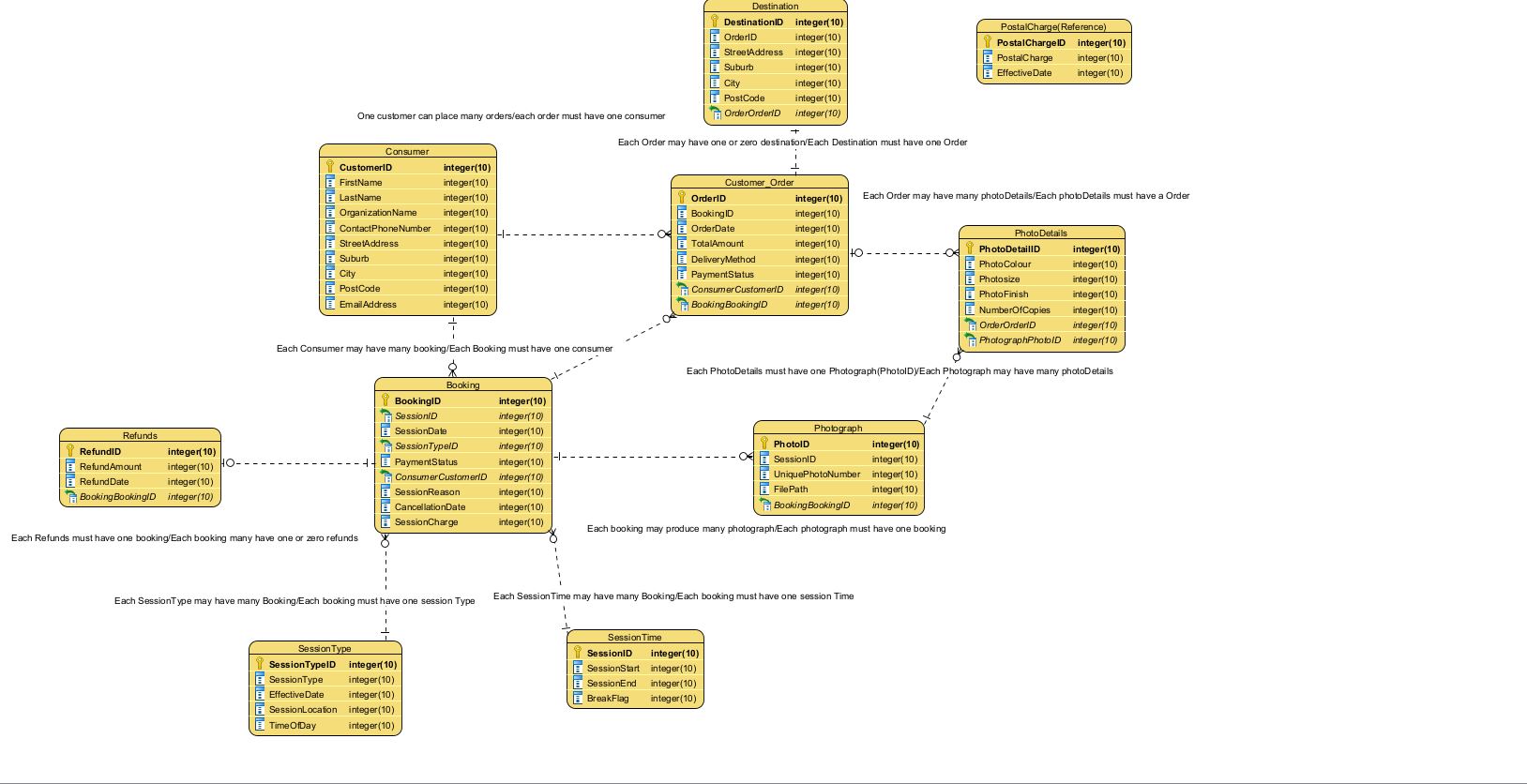
**--Task 3 Creating Database**

CREATE TABLE Customer

(

CustomerID INT PRIMARY KEY,

FirstName VARCHAR(50) NOT NULL,

LastName VARCHAR(50) NOT NULL,

OrganizationName VARCHAR(100),

ContactPhoneNumber VARCHAR(15) NOT NULL,

StreetAddress VARCHAR(100) NOT NULL,

Suburb VARCHAR(50) NOT NULL,

City VARCHAR(50) NOT NULL,

PostCode VARCHAR(10) NOT NULL,

EmailAddress VARCHAR(100) NOT NULL

);

CREATE TABLE SessionTimes

(

SessionID INT PRIMARY KEY,

SessionStart DATE NOT NULL,

SessionEnd DATE NOT NULL,

BreakFlag CHAR(1) NOT NULL,

CONSTRAINT break\_flag\_check CHECK (BreakFlag IN ('Y', 'N'))

);

CREATE TABLE SessionType

(

SessionTypeID INT PRIMARY KEY,

TypeName VARCHAR(50) NOT NULL,

SessionLocation VARCHAR(50) NOT NULL,

TimeOfDay VARCHAR(50) NOT NULL,

SessionCharge INT NOT NULL

);

--Create booking table, note CancellationDate is different from RefundDate in refound table.

