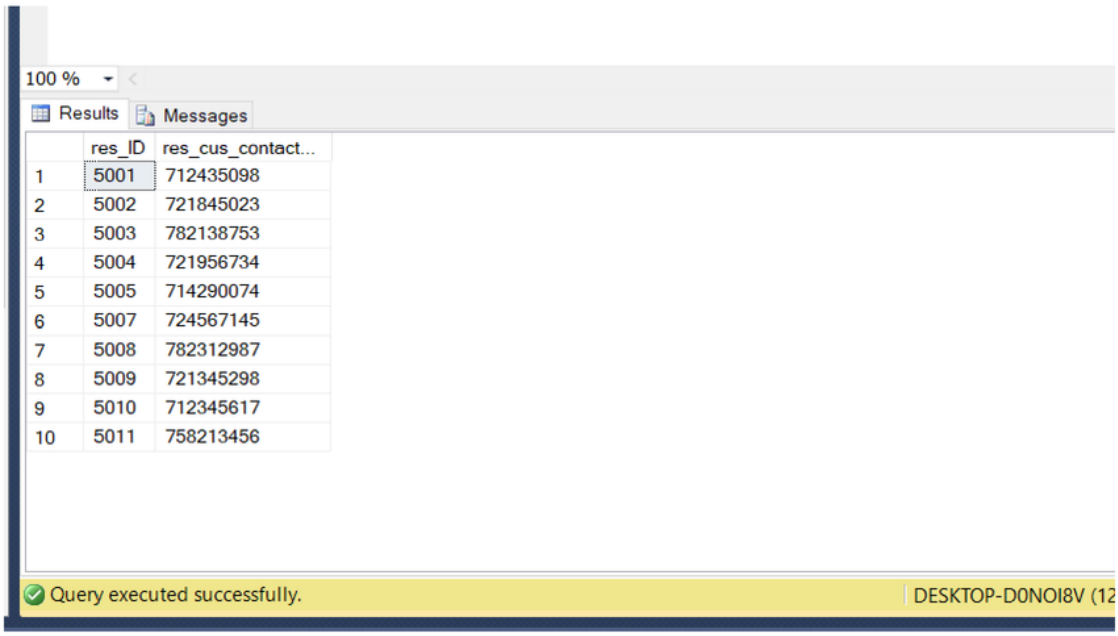
100 %

Results | Messages

	res_ID	emp_ID	cus_...	res_date
1	5001	2000	1	2015-04-23
2	5002	2008	7	2015-09-12
3	5003	2007	6	2016-01-03
4	5004	2000	5	2016-02-23
5	5006	2011	3	2016-04-25
6	5007	2002	2	2016-08-15
7	5008	2001	9	2018-01-05
8	5009	2008	4	2018-02-23
9	5010	2005	10	2018-02-24
10	5011	2002	4	2018-02-24

Query executed successfully. DESKTOP-D0NOI8V (12

RESERVATION_CONTACT Table



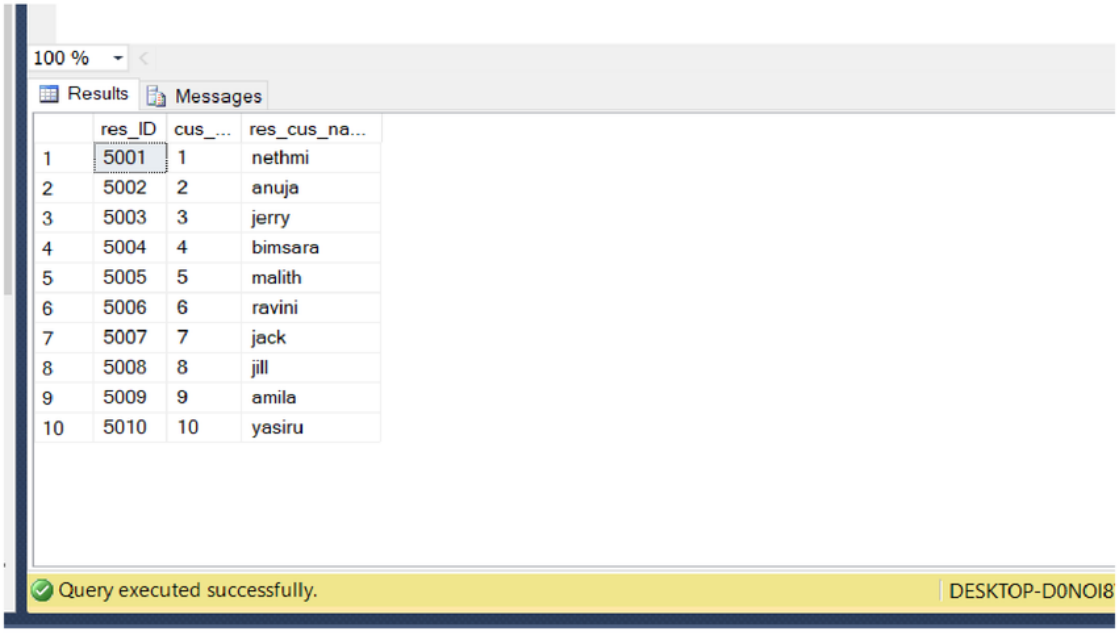
100 %

Results | Messages

	res_ID	res_cus_contact...
1	5001	712435098
2	5002	721845023
3	5003	782138753
4	5004	721956734
5	5005	714290074
6	5007	724567145
7	5008	782312987
8	5009	721345298
9	5010	712345617
10	5011	758213456

Query executed successfully. DESKTOP-D0NOI8V (12

RESERVATION_CUSTOMER Table



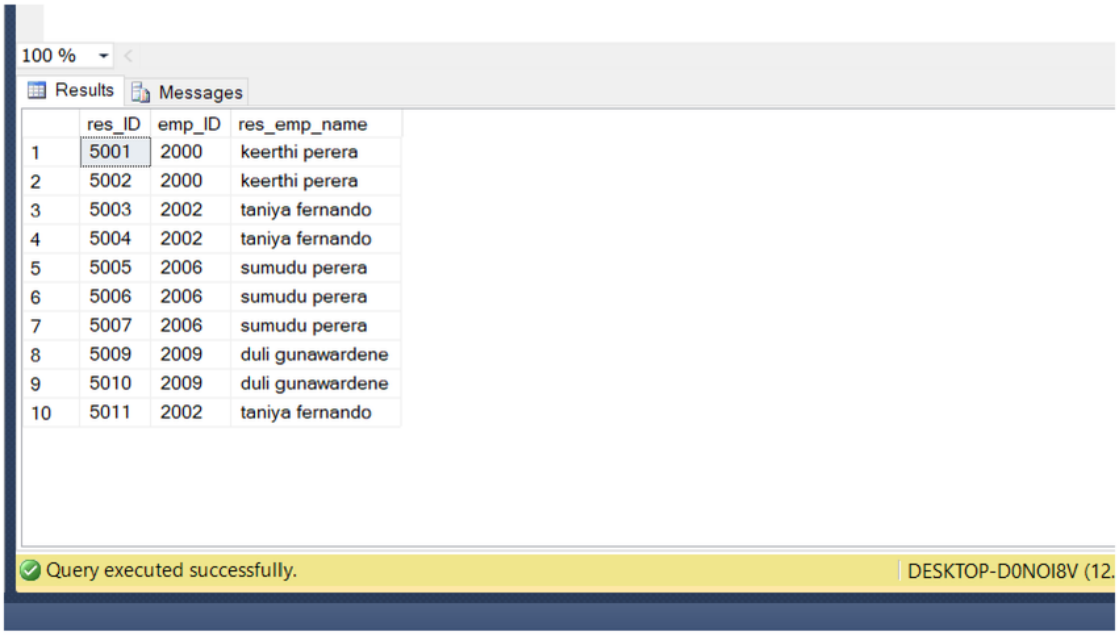
100 %

Results | Messages

	res_ID	cus_...	res_cus_na...
1	5001	1	nethmi
2	5002	2	anuja
3	5003	3	jerry
4	5004	4	bimsara
5	5005	5	malith
6	5006	6	ravini
7	5007	7	jack
8	5008	8	jill
9	5009	9	amila
10	5010	10	yasiru

