**Translation of the logical data model to a physical data model including tables and columns names and data types (SQL Script):**

CREATE TABLE AIRLINE.FREQ\_PASSENGER

(

ID NUMBER,

NID NUMBER,

Fname VARCHAR2(12),

Lname VARCHAR2(12),

Address VARCHAR2(100),

Phone VARCHAR2(20)

)

LOGGING

NOCOMPRESS

NOCACHE

NOPARALLEL

NOMONITORING;

ALTER TABLE AIRLINE.FREQ\_PASSENGER ADD (

CONSTRAINT FREQ\_PASSENGER\_PK

PRIMARY KEY

(ID));

---------------------------------------

CREATE TABLE AIRLINE.Flight

(

ID NUMBER,

FLIGHT\_KEY NUMBER,

Departure\_Airport VARCHAR2(20),

Arrival\_Airport VARCHAR2(20),

Departure\_Time DATE,

Arrival Time DATE

)

LOGGING

NOCOMPRESS

NOCACHE

NOPARALLEL

NOMONITORING;

ALTER TABLE AIRLINE.Flight ADD (

CONSTRAINT Flight\_PK

PRIMARY KEY

(ID));

---------------------------------------

CREATE TABLE AIRLINE.Class

(

ID NUMBER,

Class\_type VARCHAR2(20)

)

LOGGING

NOCOMPRESS

NOCACHE

NOPARALLEL

NOMONITORING;

ALTER TABLE AIRLINE.Class ADD (

CONSTRAINT Class\_PK

PRIMARY KEY

(ID));

---------------------------------------

CREATE TABLE AIRLINE.Date\_table

(

KEY NUMBER,

full\_Date DATE,

Full\_day\_desc VARCHAR2(100),

Day\_of\_week NUMBER,

Day\_of\_month NUMBER,

Day\_of\_year NUMBER,

Last\_day\_of\_month VARCHAR2(20),

Month\_name VARCHAR2(20),

Day\_name VARCHAR2(20),

quarter NUMBER,

year NUMBER,

Half\_year NUMBER

)

LOGGING

NOCOMPRESS

NOCACHE

NOPARALLEL

NOMONITORING;

ALTER TABLE AIRLINE.Date\_table ADD (

CONSTRAINT Date\_PK

PRIMARY KEY

(KEY));

-------------------------------------------

CREATE TABLE AIRLINE.Passenger

(

ID NUMBER,

N\_ID NUMBER,

Fname VARCHAR2(20),

Lname VARCHAR2(20),

Address VARCHAR2(50),

Phone\_number VARCHAR2(50)

)

LOGGING

NOCOMPRESS

NOCACHE

NOPARALLEL

NOMONITORING;

ALTER TABLE AIRLINE.Passenger ADD (

CONSTRAINT Passenger\_PK

PRIMARY KEY

(ID));

-------------------------------------------

CREATE TABLE AIRLINE.Fare\_basis

(

ID NUMBER,

Code VARCHAR2(50)

)

LOGGING

NOCOMPRESS

NOCACHE

NOPARALLEL

NOMONITORING;

ALTER TABLE AIRLINE.Fare\_basis ADD (

CONSTRAINT Fare\_base\_PK

PRIMARY KEY

(ID));

----------------------------------------------

CREATE TABLE AIRLINE.Reservation\_Channel

(

ID NUMBER,

TYPE VARCHAR2(100)

)

LOGGING

NOCOMPRESS

NOCACHE

NOPARALLEL

NOMONITORING;

ALTER TABLE AIRLINE.Reservation\_Channel ADD (

CONSTRAINT Reservation\_Channel\_PK

PRIMARY KEY

(ID));

----------------------------------------------

CREATE TABLE AIRLINE.Hotel

(

ID NUMBER,

NAME VARCHAR2(100),

CITY VARCHAR2(50),

COUNTRY VARCHAR2(50)

)

LOGGING

NOCOMPRESS

NOCACHE

NOPARALLEL

NOMONITORING;

ALTER TABLE AIRLINE.Hotel ADD (

CONSTRAINT Hotel\_PK

PRIMARY KEY

(ID));

------------------------------------------------

CREATE TABLE AIRLINE.Cust\_Opinion

(

ID NUMBER,

Type VARCHAR2(50),

Description VARCHAR2(300)

)

LOGGING

NOCOMPRESS

NOCACHE

NOPARALLEL

NOMONITORING;

ALTER TABLE AIRLINE.Cust\_Opinion ADD (

CONSTRAINT Cust\_Opinion\_PK

PRIMARY KEY

(ID));

-----------------------------------------------

CREATE TABLE AIRLINE.Interaction

(

ID NUMBER,

TYPE VARCHAR2(50)

)