CREATE TABLE Booking

(

BookingID INT PRIMARY KEY,

CustomerID INT NOT NULL,

SessionID INT NOT NULL,

SessionDate DATE NOT NULL,

SessionTypeID INT NOT NULL,

SessionReason VARCHAR(500) NOT NULL,

PaymentStatus VARCHAR(10) NOT NULL,

CancellationDate DATE,

FOREIGN KEY (CustomerID) REFERENCES Customer(CustomerID),

FOREIGN KEY (SessionID) REFERENCES SessionTimes(SessionID),

FOREIGN KEY (SessionTypeID) REFERENCES SessionType(SessionTypeID),

CONSTRAINT payment\_status\_check CHECK (PaymentStatus IN ('Paid', 'Unpaid', 'Refunded'))

);

CREATE TABLE Customer\_Order

(

OrderID INT PRIMARY KEY,

BookingID INT NOT NULL,

CustomerID INT NOT NULL,

OrderDate DATE NOT NULL,

TotalAmount INT NOT NULL,

DeliveryMethod VARCHAR(50) NOT NULL,

PaymentStatus VARCHAR(10) NOT NULL,

FOREIGN KEY (CustomerID) REFERENCES Customer(CustomerID),

FOREIGN KEY (BookingID) REFERENCES Booking(BookingID),

CONSTRAINT delivery\_method\_check CHECK (DeliveryMethod IN ('Studio Pickup', 'Courier')),

CONSTRAINT order\_payment\_status\_check CHECK (PaymentStatus IN ('Paid', 'Unpaid'))

);

CREATE TABLE Photograph

(

PhotoID INT PRIMARY KEY,

SessionID INT NOT NULL,

UniquePhotoNumber INT NOT NULL,

FilePath VARCHAR(255) NOT NULL,

FOREIGN KEY (SessionID) REFERENCES SessionTimes(SessionID)

);

CREATE TABLE PhotoDetails

(

PhotoDetailID INT PRIMARY KEY,

OrderID INT NOT NULL,

PhotoID INT NOT NULL,

PhotoColour VARCHAR(50) NOT NULL,

PhotoSize VARCHAR(50) NOT NULL,

PhotoFinish VARCHAR(50) NOT NULL,

NumberOfCopies INT NOT NULL,

PhotoPrice INT NOT NULL,

FOREIGN KEY (OrderID) REFERENCES Customer\_Order(OrderID),

FOREIGN KEY (PhotoID) REFERENCES Photograph(PhotoID)

);

CREATE TABLE Refund

(

RefundID INT PRIMARY KEY,

BookingID INT NOT NULL,

RefundAmount DECIMAL(8,2) NOT NULL,

RefundDate DATE NOT NULL,

FOREIGN KEY (BookingID) REFERENCES Booking(BookingID)

);

CREATE TABLE Destination

(

DestinationID INT PRIMARY KEY,

OrderID INT,

StreetAddress VARCHAR(100),

Postcode VARCHAR(10),

Suburb VARCHAR(50),

City VARCHAR(50),

FOREIGN KEY (OrderID) REFERENCES Customer\_Order(OrderID)

);

CREATE TABLE PostalCharge

(

DestinationID INT PRIMARY KEY,

PostalCharge FLOAT,

EffectiveDate DATE,

FOREIGN KEY (DestinationID) REFERENCES Destination(DestinationID)

);

**--keypoint: for the cancellation date, although it should be implimented in application layer, I Created a trigger to stop data coming in if less then three days.**

CREATE OR REPLACE TRIGGER trg\_check\_cancellation

BEFORE UPDATE OF CancellationDate ON Booking

FOR EACH ROW

DECLARE

days\_diff NUMBER;

BEGIN

SELECT (SessionDate - SYSDATE) INTO days\_diff FROM Booking WHERE BookingID = :new.BookingID;

IF days\_diff < 3 THEN

RAISE\_APPLICATION\_ERROR(-20001, 'You can only cancel at least three days before in advance to receive a refund');

END IF;

END;

/

**--Task 4 Insert Information**

**-- Insert into Customer, I spend(waste) a lot of time searching for charlie's information**

INSERT INTO Customer (CustomerID, FirstName, LastName, OrganizationName, ContactPhoneNumber, StreetAddress, Suburb, City, PostCode, EmailAddress)

VALUES (1, 'Albert', 'Einstein', 'Princeton University', '1029384756', '112 Mercer Street', 'Princeton', 'New Jersey', '08540', 'a.einstein@princeton.edu');

INSERT INTO Customer (CustomerID, FirstName, LastName, OrganizationName, ContactPhoneNumber, StreetAddress, Suburb, City, PostCode, EmailAddress)

VALUES (2, 'Marie', 'Curie', 'Sorbonne University', '19283982', '1 Rue de la Pépinière', 'Paris', 'France', '75008', 'm.curie@sorbonne.fr');

INSERT INTO Customer (CustomerID, FirstName, LastName, OrganizationName, ContactPhoneNumber, StreetAddress, Suburb, City, PostCode, EmailAddress)

VALUES (3, 'Nikola', 'Tesla', 'Colorado Springs Laboratory', '293056281', 'Knob Hill', 'Colorado Springs', 'Colorado', '80903', 'n.tesla@cslab.com');

INSERT INTO Customer (CustomerID, FirstName, LastName, OrganizationName, ContactPhoneNumber, StreetAddress, Suburb, City, PostCode, EmailAddress)

VALUES (4, 'Rosalind', 'Franklin', 'Kings College London', '2345678901', 'Strand', 'London', 'United Kingdom', 'WC2R 2LS', 'r.franklin@kcl.ac.uk');

INSERT INTO Customer (CustomerID, FirstName, LastName, OrganizationName, ContactPhoneNumber, StreetAddress, Suburb, City, PostCode, EmailAddress)

VALUES (5, 'Alan', 'Turing', 'Manchester University', '5678901234', 'Oxford Road', 'Manchester', 'United Kingdom', 'M13 9PL', 'a.turing@manchester.ac.uk');