Query executed successfully. DESKTOP-D0NOI8

RESERVATION_EMPLOYEE Table



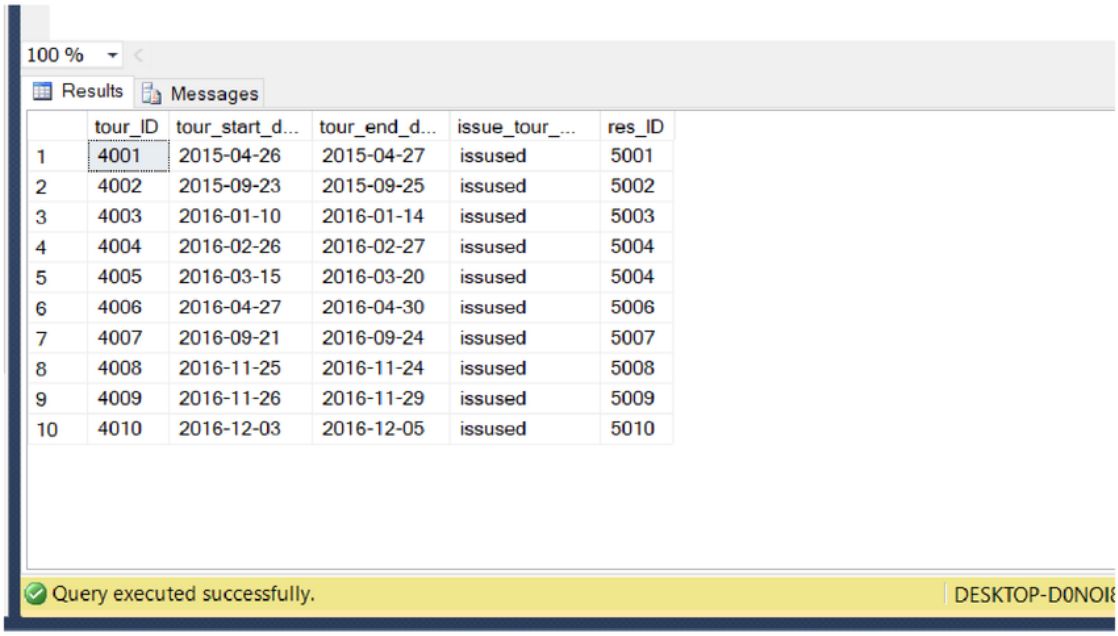
100 %

Results | Messages

	res_ID	emp_ID	res_emp_name
1	5001	2000	keerthi perera
2	5002	2000	keerthi perera
3	5003	2002	taniya fernando
4	5004	2002	taniya fernando
5	5005	2006	sumudu perera
6	5006	2006	sumudu perera
7	5007	2006	sumudu perera
8	5009	2009	duli gunawardene
9	5010	2009	duli gunawardene
10	5011	2002	taniya fernando

Query executed successfully. DESKTOP-D0NOI8V (12.

TOUR Table



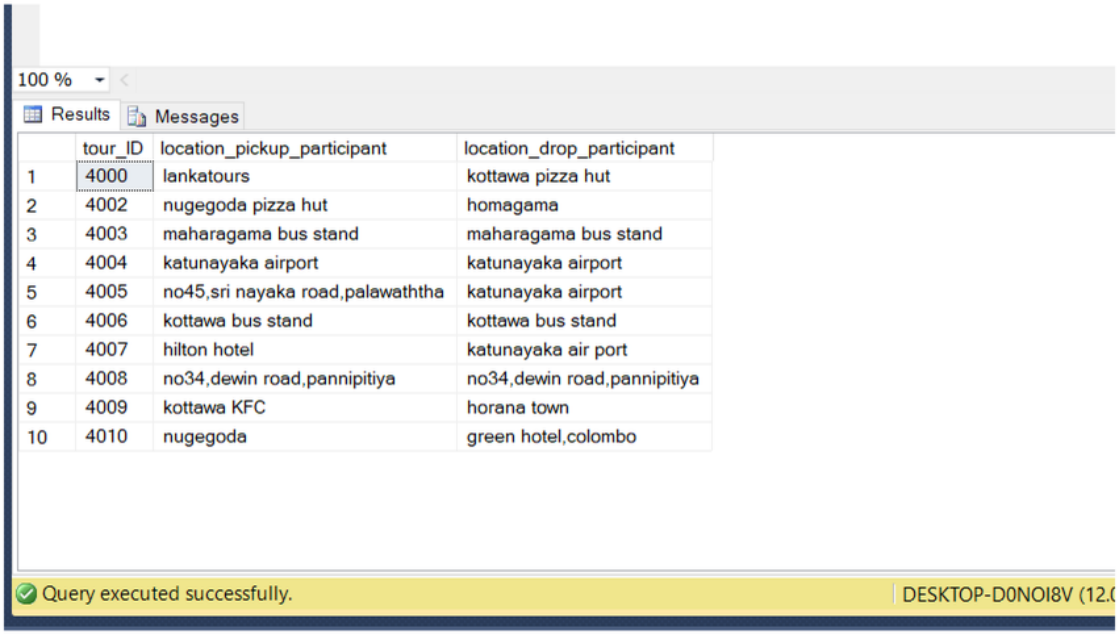
100 %

Results | Messages

	tour_ID	tour_start_d...	tour_end_d...	issue_tour_...	res_ID
1	4001	2015-04-26	2015-04-27	issused	5001
2	4002	2015-09-23	2015-09-25	issused	5002
3	4003	2016-01-10	2016-01-14	issused	5003
4	4004	2016-02-26	2016-02-27	issused	5004
5	4005	2016-03-15	2016-03-20	issused	5004
6	4006	2016-04-27	2016-04-30	issused	5006
7	4007	2016-09-21	2016-09-24	issused	5007
8	4008	2016-11-25	2016-11-24	issused	5008
9	4009	2016-11-26	2016-11-29	issused	5009
10	4010	2016-12-03	2016-12-05	issused	5010

Query executed successfully. DESKTOP-D0NOI

TOUR_LOCATION Table



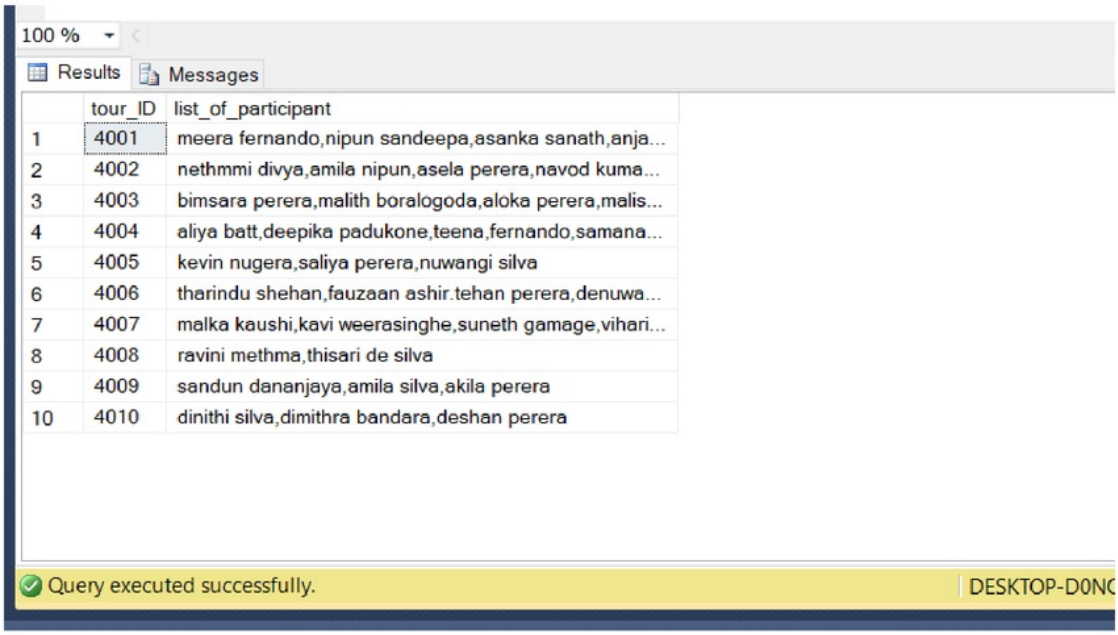
100 %

Results | Messages

	tour_ID	location_pickup_participant	location_drop_participant
1	4000	lankatours	kottawa pizza hut
2	4002	nugegoda pizza hut	homagama
3	4003	maharagama bus stand	maharagama bus stand
4	4004	katunayaka airport	katunayaka airport
5	4005	no45,sri nayaka road,palawaththa	katunayaka airport
6	4006	kottawa bus stand	kottawa bus stand
7	4007	hilton hotel	katunayaka air port
8	4008	no34,dewin road,pannipitiya	no34,dewin road,pannipitiya
9	4009	kottawa KFC	horana town
10	4010	nugegoda	green hotel,colombo

Query executed successfully. DESKTOP-D0NOI8V (12.