LOGGING

NOCOMPRESS

NOCACHE

NOPARALLEL

NOMONITORING;

ALTER TABLE AIRLINE.Interaction ADD (

CONSTRAINT Interaction\_PK

PRIMARY KEY

(ID));

-----------------------------------------------

CREATE TABLE AIRLINE.FLIGHT\_ACTIVITY

(

FLIGHT\_ID NUMBER,

PASSENGER\_ID NUMBER,

DATE\_ID NUMBER,

FARE\_BASIS\_ID NUMBER,

RESERVATION\_CHANNEL\_ID NUMBER,

CLASS\_ID NUMBER,

DISTANCE\_IN\_MILES NUMBER,

MILES\_EARNED NUMBER

)

LOGGING

NOCOMPRESS

NOCACHE

NOPARALLEL

NOMONITORING;

ALTER TABLE AIRLINE.FLIGHT\_ACTIVITY ADD (

FOREIGN KEY (CLASS\_ID)

REFERENCES AIRLINE.CLASS (ID),

FOREIGN KEY (FLIGHT\_ID)

REFERENCES AIRLINE.FLIGHT (ID),

FOREIGN KEY (PASSENGER\_ID)

REFERENCES AIRLINE.FREQ\_PASSENGER (ID),

FOREIGN KEY (DATE\_ID)

REFERENCES AIRLINE.DATE\_TABLE (KEY),

FOREIGN KEY (FARE\_BASIS\_ID)

REFERENCES AIRLINE.FARE\_BASIS (ID),

FOREIGN KEY (RESERVATION\_CHANNEL\_ID)

REFERENCES AIRLINE.RESERVATION\_CHANNEL (ID));

--------------------------------------------

CREATE TABLE AIRLINE.PASSENGER

(

ID NUMBER,

NID VARCHAR2(20),

FNAME VARCHAR2(20),

LNAME VARCHAR2(20),

ADDRESS VARCHAR2(100),

PHONE VARCHAR2(20)

)

LOGGING

NOCOMPRESS

NOCACHE

NOPARALLEL

NOMONITORING;

ALTER TABLE AIRLINE.PASSENGER ADD (

CONSTRAINT PASSENGER\_PK

PRIMARY KEY

(ID));

----------------------------------------------

CREATE TABLE AIRLINE.Reservation

(

DATE\_ID NUMBER,

PASSENGER\_ID NUMBER,

FLIGHT\_ID NUMBER,

RESERVATION\_CHANNEL\_ID NUMBER,

CLASS\_ID NUMBER,

RESERVATION\_ID NUMBER,

SEAT NUMBER,

RATE NUMBER,

PAYMENT\_AMOUNT NUMBER

)

LOGGING

NOCOMPRESS

NOCACHE

NOPARALLEL

NOMONITORING;

ALTER TABLE AIRLINE.Reservation ADD (

CONSTRAINT Reservation\_PK

PRIMARY KEY

(RESERVATION\_ID));

ALTER TABLE AIRLINE.Reservation ADD (

FOREIGN KEY (DATE\_ID)

REFERENCES AIRLINE.DATE\_TABLE (KEY),

FOREIGN KEY (FLIGHT\_ID)

REFERENCES AIRLINE.FLIGHT (ID),

FOREIGN KEY (RESERVATION\_CHANNEL\_ID)

REFERENCES AIRLINE.RESERVATION\_CHANNEL (ID),

FOREIGN KEY (PASSENGER\_ID)

REFERENCES AIRLINE.PASSENGER (ID),

FOREIGN KEY (CLASS\_ID)

REFERENCES AIRLINE.CLASS (ID));

-----------------------------------------

CREATE TABLE AIRLINE.OVERNIGHT\_STAYS

(

Date\_of\_Arrival\_Key NUMBER,

Date\_of\_Departure\_Key NUMBER,

Date\_of\_Reservation\_Key NUMBER,

Passenger\_ID NUMBER,

HOTEL\_ID NUMBER,

Reservation\_Channel\_ID NUMBER,

TICKET\_NUMBER NUMBER,

Number\_of\_Nights NUMBER

)

LOGGING

NOCOMPRESS

NOCACHE

NOPARALLEL

NOMONITORING;

ALTER TABLE AIRLINE.OVERNIGHT\_STAYS ADD (

FOREIGN KEY (Date\_of\_Arrival\_Key)

REFERENCES AIRLINE.DATE\_TABLE (KEY),

FOREIGN KEY (Date\_of\_Departure\_Key)

REFERENCES AIRLINE.DATE\_TABLE (KEY),

FOREIGN KEY (Date\_of\_Reservation\_Key)

REFERENCES AIRLINE.DATE\_TABLE (KEY),

FOREIGN KEY (Passenger\_ID)