INSERT INTO Customer (CustomerID, FirstName, LastName, OrganizationName, ContactPhoneNumber, StreetAddress, Suburb, City, PostCode, EmailAddress)

VALUES (6, 'Charlie', 'White', 'Most Critical', '0850930291', 'Bucole your seat belt Street', 'alligator street', 'Florida', '696969', 'charlie.brooker@mostcritical.com');

INSERT INTO Customer (CustomerID, FirstName, LastName, OrganizationName, ContactPhoneNumber, StreetAddress, Suburb, City, PostCode, EmailAddress)

VALUES (7, 'Charles', 'Dickens', NULL, '2345678901', 'Oliver Twist Lane', 'two-city', 'London', '114514', 'charles.dickens@greatexpectations.com');

INSERT INTO Customer (CustomerID, FirstName, LastName, OrganizationName, ContactPhoneNumber, StreetAddress, Suburb, City, PostCode, EmailAddress)

VALUES (8, 'William', 'Shakespeare', NULL, '3456789012', 'Romeo and Juliet Street', 'much-ado about nothing', 'Stratford-upon-Avon', '10023', 'william.shakespeare@thebard.com');

INSERT INTO Customer (CustomerID, FirstName, LastName, OrganizationName, ContactPhoneNumber, StreetAddress, Suburb, City, PostCode, EmailAddress)

VALUES (9, 'George', 'Orwell', NULL, '4567890123', 'Animal Farm Road', 'Big-brother', 'Motihari', '292732', 'george.orwell@1984.com');

INSERT INTO Customer (CustomerID, FirstName, LastName, OrganizationName, ContactPhoneNumber, StreetAddress, Suburb, City, PostCode, EmailAddress)

VALUES (10, 'Jane', 'Austen', NULL, '5678901234', 'Pride and Prejudice Avenue', '42', 'Hampshire', '12312', 'jane.austen@prideandprejudice.com');

INSERT INTO Customer (CustomerID, FirstName, LastName, OrganizationName, ContactPhoneNumber, StreetAddress, Suburb, City, PostCode, EmailAddress)

VALUES (11, 'Yi', 'Long Ma', 'SpaceX', '6789012345', 'Mars Colony Base', 'Tiananmen Square', 'Beijing', '14312', 'yi.long.ma@spacex.com');

--Incert into SessionTime

INSERT INTO SessionTimes (SessionID, SessionStart, SessionEnd, BreakFlag)

VALUES (1, TO\_DATE('08:30:00', 'HH24:MI:SS'), TO\_DATE('09:45:00', 'HH24:MI:SS'), 'Y');

INSERT INTO SessionTimes (SessionID, SessionStart, SessionEnd, BreakFlag)

VALUES (2, TO\_DATE('10:00:00', 'HH24:MI:SS'), TO\_DATE('11:15:00', 'HH24:MI:SS'), 'Y');

INSERT INTO SessionTimes (SessionID, SessionStart, SessionEnd, BreakFlag)

VALUES (3, TO\_DATE('11:30:00', 'HH24:MI:SS'), TO\_DATE('12:45:00', 'HH24:MI:SS'), 'Y');

INSERT INTO SessionTimes (SessionID, SessionStart, SessionEnd, BreakFlag)

VALUES (4, TO\_DATE('13:30:00', 'HH24:MI:SS'), TO\_DATE('14:45:00', 'HH24:MI:SS'), 'Y');

INSERT INTO SessionTimes (SessionID, SessionStart, SessionEnd, BreakFlag)

VALUES (5, TO\_DATE('17:30:00', 'HH24:MI:SS'), TO\_DATE('18:45:00', 'HH24:MI:SS'), 'N');

--SessionTYPE

INSERT INTO SessionType (SessionTypeID, TypeName, SessionCharge, SessionLocation, TimeOfDay)

VALUES (1, 'Daytime Studio', 250, 'Studio', 'Daytime');

INSERT INTO SessionType (SessionTypeID, TypeName, SessionCharge, SessionLocation, TimeOfDay)

VALUES (2, 'Evening Studio', 275, 'Studio', 'Evening');

INSERT INTO SessionType (SessionTypeID, TypeName, SessionCharge, SessionLocation, TimeOfDay)

VALUES (3, 'CustomLocation', 400, 'CustomLocation', 'Daytime');

-- Booking Table

--Einstine's booking

INSERT INTO Booking (BookingID, CustomerID, SessionID, SessionDate, SessionTypeID, PaymentStatus, SessionReason)

VALUES (1, 1, 1, TO\_DATE('2023-06-23', 'YYYY-MM-DD'), 1, 'Paid', 'If one endeavors to comprehend the world in its depth and complexity, it is crucial to adopt an appreciable perspective. APU Photography resonates harmoniously with my philosophical principles, capturing not just mere images but the inherent reality. Much like in my thought experiments, they delve into the details, pondering the extraordinary in the ordinary. Their pursuit of excellence in photography mirrors my quest for understanding the Universe');

--Marie Curie's booking

INSERT INTO Booking (BookingID, CustomerID, SessionID, SessionDate, SessionTypeID, PaymentStatus, SessionReason)

VALUES (2, 2, 2, TO\_DATE('2023-05-11', 'YYYY-MM-DD'), 2, 'Paid', 'In my field of study, I have come to deeply value precision, clarity, and meticulousness. APU Photography embodies these principles through their dedicated craftsmanship. Their capability to capture moments with an unparalleled level of detail reminds me of my diligent work in the lab. Their portrayal of life’s radiance is indeed a beautiful spectacle, similar to the faint glow from my test tubes containing radium.');