TOUR_PARTICIPANT Table



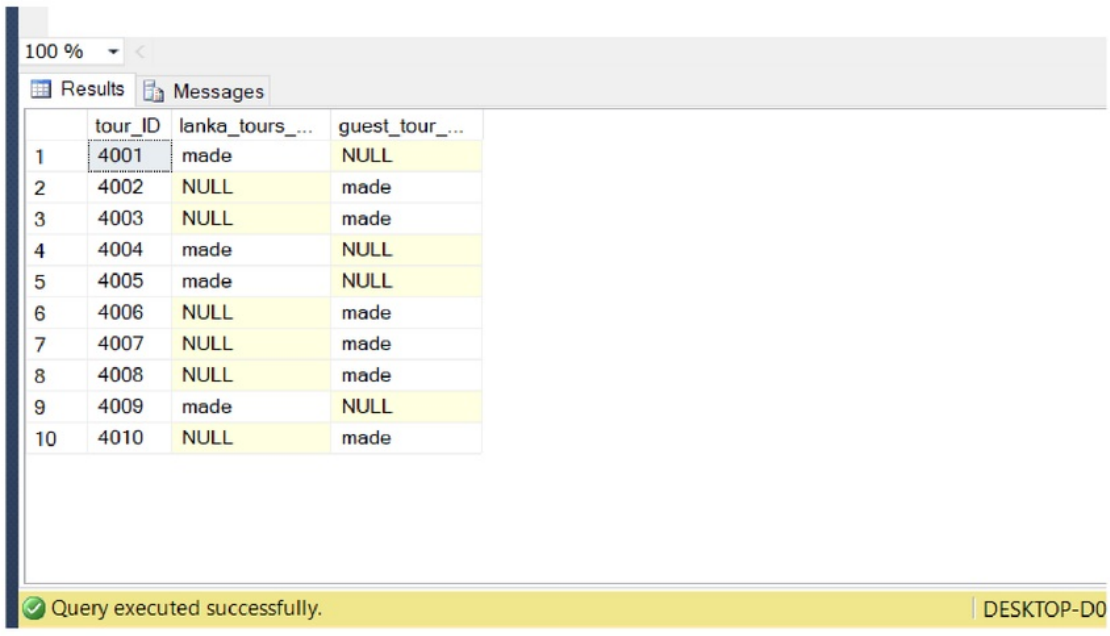
100 %

Results | Messages

	tour_ID	list_of_participant
1	4001	meera fernando,nipun sandeepa,asanka sanath,anja...
2	4002	nethmmi divya,amila nipun,asela perera,navod kuma...
3	4003	bimsara perera,malith boralogoda,aloka perera,malis...
4	4004	aliya batt,deepika padukone,teena,fernando,samana...
5	4005	kevin nugera,saliya perera,nuwangi silva
6	4006	tharindu shehan,fauzaan ashir.tehan perera,denuwa...
7	4007	malka kaushi,kavi weerasinghe,suneth gamage,vihari...
8	4008	ravini methma,thisari de silva
9	4009	sandun dananjaya,amila silva,akila perera
10	4010	dinithi silva,dimithra bandara,deshan perera

Query executed successfully. DESKTOP-D0NC

TOUR_TYPE Table



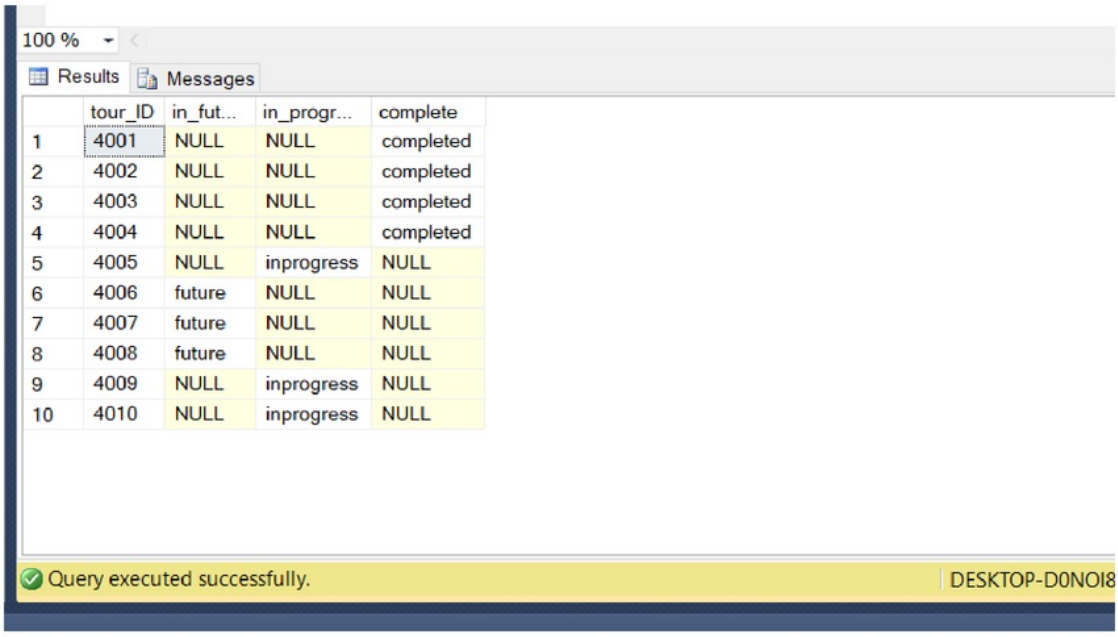
100 %

Results | Messages

	tour_ID	lanka_tours_...	guest_tour_...
1	4001	made	NULL
2	4002	NULL	made
3	4003	NULL	made
4	4004	made	NULL
5	4005	made	NULL
6	4006	NULL	made
7	4007	NULL	made
8	4008	NULL	made
9	4009	made	NULL
10	4010	NULL	made

Query executed successfully. DESKTOP-D0

TOUR_STATUS Table



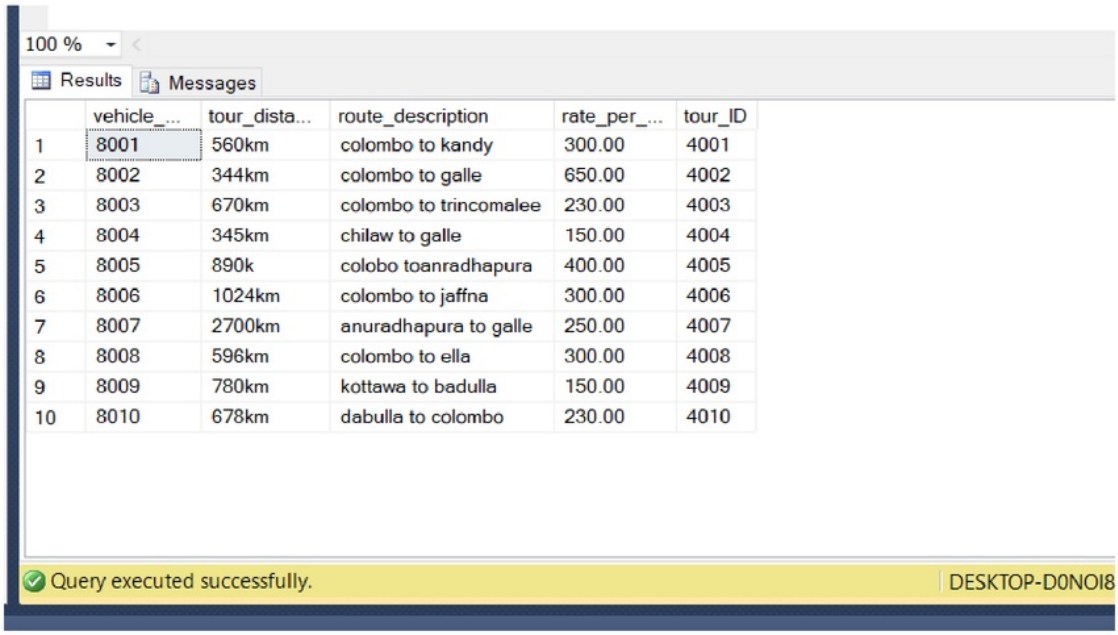
100 %

Results | Messages

	tour_ID	in_fut...	in_progr...	complete
1	4001	NULL	NULL	completed
2	4002	NULL	NULL	completed
3	4003	NULL	NULL	completed
4	4004	NULL	NULL	completed
5	4005	NULL	inprogress	NULL
6	4006	future	NULL	NULL
7	4007	future	NULL	NULL
8	4008	future	NULL	NULL
9	4009	NULL	inprogress	NULL
10	4010	NULL	inprogress	NULL