REFERENCES AIRLINE.FREQ\_PASSENGER (ID),

FOREIGN KEY (HOTEL\_ID)

REFERENCES AIRLINE.HOTEL (ID),

FOREIGN KEY (Reservation\_Channel\_ID)

REFERENCES AIRLINE.RESERVATION\_CHANNEL (ID));

--------------------------------------------

CREATE TABLE AIRLINE.Customer\_care

(

DATE\_KEY NUMBER,

PASSENGER\_ID NUMBER,

FLIGHT\_ID NUMBER,

OPINION\_ID NUMBER,

INTERACTION\_ID NUMBER,

PROBLEM\_SEVERITY NUMBER,

FEEDBACK\_RATE NUMBER

)

LOGGING

NOCOMPRESS

NOCACHE

NOPARALLEL

NOMONITORING;

ALTER TABLE AIRLINE.Customer\_care ADD (

FOREIGN KEY (DATE\_KEY)

REFERENCES AIRLINE.DATE\_TABLE (KEY),

FOREIGN KEY (PASSENGER\_ID)

REFERENCES AIRLINE.PASSENGER (ID),

FOREIGN KEY (FLIGHT\_ID)

REFERENCES AIRLINE.FLIGHT (ID),

FOREIGN KEY (OPINION\_ID)

REFERENCES AIRLINE.CUST\_OPINION (ID),

FOREIGN KEY (INTERACTION\_ID)

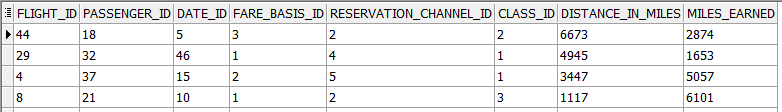
REFERENCES AIRLINE.INTERACTION (ID));

--------------------------------------------

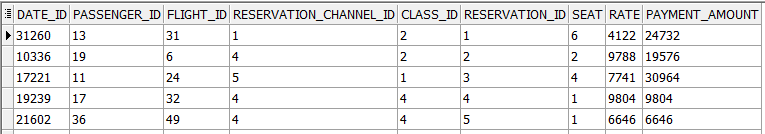
**sample data used in queries:**

we have used **dbForge Data Generator for Oracle** tool to auto generate dummy data.

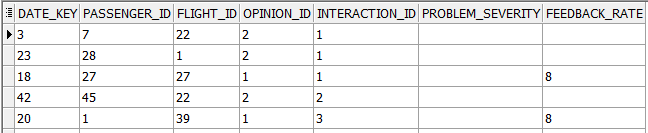
FLIGHT\_ACTIVITY



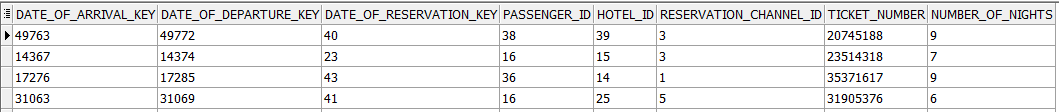
RESERVATION



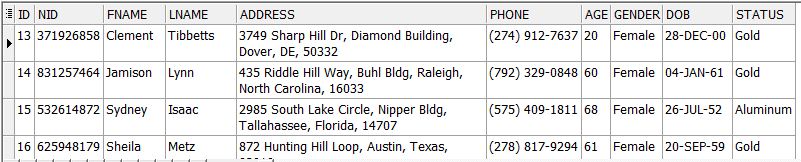
CUSTOMER\_CARE



OVERNIGHT\_STAYS



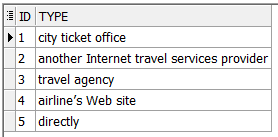
FREQ\_PASSENGER



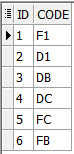
FLIGHT



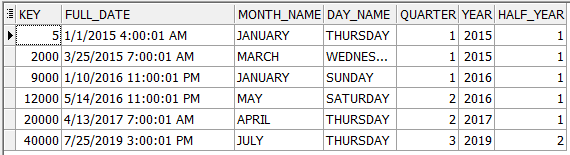
RESERVATION\_CHANNEL



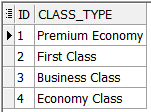
FARE\_BASIS



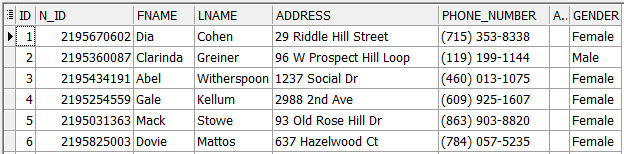
DATE\_TABLE



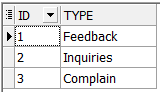
CLASS



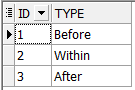
PASSENGER



CUST\_OPINION



INTERACTION



HOTEL