--Nikola Tesla's booking

INSERT INTO Booking (BookingID, CustomerID, SessionID, SessionDate, SessionTypeID, PaymentStatus, SessionReason)

VALUES (3, 3, 3, TO\_DATE('2022-09-17', 'YYYY-MM-DD'), 1, 'Paid', 'In a world vibrating with energies unseen, APU Photography has mastered the art of harnessing light, transforming it into tangible memories. Much like my work with electricity, they have tapped into a fundamental force of nature. Their utilization of technology and expertise to capture a moment’s essence truly fascinates me. In a sense, we both work to make the invisible visible.');

--Franklin's booking

INSERT INTO Booking (BookingID, CustomerID, SessionID, SessionDate, SessionTypeID, PaymentStatus, SessionReason)

VALUES (4, 4, 2, TO\_DATE('2021-06-18', 'YYYY-MM-DD'), 2, 'Unpaid', 'Throughout my life, I have observed the importance of capturing life’s fleeting moments, much like jotting down one’s thoughts in a Poor Richard’s almanac. APU Photography’s dedication to immortalizing those moments resonates with my philosophy. Their ability to illuminate a subject reminds me of a well-lit glass armonica, each image as harmonious and captivating as the tunes it plays.');

--Turing's booking

INSERT INTO Booking (BookingID, CustomerID, SessionID, SessionDate, SessionTypeID, PaymentStatus, SessionReason)

VALUES (5, 5, 1, TO\_DATE('2010-09-21', 'YYYY-MM-DD'), 1, 'Paid', 'In the realm of mathematical logic, there is a beauty to patterns, sequences, and truths. What intrigues me about APU Photography is their ability to capture this logic within life’s chaos. Every photograph they produce carries a pattern, a sequence, an inherent truth about the moment it encapsulates. Their work parallels my exploration of computational systems, finding structure in the seemingly unstructured.');

--Charlie booking

INSERT INTO Booking (BookingID, CustomerID, SessionID, SessionDate, SessionTypeID, PaymentStatus, SessionReason, CancellationDate)

VALUES (6, 6, 3, TO\_DATE('2020-06-20', 'YYYY-MM-DD'), 1, 'Refunded', 'Sorry folks, Charlie here. Turns out my youtuber schedule''s tighter than a gnat''s chuff. Might have to pull a plug on the cafe gig. Refunds aplenty inbound if that happens.', TO\_DATE('2020-06-17', 'YYYY-MM-DD'));

INSERT INTO Booking (BookingID, CustomerID, SessionID, SessionDate, SessionTypeID, PaymentStatus, SessionReason)

VALUES (7, 6, 1, TO\_DATE('2019-06-15', 'YYYY-MM-DD'), 3, 'Paid', 'Heya, Charlie here. Decided to go with APU Photography because, lets be real, their artistry is far from being a moist pile of mediocrity. Looking forward to some good old studio magic.');

--Charles Dickens

INSERT INTO Booking (BookingID, CustomerID, SessionID, SessionDate, SessionTypeID, PaymentStatus, SessionReason)

VALUES (8, 7, 2, TO\_DATE('2023-06-07', 'YYYY-MM-DD'), 2, 'Paid', 'It is a far, far better thing to have my portrait taken by APU Photography than I have ever done; it is a far, far better place I go to than I have ever known. Their photographers have the art of capturing the spirit of their subjects, not merely their visage.');

--William Shakespeare

INSERT INTO Booking (BookingID, CustomerID, SessionID, SessionDate, SessionTypeID, PaymentStatus, SessionReason)

VALUES (9, 8, 3, TO\_DATE('2021-05-27', 'YYYY-MM-DD'), 3, 'Paid', 'All the world’s a stage, And all the men and women merely players. With APU Photography, they capture us in our acts, immortalizing our fleeting roles. I am but a humble bard, seeking a portrait that does justice to my sonnets.');

--George Orwell

INSERT INTO Booking (BookingID, CustomerID, SessionID, SessionDate, SessionTypeID, PaymentStatus, SessionReason)

VALUES (10, 9, 3, TO\_DATE('2023-01-01', 'YYYY-MM-DD'), 1, 'Paid', 'In a time of deceit, telling the truth is a revolutionary act. APU Photography has that truth - the raw honesty captured in their photographs is unparalleled. I chose them to shine a light in this age of darkness.');

--Jane's bookings

INSERT INTO Booking (BookingID, CustomerID, SessionID, SessionDate, SessionTypeID, PaymentStatus, SessionReason)

VALUES (11, 10, 3, TO\_DATE('2023-12-30', 'YYYY-MM-DD'), 2, 'Paid', 'It is a truth universally acknowledged, that a person in possession of good looks, must be in want of a good photograph. I have no doubt whatsoever in APU Photography’s ability to capture my essence. Their skills are on par with the very best of Bath.');

INSERT INTO Booking (BookingID, CustomerID, SessionID, SessionDate, SessionTypeID, PaymentStatus, SessionReason)

VALUES (12, 10, 2, TO\_DATE('2023-12-30', 'YYYY-MM-DD'), 3, 'Paid', 'Looking forward to working with APU Photography again. Their skills are on par with the very best of Bath.');

--Yi Long Ma's booking

INSERT INTO Booking (BookingID, CustomerID, SessionID, SessionDate, SessionTypeID, PaymentStatus, SessionReason)

VALUES (13, 11, 3, TO\_DATE('2023-06-20', 'YYYY-MM-DD'), 3, 'Paid', 'I am interested in having my portrait done by APU Photography. I heard from a friend that they are exceptional at their work. My friend Jane Austen recommended them.');