Query executed successfully. DESKTOP-D0NOI8

VEHICLE Table



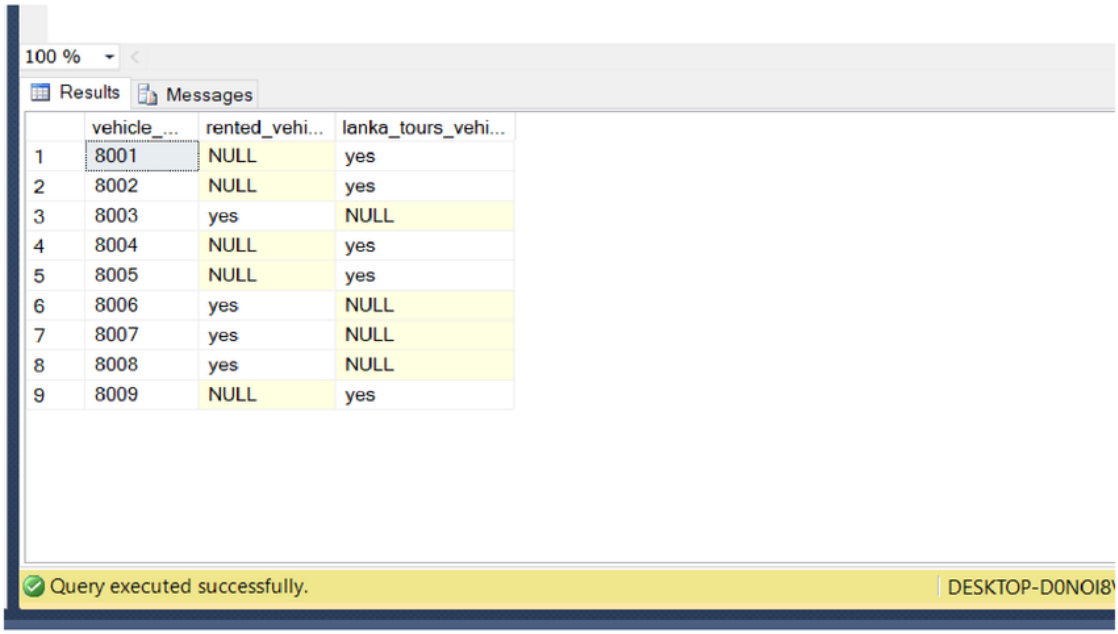
100 %

Results | Messages

	vehicle_...	tour_dista...	route_description	rate_per_...	tour_ID
1	8001	560km	colombo to kandy	300.00	4001
2	8002	344km	colombo to galle	650.00	4002
3	8003	670km	colombo to trincomalee	230.00	4003
4	8004	345km	chilaw to galle	150.00	4004
5	8005	890k	colobo toanradhapura	400.00	4005
6	8006	1024km	colombo to jaffna	300.00	4006
7	8007	2700km	anuradhapura to galle	250.00	4007
8	8008	596km	colombo to ella	300.00	4008
9	8009	780km	kottawa to badulla	150.00	4009
10	8010	678km	dabulla to colombo	230.00	4010

Query executed successfully. DESKTOP-D0NOI8

VEHICLE_OWN Table



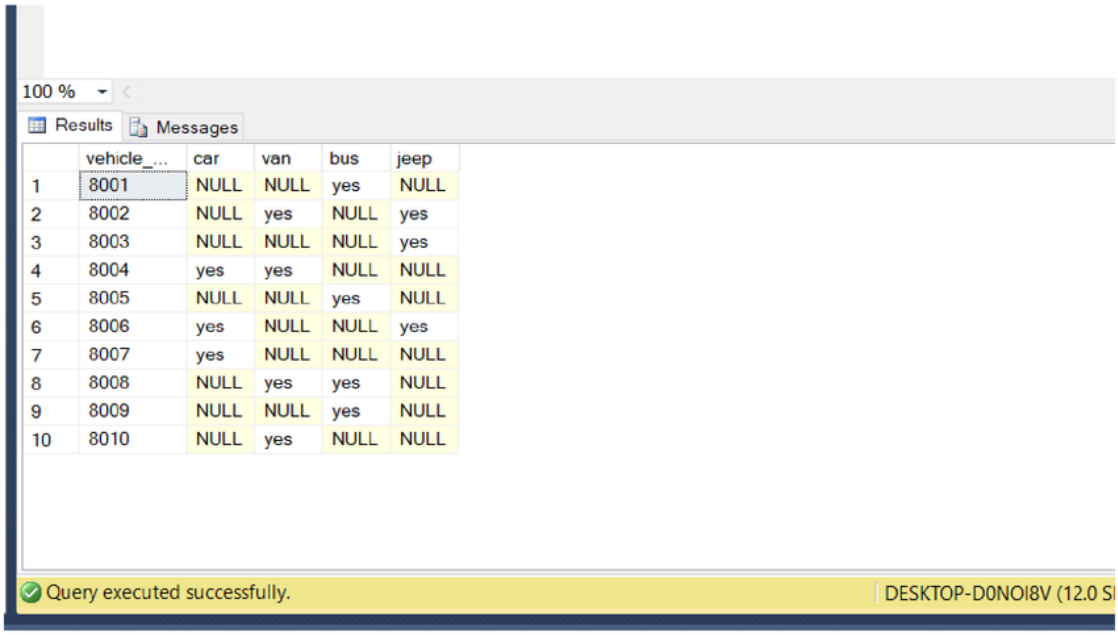
100 %

Results | Messages

	vehicle_...	rented_vehi...	lanka_tours_vehi...
1	8001	NULL	yes
2	8002	NULL	yes
3	8003	yes	NULL
4	8004	NULL	yes
5	8005	NULL	yes
6	8006	yes	NULL
7	8007	yes	NULL
8	8008	yes	NULL
9	8009	NULL	yes

Query executed successfully. DESKTOP-D0NOI8

VEHICLE_TYPE Table



100 %

Results | Messages

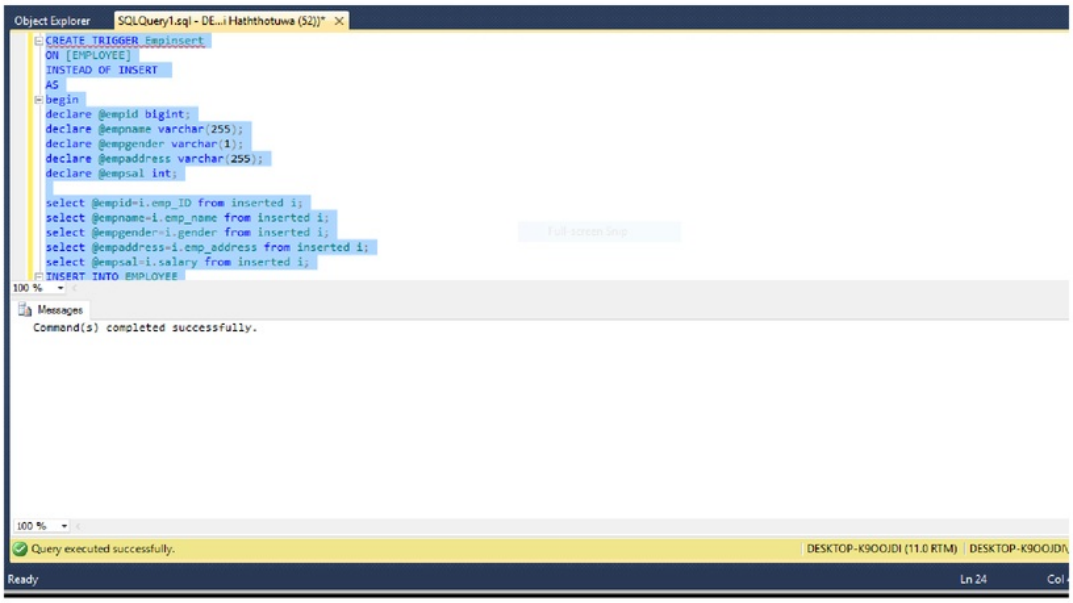
	vehicle_...	car	van	bus	jeep
1	8001	NULL	NULL	yes	NULL
2	8002	NULL	yes	NULL	yes
3	8003	NULL	NULL	NULL	yes
4	8004	yes	yes	NULL	NULL
5	8005	NULL	NULL	yes	NULL
6	8006	yes	NULL	NULL	yes
7	8007	yes	NULL	NULL	NULL
8	8008	NULL	yes	yes	NULL
9	8009	NULL	NULL	yes	NULL
10	8010	NULL	yes	NULL	NULL

