Celebal Internship (may'23-june'23)

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BATCH : 2
DOMAIN : SQL

E-commerce database using SQL

TABLE CREATION

Account table:
create table Account
(account_ID varchar2(10) NOT NULL,
registration_ID varchar2(10) NOT NULL,
fName varchar2(20) NOT NULL,
lName varchar2(40) NOT NULL,
email varchar2(320) NOT NULL,
cell_Num char(12) NULL,
logon_ID varchar2(20) NOT NULL,
password varchar2(32) NOT NULL,
create_Date DATE NOT NULL,
account_Type char(1) NOT NULL,
constraint account_Type check(account_Type IN ('P','B')),
constraint account_pk primary key (account_ID));

Item table:
create table item
(item_ID varchar2(10) not null,
sku char(8) not null,
name varchar2(40) not null,
price number(12,2) not null,
item_desc varchar2(100) null,
category varchar2(10) null,
stock number(5) not null,
item_star number(1) null,
itme_sizes varchar2(5) null,
color varchar2(20) null,
constraint item_pk primary key (item_id));

Card table:
create table CARD
(card_number VARCHAR2(16) not null,

cc_name VARCHAR2(40) not null,
pin CHAR(4) not null,
b_street VARCHAR2(40),
b_city VARCHAR2(20),
b_state CHAR(2),
b_zip CHAR(10),
constraint Card_PK primary Key (Card_Number));

Customer_order table:

create table Customer_Order
(order_ID varchar2(10) NOT NULL,
account_ID varchar2(10) NOT NULL,
s_street varchar2(40) NULL,
s_City varchar2(20) NULL,
s_State CHAR(2) NOT NULL,
s_Zip CHAR(10) NULL,
order_date DATE NULL,
receiver_name varchar2(40) NOT NULL,
delivery_date DATE NULL,
dispatch_date DATE NULL,
constraint Customer_Order_pk primary key (order_ID),
constraint account_order foreign key (account_ID) references Account);

Order_Item table:

create table Order_Item
(order_ID varchar2(10) NOT NULL,
order_item_ID varchar2(10) NOT NULL,
item_ID varchar2(10) NOT NULL,
discounted_price number(12,2) NOT NULL,
quantity number(20) NOT NULL,
constraint order_item_pk primary key (order_ID, order_item_ID),
constraint order_id foreign key (order_ID) references Customer_Order,
constraint item_id foreign key (item_ID) references Item);

Order status table:

create table ORDER_STATUS
(status_Order_ID VARCHAR2(10) not null,
status varchar2(40) null,
status_Timestamp varchar2(20) null,
constraint Status_PK primary key (Status_Order_ID, Status_Timestamp),
constraint STATUS_fk_Order foreign key (status_order_ID) references Customer_Order(order_ID));

Payment table:

create table Payment
(payment_id varchar2(10) NOT NULL,
order_id varchar2(10) NOT NULL,
payment_date DATE NULL,
total_amount NUMBER(12,2) NULL,
card_n varchar2(16) NULL,
constraint Payment_pk primary key (payment_id),

constraint Payment_fk_CARDNUM foreign key (card_n) references Card(card_number),
constraint Payment_fk_Customer_Order foreign key (order_id) references
Customer_Order(order_id));

Return table:

create table Returns
(returns_ID varchar2(10) NOT NULL,
refund_amount number(12,2) NOT NULL,
returns_date date NOT NULL,
order_ID varchar2(10) NOT NULL,
card_n varchar2(16) NOT NULL,
constraint returns_pk primary key (returns_ID),
constraint returns_order foreign key (order_ID) references Customer_Order,
constraint c_card foreign key (card_n) references Card);

create table Return_line_item
(return_ID varchar2(10) NOT NULL,
return_item_ID varchar2(10) NOT NULL,
quantity NUMBER(20) NOT NULL,
order_item varchar2(10) NOT NULL,
order_ID varchar2(10) NOT NULL,
constraint Return_line_item_pk primary key (return_ID, return_item_ID),
constraint Return_line_item_fk_RETURN foreign key (return_ID) references Returns(returns_ID),
constraint Return_line_fk_id_ITEM foreign key (order_ID,order_item) references
Order_Item(order_ID, order_item_ID)
);