INSERT INTO Booking (BookingID, CustomerID, SessionID, SessionDate, SessionTypeID, PaymentStatus, SessionReason)

VALUES (14, 11, 3, TO\_DATE('2023-08-01', 'YYYY-MM-DD'), 3, 'Paid', 'Looking forward to another great experience with APU Photography. Their work has always exceeded my expectations.');

**-- The refound table**

INSERT INTO Refund (RefundID, BookingID, RefundAmount, RefundDate)

VALUES (1, 6, 400, TO\_DATE('2023-06-06', 'YYYY-MM-DD'));

**-- Customer\_Order Table, this table records after customer decided to pick up( null in Destination) or Courier to his city(refers to postal charge table and**

INSERT INTO Customer\_Order (OrderID, BookingID, CustomerID, OrderDate, TotalAmount, DeliveryMethod, PaymentStatus)

VALUES (1, 1, 1, TO\_DATE('2023-06-25', 'YYYY-MM-DD'), 500, 'Studio Pickup', 'Paid');

INSERT INTO Customer\_Order (OrderID, BookingID, CustomerID, OrderDate, TotalAmount, DeliveryMethod, PaymentStatus)

VALUES(2, 2, 2, TO\_DATE('2023-05-13', 'YYYY-MM-DD'), 300, 'Courier', 'Paid');

INSERT INTO Customer\_Order (OrderID, BookingID, CustomerID, OrderDate, TotalAmount, DeliveryMethod, PaymentStatus)

VALUES (3, 3, 3, TO\_DATE('2022-09-19', 'YYYY-MM-DD'), 700, 'Courier', 'Paid');

INSERT INTO Customer\_Order (OrderID, BookingID, CustomerID, OrderDate, TotalAmount, DeliveryMethod, PaymentStatus)

VALUES (4, 7, 6, TO\_DATE('2019-06-17', 'YYYY-MM-DD'), 200, 'Studio Pickup', 'Paid');

INSERT INTO Customer\_Order (OrderID, BookingID, CustomerID, OrderDate, TotalAmount, DeliveryMethod, PaymentStatus)

VALUES (5, 8, 7, TO\_DATE('2023-06-09', 'YYYY-MM-DD'), 550, 'Studio Pickup', 'Paid');

INSERT INTO Customer\_Order (OrderID, BookingID, CustomerID, OrderDate, TotalAmount, DeliveryMethod, PaymentStatus)

VALUES (6, 9, 8, TO\_DATE('2021-05-29', 'YYYY-MM-DD'), 650, 'Courier', 'Paid');

INSERT INTO Customer\_Order (OrderID, BookingID, CustomerID, OrderDate, TotalAmount, DeliveryMethod, PaymentStatus)

VALUES (7, 10, 9, TO\_DATE('2023-01-03', 'YYYY-MM-DD'), 600, 'Courier', 'Paid');

INSERT INTO Customer\_Order (OrderID, BookingID, CustomerID, OrderDate, TotalAmount, DeliveryMethod, PaymentStatus)

VALUES (8, 11, 10, TO\_DATE('2023-12-31', 'YYYY-MM-DD'), 800, 'Studio Pickup', 'Paid');

INSERT INTO Customer\_Order (OrderID, BookingID, CustomerID, OrderDate, TotalAmount, DeliveryMethod, PaymentStatus)

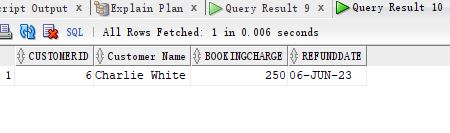
VALUES (9, 12, 10, TO\_DATE('2023-12-31', 'YYYY-MM-DD'), 400, 'Studio Pickup', 'Paid');

INSERT INTO Customer\_Order (OrderID, BookingID, CustomerID, OrderDate, TotalAmount, DeliveryMethod, PaymentStatus)

VALUES (10, 13, 11, TO\_DATE('2023-06-22', 'YYYY-MM-DD'), 1000, 'Courier', 'Paid');

INSERT INTO Customer\_Order (OrderID, BookingID, CustomerID, OrderDate, TotalAmount, DeliveryMethod, PaymentStatus)

VALUES (11, 14, 11, TO\_DATE('2023-08-03', 'YYYY-MM-DD'), 950, 'Courier', 'Paid');

****INSERT INTO Photograph (PhotoID, SessionID, UniquePhotoNumber, FilePath)

VALUES (1, 1, 938291091, '/ubuntu/home/US/WackyEinsteinTongue.jpg');

INSERT INTO Photograph (PhotoID, SessionID, UniquePhotoNumber, FilePath)

VALUES(2, 5, 938291092, '/ubuntu/home/China/YilongmaMeetsXijingping.jpg');

INSERT INTO Photograph (PhotoID, SessionID, UniquePhotoNumber, FilePath)

VALUES(3, 3, 938291093, '/ubuntu/home/US/CharliewithHisAligator.jpg');

INSERT INTO Photograph (PhotoID, SessionID, UniquePhotoNumber, FilePath)

VALUES(4, 4, 938291094, '/ubuntu/home/SovietUnion/YoungOwrell.jpg');

INSERT INTO Photograph (PhotoID, SessionID, UniquePhotoNumber, FilePath)

VALUES(5, 2, 938291095, '/ubuntu/home/US/Experiment.jpg');

INSERT INTO Photograph (PhotoID, SessionID, UniquePhotoNumber, FilePath)

VALUES(6, 1, 938291095, '/ubuntu/home/FR/RadioactiveLady.jpg');