Query executed successfully. DESKTOP-D0NOI8V (12.0 S

Create Triggers

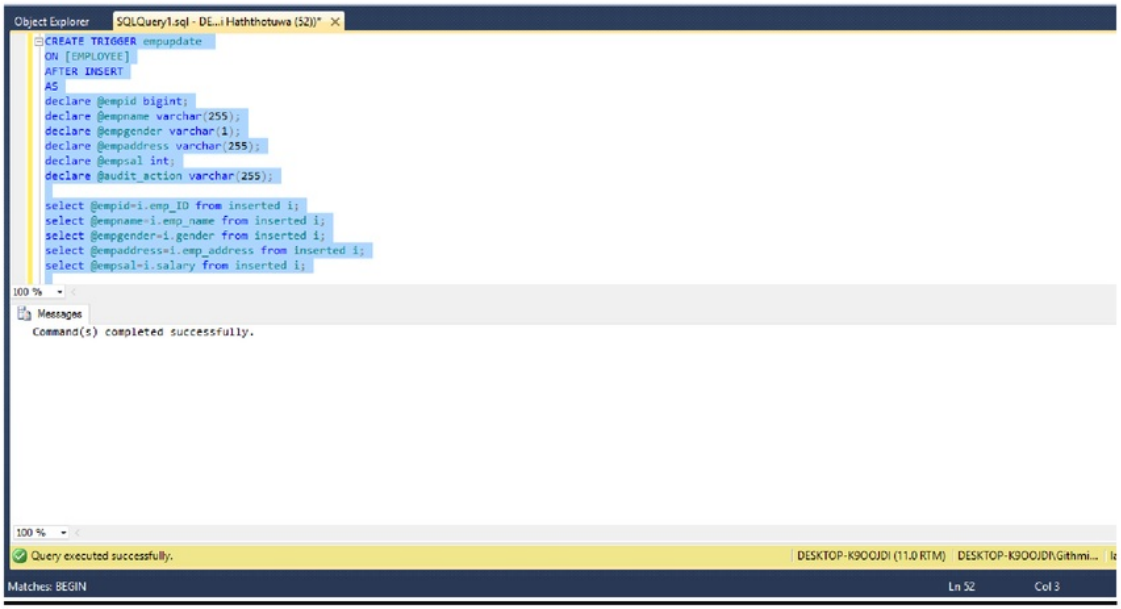
INSERT

```
CREATE TRIGGER Empinsert

ON [EMPLOYEE]

INSTEAD OF INSERT

AS

begin

declare @empid bigint;

declare @empname varchar(255);

declare @empgender varchar(1);

declare @empaddress varchar(255);

declare @empsal int;

select @empid = i.emp_ID from inserted i;

select @empname = i.emp_name from inserted i;

select @empgender = i.gender from inserted i;

select @empaddress = i.emp_address inserted i;

select @empsal = i.salary inserted i;

INSERT INTO EMPLOYEE

(emp_ID , emp_name , gender , emp_address , salary)

VALUES( @empid , @empname , @empgender , @empaddress , @empsal);

GO
```


Object Explorer
SQLQuery1.sql - DE...i Haththotuwa (52))*
CREATE TRIGGER Empinsert
ON [EMPLOYEE]
INSTEAD OF INSERT
AS
begin
declare @empid bigint;
declare @empname varchar(255);
declare @empgender varchar(1);
declare @empaddress varchar(255);
declare @empsal int;
select @empid=i.emp_ID from inserted i;
select @empname=i.emp_name from inserted i;
select @empgender=i.gender from inserted i;
select @empaddress=i.emp_address from inserted i;
select @empsal=i.salary from inserted i;
INSERT INTO EMPLOYEE
100 %
Messages
Command(s) completed successfully.
100 %
Query executed successfully.
DESKTOP-K9OOJDI (11.0 RTM)
Ready
Ln 24

UPDATE

```
CREATE TRIGGER empupdate

ON [EMPLOYEE]

AFTER INSERT

AS

declare @empid bigint;

declare @empname varchar(255);

declare @empgender varchar(1);

declare @empaddress varchar(255);

declare @empsal int;

declare @audit_action varchar(255);

select @empid = i.emp_ID from inserted i;

select @empname = i.emp_name from inserted i;

select @empsal = i.salary inserted i;

if update ( emp_name)

    set @audit_action = 'Updated Record—After Update Trigger';

if update( salary )

    set @audit_action = 'Updated Record—After Update Trigger';

INSERT INTO EMPLOYEE

(emp_ID , emp_name , gender , emp_address , salary)

VALUES( @empid , @empname , @empgender , @empaddress , @empsal);

PRINT  'AFTER INSERT trigger fired' ;

GO
```

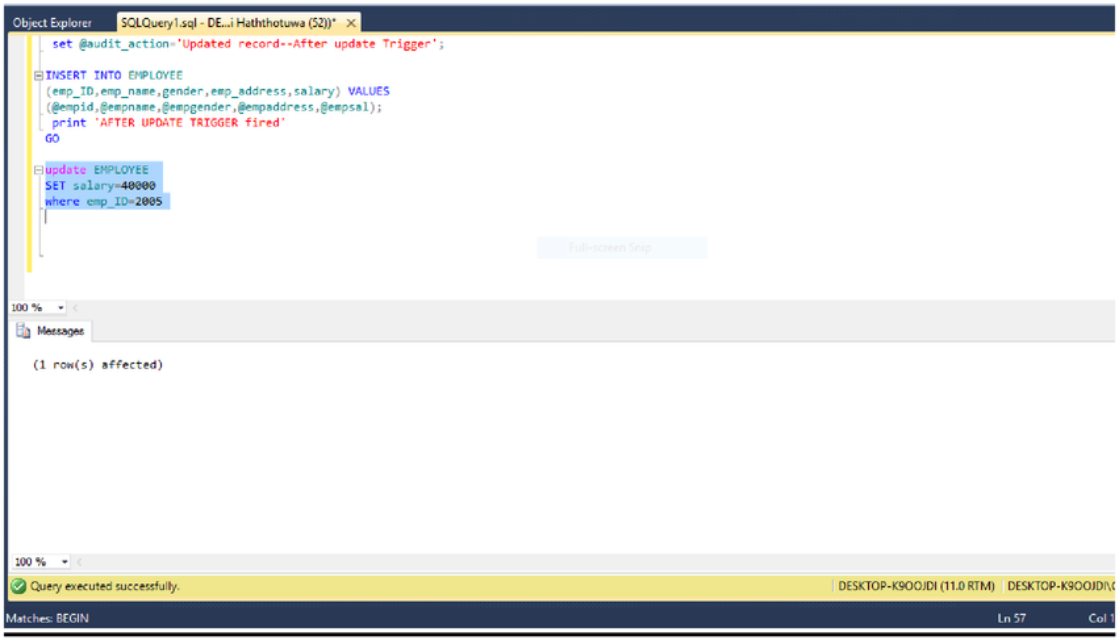

Object Explorer
SQLQuery1.sql - DE...i Haththotuwa (52))*
CREATE TRIGGER empupdate
ON [EMPLOYEE]
AFTER INSERT
AS
declare @empid bigint;
declare @empname varchar(255);
declare @empgender varchar(1);
declare @empaddress varchar(255);
declare @empsal int;
declare @audit_action varchar(255);
select @empid=i.emp_ID from inserted i;
select @empname=i.emp_name from inserted i;
select @empgender=i.gender from inserted i;
select @empaddress=i.emp_address from inserted i;
select @empsal=i.salary from inserted i;
100 %
Messages
Command(s) completed successfully.
100 %
Query executed successfully.
DESKTOP-K9OOJDI (11.0 RTM)
DESKTOP-K9OOJDI\Githmi...
Matches: BEGIN
Ln 52
Col 3