Review table:

create table Review
(review_ID varchar2(10) NOT NULL,
r_star number(12,2) NOT NULL,
comments varchar2(255),
reviewDate date NOT NULL,
useful_flag number(1),
num_of_words number(3),
review_account varchar(10) NOT NULL,
review_item varchar(10) NOT NULL,
constraint useful_flag check(useful_flag IN (1,0)),
constraint review_pk primary key (review_ID),
constraint r_account foreign key (review_account) references Account,
constraint r_item foreign key (review_item) references Item);

Save table:

create table Save_For_Later
(sfl_account_ID varchar2(10) NOT NULL,
sfl_ID varchar2(10) NOT NULL,
sfl_item_ID varchar2(10) NOT NULL,
save_Date DATE NOT NULL,
constraint Save_For_Later_pk primary key (sfl_account_ID, sfl_ID),
constraint Save_For_Later_fk_ACCOUNT foreign key (sfl_account_ID) references Account(account_ID),
constraint Save_For_Later_fk_ITEM foreign key (sfl_item_ID) references Item(item_ID));

VALUE INSERTION

--Account

INSERT INTO ACCOUNT VALUES ('1234567890','1234567899','Brianna','Kean','Bk275@company.com','023-123-1234','bking','7C6A180B36896A0A8C02787EEAFB0E4C','20-Nov-20','B');
INSERT INTO ACCOUNT VALUES ('2298387651','4500078457','Marry','Andrews','ma828@company.com','393456890098','ma834','6CB75F652A9B52798EB6CF2201057C73','05-Dec-20','P');
INSERT INTO ACCOUNT VALUES ('7184545773','7186729830','Tony','Stark','tony.stark@avenger.com','232-534-8732','tstark15','819B0643D6B89DC9B579FDFC9094F28E','26-Apr-19','B');
INSERT INTO ACCOUNT VALUES ('1000','2000','Super','Man','superman@gmail.com','212-683-2039','superbro','34CC93ECE0BA9E3F6F235D4AF979B16C','01-Jan-19','P');
INSERT INTO ACCOUNT VALUES ('9405830483','9402759275','Satya','Nadella','snadella@outlook.com','987-674-0293','sandella','DB0EDD04AAAC4506F7EDAB03AC855D56','02-Feb-19','P');
INSERT INTO ACCOUNT VALUES ('9304395215','5174974009','Larry','Page','lapage123@gmail.com','9096067848','larrygoogle123','218DD27AEBECCECAE69AD8408D9A36BF','20-Mar-18','B');
INSERT INTO ACCOUNT VALUES ('6054296998','3859766232','Sergey','Brin','brin@gmail.com','8774840197','brinsergey63','00CDB7BB942CF6B290CEB97D6ACA64A3','21-Mar-18','B');
INSERT INTO ACCOUNT VALUES ('8127783337','1231702810','Mark','Zuckerberg','markzuck@icloud.com','8810957688','markzuck2004','B25EF06BE3B6948C0BC431DA46C2C738','27-May-19','B');

--Item

INSERT INTO ITEM VALUES ('0000000321','12121212','Best Socks','30.5','Low Quality Socks. Made with cheap materials.','Socks','300','5','M','Blue');
INSERT INTO ITEM VALUES ('2123987345','17465','Womens Jeans','99.99','Womens blue high-waist skinny jeans','Jeans','23','4','M','Blue');
INSERT INTO ITEM VALUES ('4983783429','72290323','T-shirt','100','Plain T-Shirt with Supreme Logo on it.','Tshirts','30','5','M','Black');
INSERT INTO ITEM VALUES ('1000','00000012','Superman pants','599.99','Supermans blue pants','Costume','10','5','M','Blue');
INSERT INTO ITEM VALUES ('2784287834','25804110','V-Neck Sweater','199.99','V-neck sweater made out of real cashmere wool','Sweater','50','4.8','L','Grey');
INSERT INTO ITEM VALUES ('5037523800','62998112','Google Logo T-shirt','39.99','Big Google logo in front','Tshirts','200','4.5','S','Light Black');
INSERT INTO ITEM VALUES ('2045201575','14405056','Small Google Logo T-shirt','19.99','Small Google Logo by pocket','Tshirts','150','4.6','L','Dark Black');
INSERT INTO ITEM VALUES ('4927973242','87768016','Armani Suit','399.99','Blue armani suit.','Suit','15','5','M','Blue');