INSERT INTO Photograph (PhotoID, SessionID, UniquePhotoNumber, FilePath)

VALUES(7, 4, 938291095, '/ubuntu/home/UK/TuringTypingSomething.jpg');

INSERT INTO Photograph (PhotoID, SessionID, UniquePhotoNumber, FilePath)

VALUES(8, 3, 938291095, '/ubuntu/home/UK/Shakespearholdingskull.jpg');

INSERT INTO Photograph (PhotoID, SessionID, UniquePhotoNumber, FilePath)

VALUES(9, 2, 938291095, '/ubuntu/home/US/CharlieWithFloridaman.jpg');

**-- PhotoDetails Table**

INSERT INTO PhotoDetails (PhotoDetailID, OrderID, PhotoID, PhotoColour, PhotoSize, PhotoFinish, NumberOfCopies, PhotoPrice)

VALUES (1, 1, 1, 'FullRes', '1920\*1080', 'Glossy', 1, 15);

INSERT INTO PhotoDetails (PhotoDetailID, OrderID, PhotoID, PhotoColour, PhotoSize, PhotoFinish, NumberOfCopies, PhotoPrice)

VALUES(2, 11, 2, 'Black and White', '1024 x 768', 'Canvas', 2, 15);

INSERT INTO PhotoDetails (PhotoDetailID, OrderID, PhotoID, PhotoColour, PhotoSize, PhotoFinish, NumberOfCopies, PhotoPrice)

VALUES(3, 6, 3, 'HighRes', '3840 x 2160', 'Luster', 1, 10);

INSERT INTO PhotoDetails (PhotoDetailID, OrderID, PhotoID, PhotoColour, PhotoSize, PhotoFinish, NumberOfCopies, PhotoPrice)

VALUES(4, 9, 4, 'Black and White', '1080 x 1080', 'Matte', 2, 10);

INSERT INTO PhotoDetails (PhotoDetailID, OrderID, PhotoID, PhotoColour, PhotoSize, PhotoFinish, NumberOfCopies, PhotoPrice)

VALUES(5, 4, 5, 'FullRes', '1200 x 630', 'Glossy', 3, 20);

INSERT INTO PhotoDetails (PhotoDetailID, OrderID, PhotoID, PhotoColour, PhotoSize, PhotoFinish, NumberOfCopies, PhotoPrice)

VALUES(6, 2, 6, 'RedDISABLED', '1024 x 630', 'Matte', 1, 15);

INSERT INTO PhotoDetails (PhotoDetailID, OrderID, PhotoID, PhotoColour, PhotoSize, PhotoFinish, NumberOfCopies, PhotoPrice)

VALUES(7, 7, 7, 'Colour360', '3840 x 2160', 'Blurry', 5, 10);

INSERT INTO PhotoDetails (PhotoDetailID, OrderID, PhotoID, PhotoColour, PhotoSize, PhotoFinish, NumberOfCopies, PhotoPrice)

VALUES(8, 8, 8, 'Black and White', '1920 x 1080', 'Glossy', 4, 15);

INSERT INTO PhotoDetails (PhotoDetailID, OrderID, PhotoID, PhotoColour, PhotoSize, PhotoFinish, NumberOfCopies, PhotoPrice)

VALUES(9, 6, 9, 'NormRes', '1200 x 630', 'Mask', 2, 10);

INSERT INTO PhotoDetails (PhotoDetailID, OrderID, PhotoID, PhotoColour, PhotoSize, PhotoFinish, NumberOfCopies, PhotoPrice)

VALUES(10, 7, 2, 'NormRes', '580 x 630', 'Glossy', 7, 25);

**--Destination for customer who ordered printed digital photos delivered to their door step**

INSERT INTO Destination (DestinationID, OrderID, StreetAddress, Postcode, Suburb, City)

VALUES (1, 1, '112 Mercer Street', '08540', 'Princeton', 'New Jersey');

INSERT INTO Destination (DestinationID, OrderID, StreetAddress, Postcode, Suburb, City)

VALUES (2, 2, '1 Rue de la Pépinière', '75008', 'Paris', 'France');

INSERT INTO Destination (DestinationID, OrderID, StreetAddress, Postcode, Suburb, City)

VALUES (3, 3, 'Knob Hill', '80903', 'Colorado Springs', 'Colorado');

INSERT INTO Destination (DestinationID, OrderID, StreetAddress, Postcode, Suburb, City)

VALUES (4, 4, 'Strand', 'WC2R 2LS', 'London', 'United Kingdom');

--Postal charge that correspond the changing postal charge over time

INSERT INTO PostalCharge (DestinationID, PostalCharge, EffectiveDate)

VALUES (1, 12.5, TO\_DATE('2023-06-06', 'YYYY-MM-DD'));

INSERT INTO PostalCharge (DestinationID, PostalCharge, EffectiveDate)

VALUES(2, 20, TO\_DATE('2023-06-06', 'YYYY-MM-DD'));

INSERT INTO PostalCharge (DestinationID, PostalCharge, EffectiveDate)

VALUES(3, 30, TO\_DATE('2023-06-06', 'YYYY-MM-DD'));

INSERT INTO PostalCharge (DestinationID, PostalCharge, EffectiveDate)

VALUES(4, 15, TO\_DATE('2023-06-06', 'YYYY-MM-DD'));

**--Task 5, queries 1 Deadline is June 7th: Find all customers who have attempted to refund bookings before June 7th, 2023, and had booking charges greater than $200, ordered by last name.**