TRIGGER EXECUTION

UPDATE EMPLOYEE

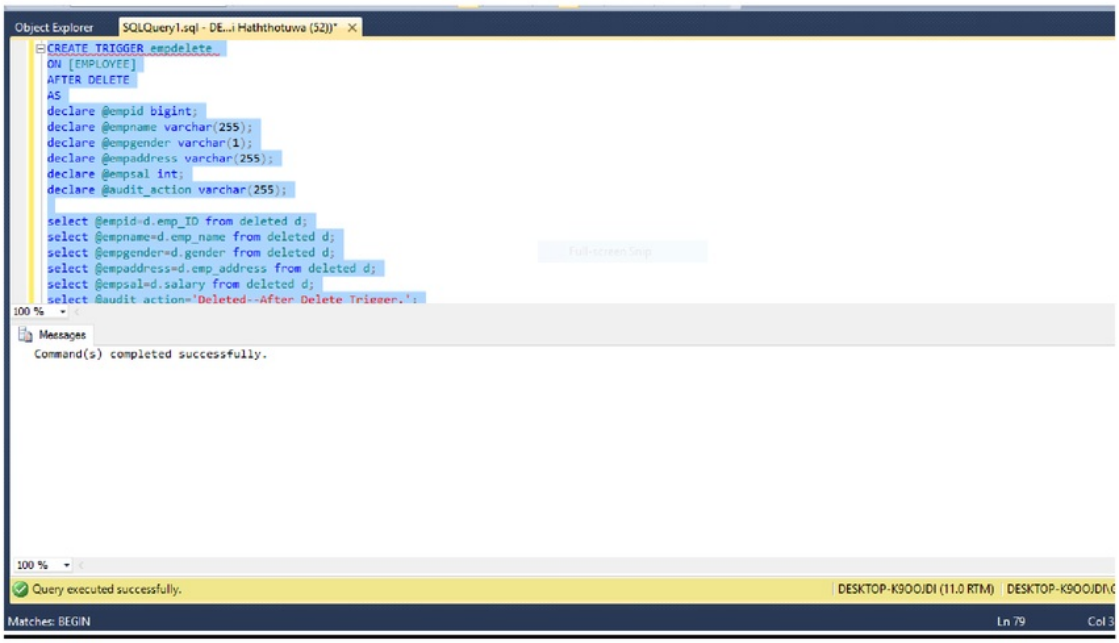
SET salary =40000

WHERE emp_ID = 2005



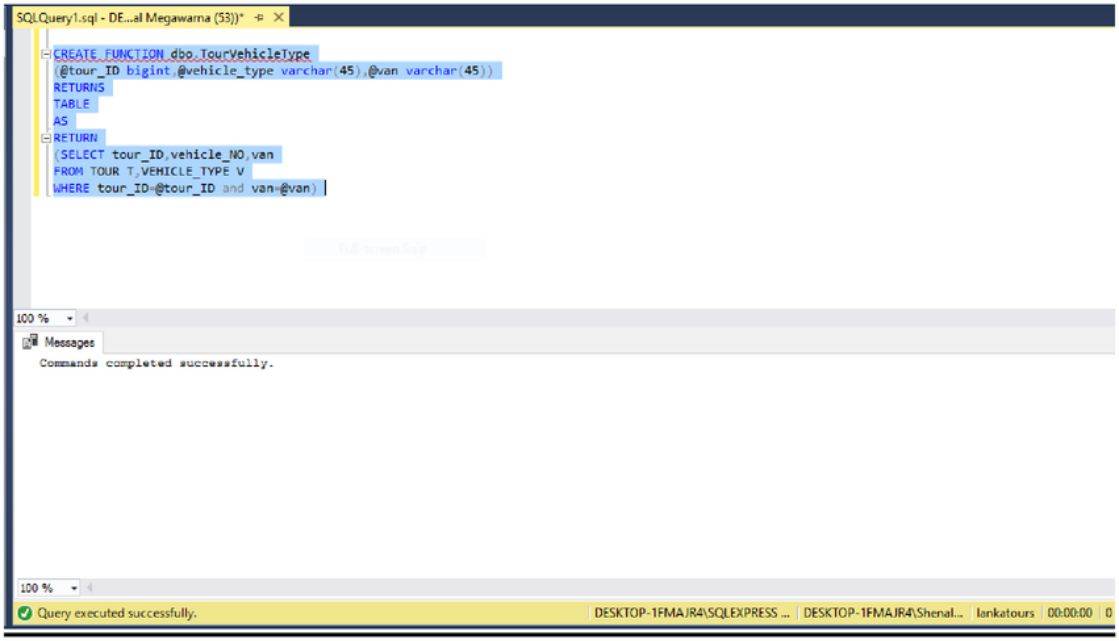
DELETE

```
CREATE TRIGGER empdelete

ON [EMPLOYEE]

AFTER DELETE
AS

declare @empid bigint;

declare @empname varchar(255);

declare @empgender varchar(1);

declare @empaddress varchar(255);

declare @empsal int;
declare @audit_action varchar(255);

select @empid = d.emp_ID from deleted i;

select @empname = d.emp_name from deleted i;

select @empgender = d.gender from deleted i;

select @empaddress = d.emp_address deleted i;

select @empsal = d.salary deleted i;
```



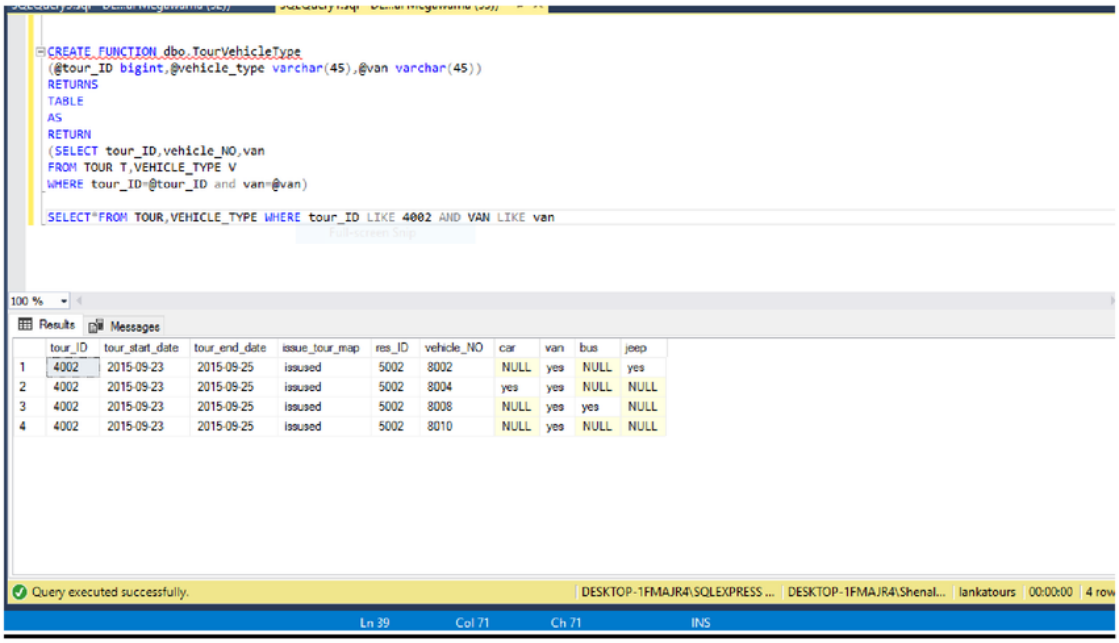
Create Functions Statements

```
CREATE   FUNCTION  dbo.TourVehicleType

( @tour_ID bigint , @vehicle_type  varchar(45) , @van varchar(45))

RETURNS

TABLE

AS

RETURN

( SELECT tour_ID , vehicle_NO , van

FROM   TOUR T , VEHICLE_TYPE  V

WHERE tour_ID = @tour_ID and VAN = @van
```



FUNCTION EXECUTION

SELECT * FROM TOUR , VEHICLE_TYPE WHERE tour_ID LIKE 4002 AND VAN LIKE van



```
CREATE FUNCTION dbo.TourVehicleType
(@tour_ID bigint,@vehicle_type varchar(45),@van varchar(45))
RETURNS
TABLE
AS
RETURN
(SELECT tour_ID,vehicle_NO,van
FROM TOUR T,VEHICLE_TYPE V
WHERE tour_ID=@tour_ID and van=@van)

SELECT*FROM TOUR,VEHICLE_TYPE WHERE tour_ID LIKE 4002 AND VAN LIKE van
```

100 %

Results | Messages

	tour_ID	tour_start_date	tour_end_date	issue_tour_map	res_ID	vehicle_NO	car	van	bus	jeep
1	4002	2015-09-23	2015-09-25	issused	5002	8002	NULL	yes	NULL	yes
2	4002	2015-09-23	2015-09-25	issused	5002	8004	yes	yes	NULL	NULL
3	4002	2015-09-23	2015-09-25	issused	5002	8008	NULL	yes	yes	NULL
4	4002	2015-09-23	2015-09-25	issused	5002	8010	NULL	yes	NULL	NULL

Query executed successfully. | DESKTOP-1FMAJR4\SQLEXPRESS ... | DESKTOP-1FMAJR4\Shenal... | lankatours | 00:00:00 | 4 row

Ln 39 Col 71 Ch 71 INS

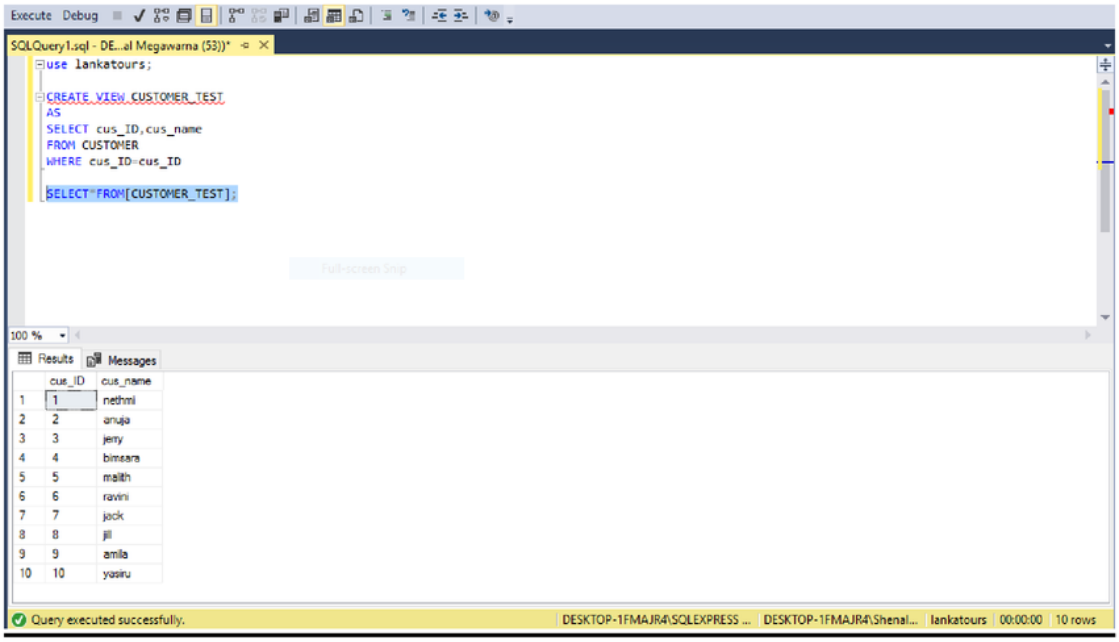
Create View Statements

2

```
CREATE  VIEW  CUSTOMER_TEST

AS

SELECT  cus_ID , cus_name

FROM  CUSTOMER

WHERE cus_ID = cus_ID
```