--Card

INSERT INTO CARD VALUES ('1234432198766789','Brianna Kean','4321','2100 Walnut St','Philadelphia','PA','19103');
INSERT INTO CARD VALUES ('91002341','Marry Andrews','1299','Pompeo Neri street','Philadelphia','PA','19104');

INSERT INTO CARD VALUES ('9034029487348930','Tony Stark','782','6111 5th avenue','New York City','NY','10001');
INSERT INTO CARD VALUES ('1234123412341234','Super Man','1234','Super street','Philadelphia','PA','19099');
INSERT INTO CARD VALUES ('8819921485873043','Satya Nadella','8302','87 Fulton Rd.','Front Royal','VA','22630');
INSERT INTO CARD VALUES ('8587304388199214','Larry Page','7394','7280 Wrangler Road','Glendora','CA','91740');
INSERT INTO CARD VALUES ('2507881717195414','Sergey G Brin','7294','39 Indian Summer Street','Faribault','MN','55021');
INSERT INTO CARD VALUES ('1719541425078817','Mark Zuckerberg','9274','31 West Brook St.','Nashua','NH','03060');

--Customer_Order
INSERT INTO CUSTOMER_ORDER VALUES ('0000000002','1234567890','2100 Walnut St','Philadelphia','PA','19103','21-Nov-20','Brianna Kean','22-Nov-20','21-Nov-20');
INSERT INTO CUSTOMER_ORDER VALUES ('6141876715','2298387651','Pompeo Neri street','Philadelphia','PA','19104','05-Dec-20','Marry Andrews','12-Dec-20','05-Dec-20');
INSERT INTO CUSTOMER_ORDER VALUES ('342354465','7184545773','6111 5th avenue','New York City','NY','10001','21-Jun-19','Tony Stark','26-Jun-19','23-Jun-19');
INSERT INTO CUSTOMER_ORDER VALUES ('001','1000','Super street','Philadelphia','PA','19099','16-Jan-20','Super Man','25-Jan-20','18-Jan-20');
INSERT INTO CUSTOMER_ORDER VALUES ('6628160022','9405830483','87 Fulton Rd.','Front Royal','VA','22630','05-Feb-19','Satya Nadella','05-Mar-19','15-Feb-19');
INSERT INTO CUSTOMER_ORDER VALUES ('5919725578','9304395215','7280 Wrangler Road','Glendora','CA','91740','14-May-18','Larry Page','25-May-18','14-May-18');
INSERT INTO CUSTOMER_ORDER VALUES ('1251906635','6054296998','39 Indian Summer Street','Faribault','MN','55021','02-Apr-18','Sergey G Brin','01-Jun-18','29-May-18');
INSERT INTO CUSTOMER_ORDER VALUES ('9121506687','8127783337','31 West Brook St.','Nashua','NH','03060','12-Jun-19','Mark Zuckerberg','12-Aug-19','23-Jul-19');

--Order_Item
INSERT INTO order_item VALUES ('0000000002','0000012345','0000000321','0','1');
INSERT INTO order_item VALUES ('6141876715','9835472111','2123987345','89.99','2');
INSERT INTO order_item VALUES ('342354465','9297426093','4983783429','80','3');
INSERT INTO order_item VALUES ('001','333','1000','499.99','1');
INSERT INTO order_item VALUES ('6628160022','2639023105','2784287834','99.99','50');
INSERT INTO order_item VALUES ('5919725578','1991106761','5037523800','19.99','150');
INSERT INTO order_item VALUES ('1251906635','2354932174','2045201575','9.99','100');
INSERT INTO order_item VALUES ('9121506687','8690520276','4927973242','199.99','1');