SELECT

c.CustomerID,

c.FirstName || ' ' || c.LastName "Customer Name",

st.SessionCharge BookingCharge,

r.RefundDate

FROM Customer c, Booking b, Refund r, SessionType st

WHERE c.CustomerID = b.CustomerID

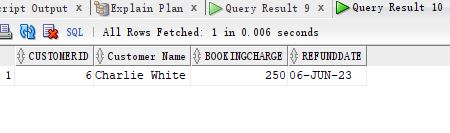
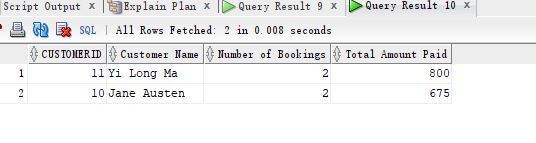
AND b.BookingID = r.BookingID

AND b.SessionTypeID = st.SessionTypeID

AND r.RefundDate < TO\_DATE('2023-06-07', 'YYYY-MM-DD')

AND st.SessionCharge > 200

ORDER BY c.LastName;



**-- Queries 2 Find the rich: find customers who have made more than one booking, whose total payment amount (subtracting any refunded amounts) is greater than $600, who have successfully made all their payments. The results will be sorted by the total payment amount in descending order.**

SELECT c.CustomerID,

c.FirstName || ' ' || c.LastName AS "Customer Name",

COUNT(b.BookingID)"Number of Bookings",

(SUM(st.SessionCharge) - NVL(SUM(rf.RefundAmount), 0))"Total Amount Paid"

FROM Customer c, Booking b, SessionType st, Refund rf

WHERE c.CustomerID = b.CustomerID

AND b.SessionTypeID = st.SessionTypeID

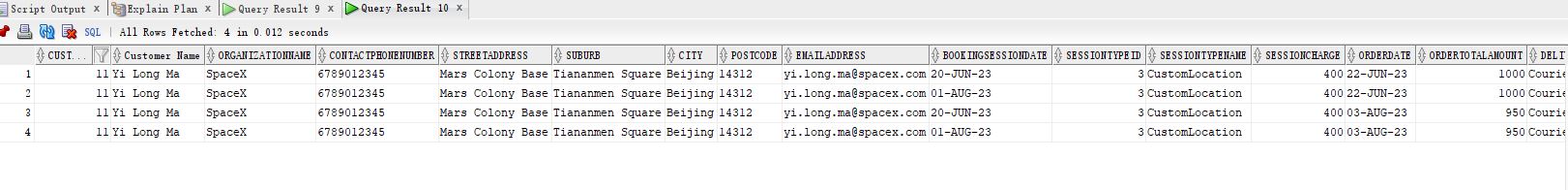
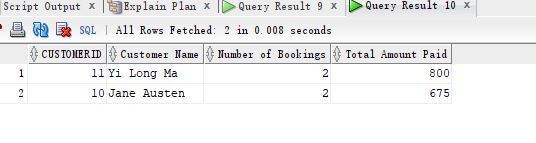
AND b.BookingID = rf.BookingID(+)

GROUP BY c.CustomerID, c.FirstName, c.LastName

HAVING

COUNT(b.BookingID) > 1

AND (SUM(st.SessionCharge) - NVL(SUM(rf.RefundAmount), 0)) > 600

ORDER BY "Total Amount Paid" DESC;

**-- Queries 3 Search Customer Related information: find most information related to customer searching by last name and first name, order by order date**

SELECT c.CustomerID,

c.FirstName || ' ' || c.LastName AS "Customer Name",

c.OrganizationName,

c.ContactPhoneNumber,

c.StreetAddress,

c.Suburb,

c.City,

c.PostCode,

c.EmailAddress,

b.SessionDate BookingSessionDate,

b.SessionTypeID,

st.TypeName SessionTypeName,

st.SessionCharge SessionCharge,

co.OrderDate,

co.TotalAmount OrderTotalAmount,

co.DeliveryMethod,

co.PaymentStatus OrderPaymentStatus,

pd.PhotoColour,

pd.PhotoSize,

pd.PhotoFinish,

pd.NumberOfCopies,

pd.PhotoPrice

FROM Customer c,

Booking b,

SessionType st,

Customer\_Order co,

PhotoDetails pd

WHERE c.CustomerID = b.CustomerID (+)

AND c.CustomerID = co.CustomerID (+)

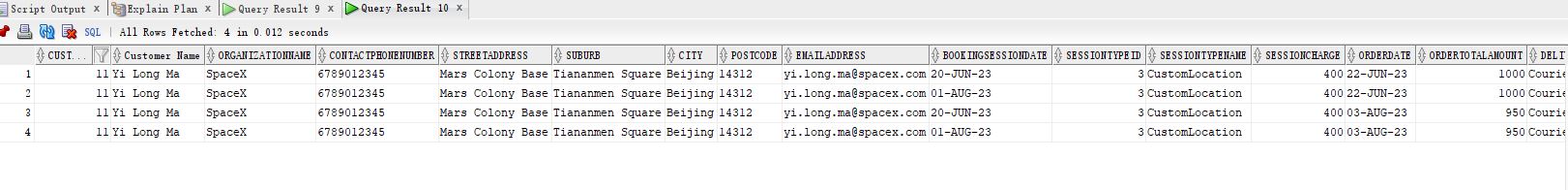
AND b.SessionTypeID = st.SessionTypeID (+)