EXECUTION

```
SELECT * FROM  [CUSTOMER_TEST]
```



CREATE VIEW [CUSTOMER_STREET]

AS

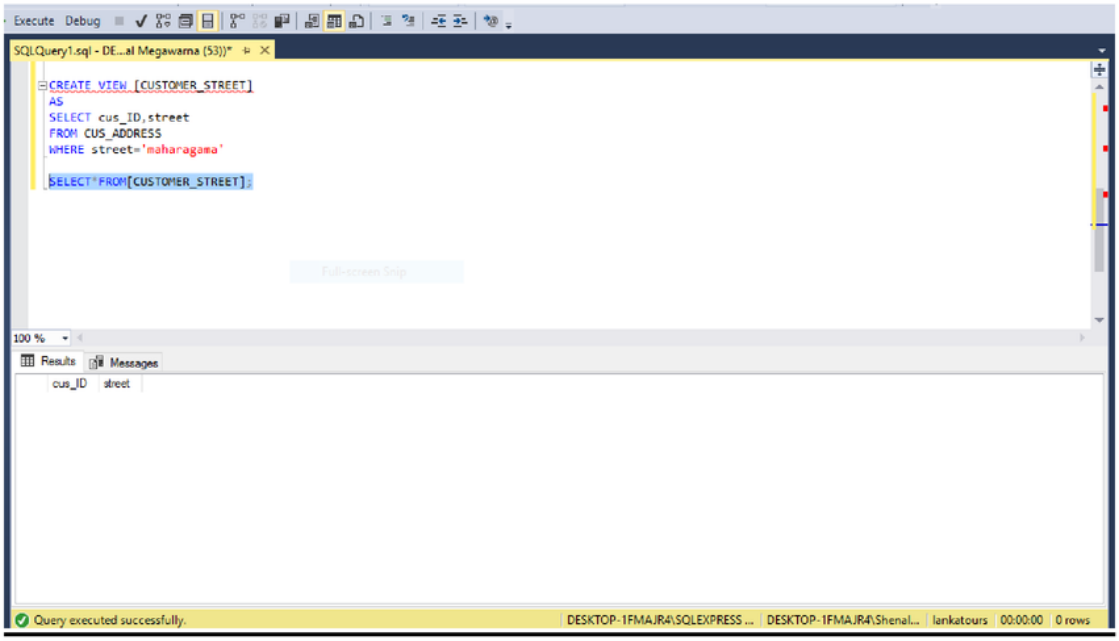
SELECT cus_ID , street

FROM CUS_ADDRESS

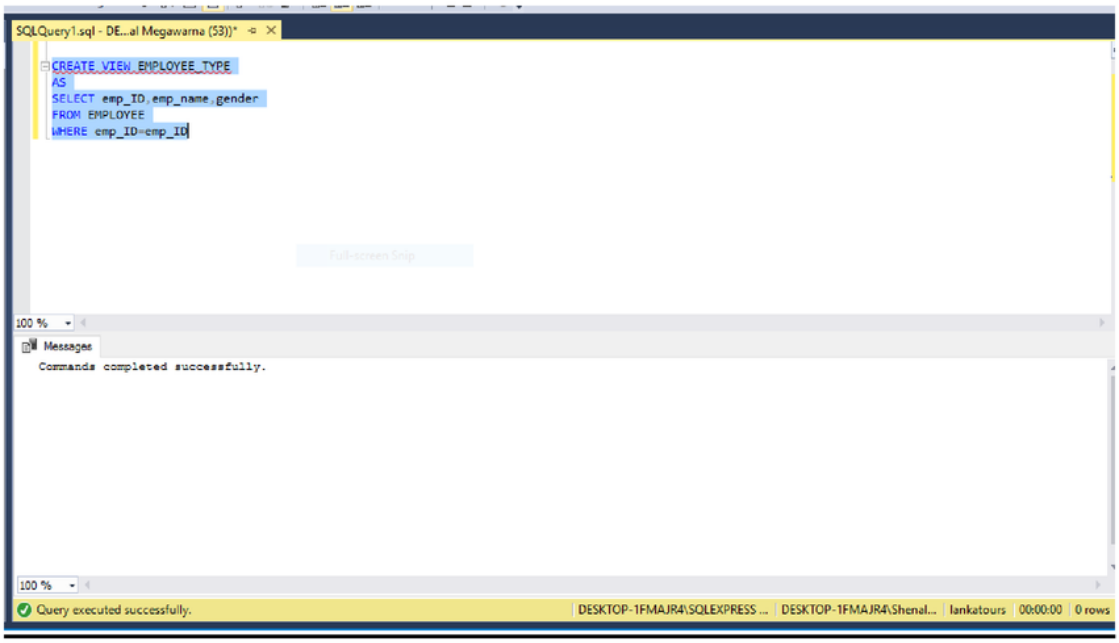
WHERE street = ‘maharagama’

EXECUTION

SELECT * FROM [CUSTOMER_STREET]

