Experiment No. 2

Aim:- Implementation of all dimension tables and fact tables based on

experiment 1 case study. i) Identifying the source tables and populating sample data

ii) Implementation of dimensional data model i.e. Star schema, Snowflake

schema and

Output: i) All the dimentional tables: Creation :

```
mysql> create database Ticket_Reservation
-> ;
Query OK, 1 row affected (0.02 sec)
mysql> use Ticket_Reservation;
Database changed
mysql> show tables;
```

```
mysql> create database Ticket_Reservation
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Query OK, 1 row affected (0.02 sec)
mysql> use Ticket_Reservation;
Database changed
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```

```
mysql> desc coach;
```

```
mysql> create table class(class_id varchar(20) primary key,
-> class_name varchar(20),
-> seat_per_coach varchar(20),
-> class_amount varchar(20));
Query OK, 0 rows affected (0.03 sec)
mysql> desc class;
```

```
mysql> alter table class add column coach_id varchar(20);
Query OK, 0 rows affected (0.02 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> alter table class add foreign key (coach_id) references coach(coach_i
d);
Query OK, 0 rows affected (0.03 sec)
```

```
mysql> create table passenger(pas_id varchar(20) primary key,
-> pas_name varchar(20),
-> pas_age int,
-> class_id varchar(20), foreign key (class_id) references class(class_id));
Query OK, 0 rows affected (0.05 sec)
mysql> desc passenger;
```

```
mysql> create table train(train_code varchar(20) primary key,
-> train_name varchar(20),
-> start_time varchar(20),
-> end_time varchar(20));
Query OK, 0 rows affected (0.02 sec)
mysql> desc train;

create table ticket_reservation(PNR_no varchar(20) primary key,
train_code varchar(20),
foreign key (train_code) references train(train_code),
from_station varchar(20),
from_date varchar(20),
to_date varchar(20));

alter table ticket_reservation drop column from_station;
desc ticket_reservation;

create table station(station_id varchar(20) primary key,
station_name varchar(20));

mysql> desc station;

alter table passenger add column train_code varchar(20);

alter table passenger add foreign key (train_code) references train(train_code);

desc passenger;

create table fact_sales(PNR_no varchar(20), foreign key (PNR_no) references
ticket_reservation(PNR_no),
station_id varchar(20), foreign key (station_id) references station(station
_id),
class_id varchar(20), foreign key (class_id) references class(class_id),
train_code varchar(20), foreign key (train_code) references train(train_cod
```

```
e),
pas_id varchar(20), foreign key (pas_id) references passenger(pas_id),
no_of_tickets_sold int,
total_amount int);

desc fact_sales;

insert into train_details(train_id, total_km, start_station, end_station, via, time_req)
values ("ABC101", 2000,"panvel", "thrissur", "ratnagiri", "25hrs"),
-> ("DEF102", 2600, "thane", "guruvayoor", "goa", "32hrs"),
-> ("GHI103",100,"miraroad", "churchgate", "kandivali", "2hrs"),
-> ("JKL104", 250, "LTT", "delhi", "gujrat", "20hrs"),
-> ("MNO105", 2008, "karnataka", "assam", "aurangabad", "36hrs");

 select * from train_details;

mysql> insert into train(train_code, train_name, start_time, end_time, train_id) values
-> (1234, "netravati_express", "11am", "next_day_3pm" , "ABC101"]
,(13141516, "delhi_express", "2pm", "next_day_12pm", "JKL104"),
(17181920, "assam_express", "3an", "2_days_1pm", "MNO105"),
-> (5678, "gareebrath", "9am", "next_day_2pm","
m" , "DEF102")
-> (9101112, "bombay_express","10am", "12pm", "GHI103");

mysql> select * from train;

mysql> insert into ticket_reservation(PNR_no, train_code, from_date, to_date) values
->
(1122, 13141516, 24/7/2023, 25/7/2023),
-> (2233,5678, 29/9/2021,30/9/2021),
->
(4455, 9101112, 12/4/2023, 12/4/2023),
-> (6677,1234,1/8/2024,2/8/2024),
-> (8899,17181920, 15/3/2023,17/3/2023);
```

```
mysql> desc fact_sales;

mysql> insert into station(station_id, station_name, zone) values
-> ("A101", "kandivali", "mumbai"),
-> ("B302", "thrissur", "kerala"),
-> ("D295", "miraroad", "bhayander"),
-> ("F534", "guruvayoor", "thrissur"),
-> ("Z206", "dombivali", "thane");

mysql> select * from station;

mysql> select * from passenger;

mysql> insert into passenger (pas_id, pas_name, pas_age, class_id, train_code) values
-> (11, "gauri", 20, 2, 1234),
-> (12, "vivek", 25, 4, 9101112),
-> (13, "akshata", 18, 1, 13141516),
-> (14, "mohini", 21, 5, 17181920),
-> (15, "yash", 30, 4, 5678);

mysql> select * from passenger;
mysql> insert into fact_sales(PNR_no, station_id,class_id, train_code, pas_id,
-> no_of_tickets_sold, total_amount) values
-> (1122, "A101", 1,1234,11,54,56000),
-> (2233, "B302", 2,5678,12,24,46000),
-> (4455, "D295", 3, 9101112,13,89,425000),
-> (6677, "F534", 4, 13141516,14,66, 189009),
-> (8899, "Z206", 5, 17181920, 15, 15, 23000);

mysql> select * from fact_sales;

mysql> insert into coach(coach_id,coach_type, seats_reserved, canteen_availability) values
-> ("A1", "seating", 10, "yes"),
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```
-> ("A2", "seating", 15, "no"),
-> ("B2", "sleeper", 44, "yes"),
-> ("B1", "sleeper", 52, "yes"),
-> ("C1", "sleeper", 46, "no");

mysql> select * from coach;

mysql> insert into class(class_id, class_name, seat_per_coach, price, coach_id) value
-> (1, "1st_class", 30, "4500rs", "A1"),
-> (2, "1st_class", 30, "4000rs", "A2"),
-> (3, "2nd_class", 50, "3500rs", "B1"),
-> (4, "2nd_class", 60, "3000rs", "B2"),
-> (5, "3rd_class", 80, "1000rs", "C1");

mysql> select * from class;
mysql> select * from class natural join fact_sales where class_id
=4;

mysql> select min(price) from class where class_id=(select class_id from
-> fact_sales where no_of_tickets_sold =54);

mysql> select count(pas_name) from passenger where pas_id
=(select pas_id from train where train_code=5678);
```