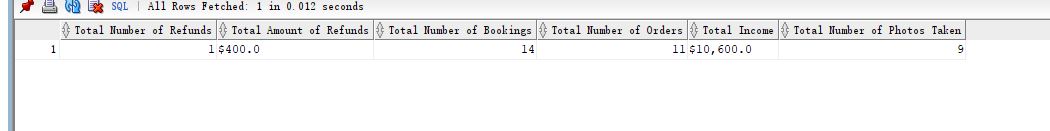
AND co.OrderID = pd.OrderID (+)

AND LOWER(c.FirstName) = '&FirstName'

AND LOWER(c.LastName) = '&LastName'

ORDER BY co.OrderDate;



Please note this is a process of de-normalization that merges tables together, this process created four tables, two in booking session and two for ordering delivery of photos

**-- Queries 4 The overview: find the total number of refunds, total amount of refunds, total number of bookings, total number of orders, total income (booking + orders), and total number of photos.(add $ and round to 1 decimal places)**

SELECT

(SELECT COUNT(\*) FROM Refund)"Total Number of Refunds",

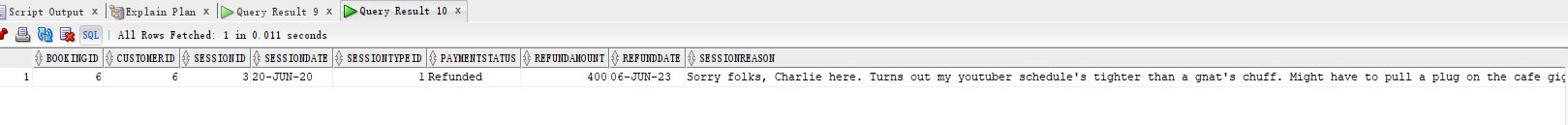
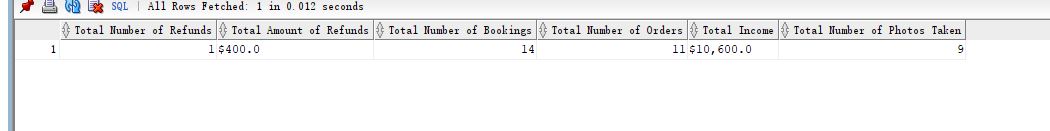
(SELECT TO\_CHAR(NVL(SUM(RefundAmount), 0), 'FM$999,990.0') FROM Refund)"Total Amount of Refunds",

(SELECT COUNT(\*) FROM Booking)"Total Number of Bookings",

(SELECT COUNT(\*) FROM Customer\_Order)"Total Number of Orders",

TO\_CHAR((SELECT NVL(SUM(TotalAmount), 0) FROM Customer\_Order) +(SELECT NVL(SUM(st.SessionCharge), 0) FROM Booking b, SessionType st WHERE b.SessionTypeID = st.SessionTypeID) -(SELECT NVL(SUM(RefundAmount), 0) FROM Refund), 'FM$999,990.0')"Total Income",

(SELECT COUNT(\*) FROM Photograph)"Total Number of Photos Taken"

FROM dual;

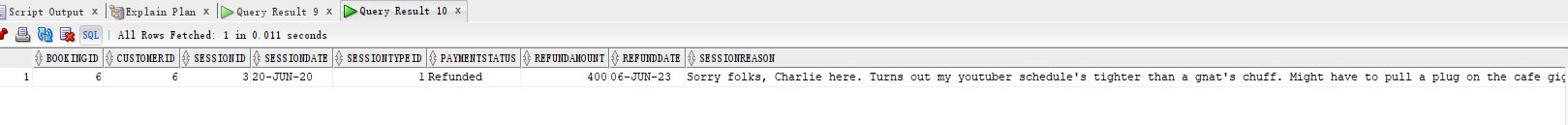
**--Queries 5 fuzzy search for the reasion: search the reason why customer books the session, that include sorry, give related information**

SELECT b.BookingID, b.CustomerID, b.SessionID, b.SessionDate, b.SessionTypeID, b.PaymentStatus, r.RefundAmount, r.RefundDate, b.SessionReason

FROM Booking b, Refund r

WhERE b.BookingID = r.BookingID

And LOWER(b.SessionReason) LIKE '%sorry%'

ORDER BY b.BookingID;

--Below codes are for testing and fine-tuning, delete when finished the project

SELECT \* FROM Customer;

SELECT \* FROM SessionTimes;

SELECT \* FROM Booking;

SELECT \* FROM Refund;

SELECT \* FROM Customer\_Order;

SELECT \* FROM Photograph;

SELECT \* FROM PhotoDetails;

SELECT \* FROM SessionType;

SELECT \* FROM Destination;

SELECT \* FROM PostalCharge ;

DROP TABLE PostalCharge;

DROP TABLE Destination;

DROP TABLE Refund;

DROP TABLE PhotoDetails;

DROP TABLE Customer\_Order;

DROP TABLE Photograph;

DROP TABLE Booking;

DROP TABLE SessionType;

DROP TABLE SessionTimes;

DROP TABLE Customer;

TRUNCATE TABLE PostalCharge;

TRUNCATE TABLE Destination;

TRUNCATE TABLE Refund;

TRUNCATE TABLE PhotoDetails;

TRUNCATE TABLE Customer\_Order;

TRUNCATE TABLE Photograph;

TRUNCATE TABLE Booking;

TRUNCATE TABLE SessionType;

TRUNCATE TABLE SessionTimes;

TRUNCATE TABLE Customer;

DELETE FROM PhotoDetails;

DELETE FROM Photograph;

DELETE FROM Customer\_Order;

DELETE FROM Refunds;

DELETE FROM Booking;

DELETE FROM SessionTimes;

DELETE FROM SessionType;

DELETE FROM Customer;