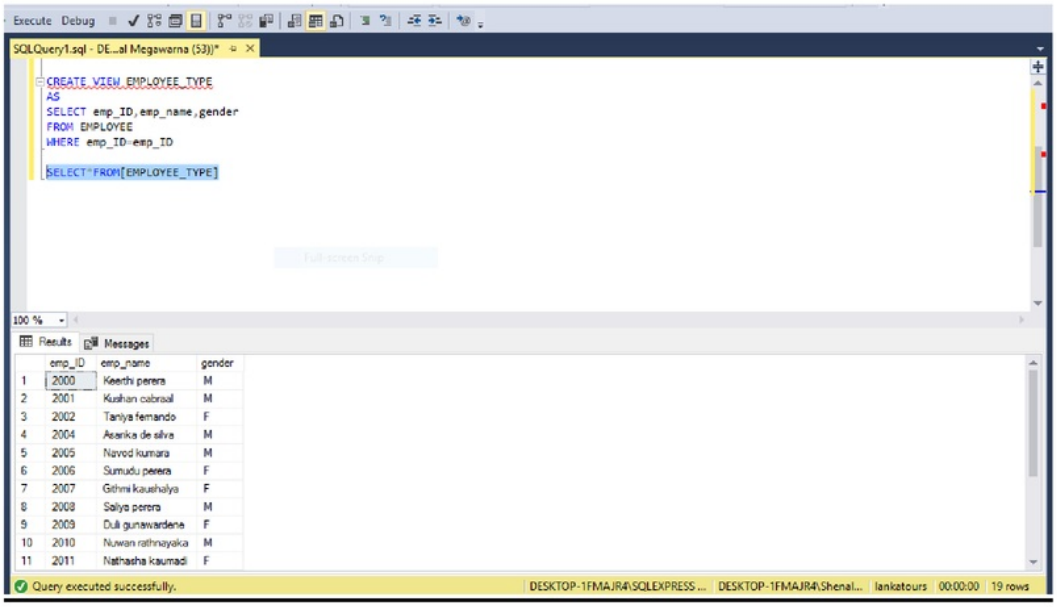


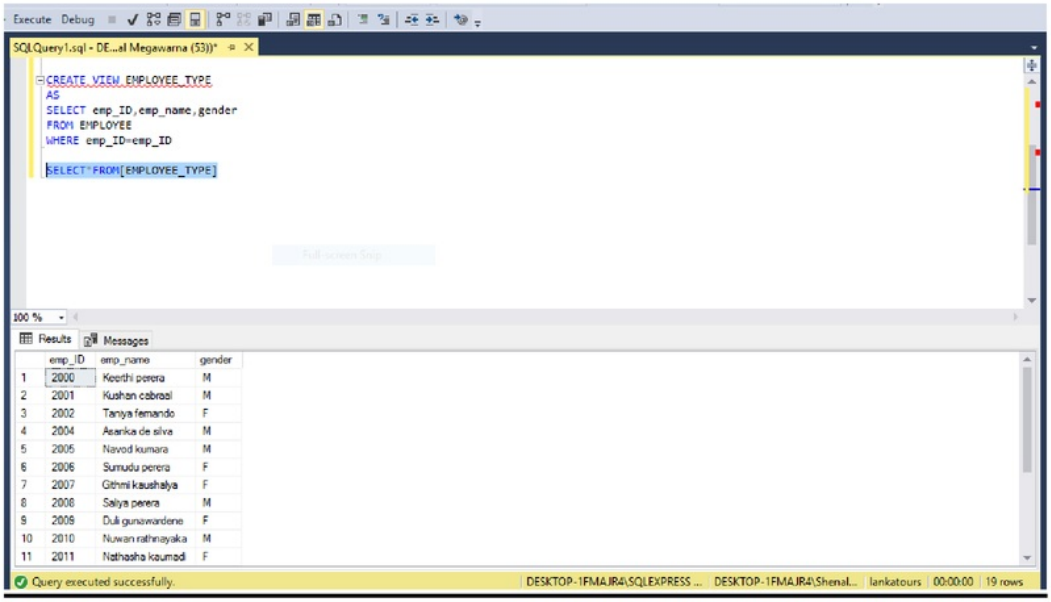
```
CREATE VIEW EMPLOYEE_TYPE

AS

SELECT  emp_ID  ,  emp_name , gender
FROM  EMPLOYEE

WHERE  emp_ID = emp_ID
```



EXECUTION

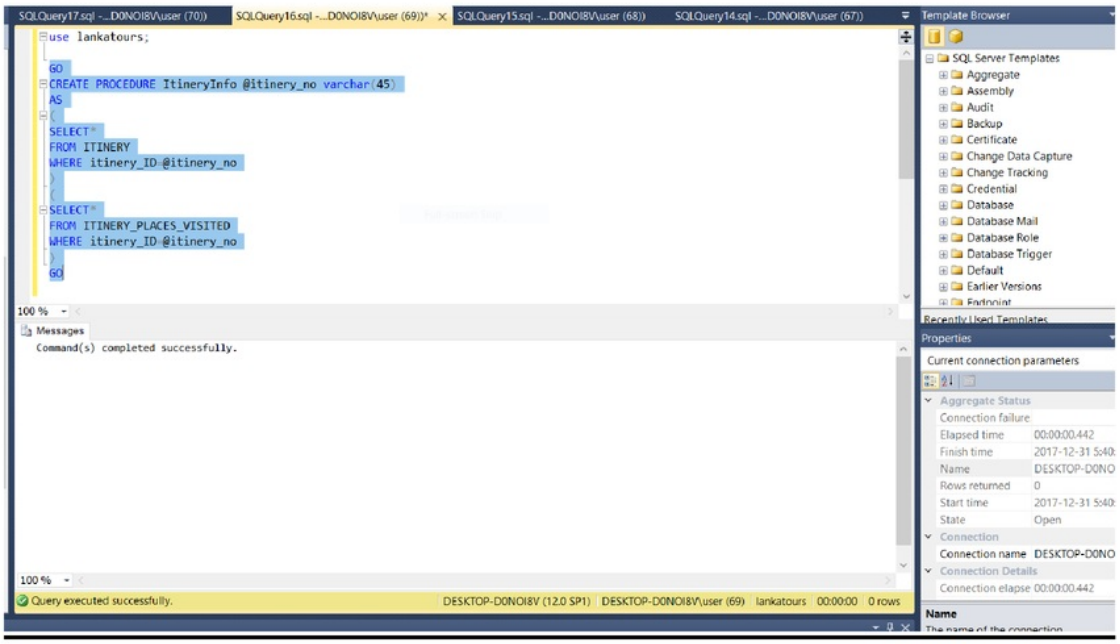
SELECT * FROM [EMPLOYEE_TYPE]





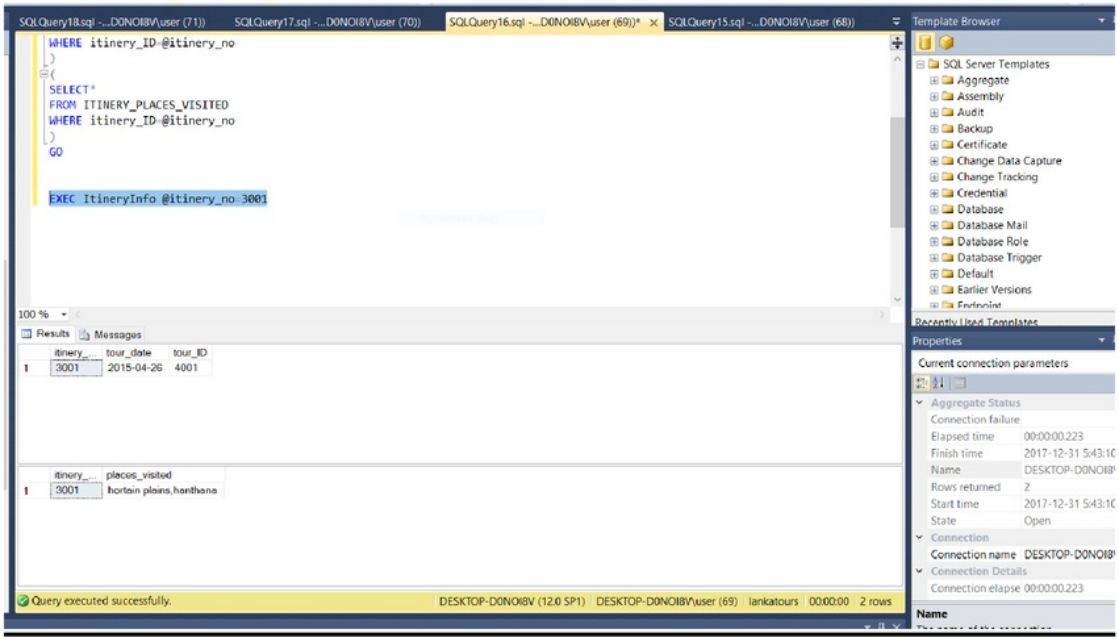
Create Procedure Statements

```
GO

CREATE  PROCEDURE ItineryInfo @itinery_no varchar(45)

AS

SELECT*

FROM   ITINERY

WHERE  itinery_ID  =  @itinery_no

)

(

SELECT*

FROM   ITINERY_PLACES_VISITED

WHERE  itinery_ID  =  @itinery_no

)

GO
```



EXECUTION PROCEDURE

EXEC ItineryInfo @itinery_no = 3001



Ciritical Appraisal

- The main feature of the database is that the integrity of the data we have used for the details. There we have managed to come with actual tour management system situation data.
- Most of the fields in the tables are applied with triggers and the users of the system can manipulate or deal with the database with less number of errors.
- In some cases, user might find it difficult to insert data for some tables as they are applied with triggers. When a trigger is fired sometime errors to the ongoing process can occur, as an example interruptions and system crashes.

Futher Implementation

- We will connect this database to real world tour management systems and plan develop separate software to this database.
- From the data retrieval, insertion and other manipulations can be done in a user-friendly way.
- After creating the user interfaces for the database, every person can easily deal with this database.
- Advanced triggers added to the database , therefore it reduce the errors that can be happen from the users when inserting and manipulating data.
- After creating the database, can reduce too large space decreasing to many free spaces in the space allocated for the database.

Work Load Matrix

Index Number	ER/EER Diagram	Relational Mapping, Data Normalization, Data Dictionary	Tables, Constraints	Views, Triggers	Stored Procedures, User Defined Functions
10602218	✕	✕			
10602194	✕				
10601950	✕	✕		✕	✕
10601949	✕	✕	✕	✕	
10602203	✕	✕		✕	✕

Peer Evaluation From For Group Work

Evaluation Criteria	10602218	10602194	10601949	10601950	10602203
Attends group meetings regularly and arrives on time.	4	3	4	4	4
Contributes meaningfully to group discussions.	4	3	4	3	4
Completes the tasks on time.	4	4	4	4	3
Prepares work in a quality manner.	3	4	4	4	4
Contributes significantly to the success of the project in a cooperative and supportive attitude.	3	4	3	4	4
TOTAL	18	18	19	19	19

Plagiarism Report

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ORIGINALITY REPORT

9%	6%	0%	7%
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4	Submitted to University of East London Student Paper	1%
5	Submitted to University of Plymouth Student Paper	1%
6	getcompiled.com Internet Source	1%
7	o7planning.org Internet Source	<1%
8	www.hivmr.com Internet Source	<1%
9	Submitted to Gulf College Oman	

	Student Paper	<1%
10	Submitted to University of Lincoln Student Paper	<1%
11	Submitted to University of Greenwich Student Paper	<1%
12	Submitted to Kingston University Student Paper	<1%

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