--Order_Status
INSERT INTO Order_Status VALUES ('0000000002','Delivered','25-Nov-2020 12:14:07');
INSERT INTO Order_Status VALUES ('6141876715','Shipped','06-May-2020');
INSERT INTO Order_Status VALUES ('342354465','Delivered','26-June-2019 11:02');
INSERT INTO Order_Status VALUES ('001','Delivered','25-Jan-2020 10:53:21');
INSERT INTO Order_Status VALUES ('6628160022','Delivered','05-Mar-19 09:10');
INSERT INTO Order_Status VALUES ('5919725578','Shipped','14-May-18 11:00');
INSERT INTO Order_Status VALUES ('1251906635','Out For Delivery','01-Jun-18 10:30');
INSERT INTO Order_Status VALUES ('9121506687','Delivered','12-Aug-19 12:15');

--Payment
INSERT INTO payment VALUES ('1000000398','0000000002','22-Nov-20','30.5','1234432198766789');

INSERT INTO payment VALUES ('9827333344','6141876715','05-May-20','179.98','91002341');
INSERT INTO payment VALUES ('9308648390','342354465','22-Jun-19','240','9034029487348930');
INSERT INTO payment VALUES ('3333','001','16-Jan-20','499.99','1234123412341234');
INSERT INTO payment VALUES ('7359619365','6628160022','10-Feb-19','4999.5','8819921485873043');
INSERT INTO payment VALUES ('3427982395','5919725578','15-May-18','2998.5','8587304388199214');
INSERT INTO payment VALUES ('9418189064','1251906635','03-Apr-18','999','2507881717195414');
INSERT INTO payment VALUES ('6881285375','9121506687','12-Jun-19','199.99','1719541425078817');

--Return
INSERT INTO returns VALUES ('0928723615','30.5','03-Dec-20','0000000002','1234432198766789');
INSERT INTO returns VALUES ('1111983344','80','09-May-20','6141876715','91002341');
INSERT INTO returns VALUES ('9028394029','30','30-Jun-19','342354465','9034029487348930');
INSERT INTO returns VALUES ('8888','399.99','10-Feb-20','001','1234123412341234');
INSERT INTO returns VALUES ('2373514274','499.5','10-Jun-18','1251906635','2507881717195414');
INSERT INTO returns VALUES ('6150257296','199.99','15-Aug-19','9121506687','1719541425078817');

--Return_line_item
INSERT INTO Return_line_item VALUES ('0928723615','890236511','1','0000012345','0000000002');
INSERT INTO Return_line_item VALUES ('1111983344','27286993','1','9835472111','6141876715');
INSERT INTO Return_line_item VALUES ('9028394029','6384729375','1','9297426093','342354465');
INSERT INTO Return_line_item VALUES ('8888','1234','1','333','001');
INSERT INTO Return_line_item VALUES ('2373514274','1245725995','50','2354932174','1251906635');
INSERT INTO Return_line_item VALUES ('6150257296','5966816521','1','8690520276','9121506687');

--Review
INSERT INTO review VALUES ('0000000023','3','Not Bad','02-Sep-20','0','2','1234567890','0000000321');
INSERT INTO review VALUES ('7799262181','4','Good product for the given price','07-May-20','0','6','2298387651','2123987345');
INSERT INTO review VALUES ('8930290349','4','T-shirt is amazing, shrinked a little bit but it still fits perfectly. Just going to resell','27-Jun-19','0','16','7184545773','4983783429');
INSERT INTO review VALUES ('123123','5','Super superman pants','07-Feb-20','0','3','1000','1000');
INSERT INTO review VALUES ('9872754927','4.5','Really Good quality sweater and really soft','06-Mar-19','1','7','9405830483','2784287834');
INSERT INTO review VALUES ('6151529433','4.5','Interns and employees love the tshirt','27-May-18','1','6','9304395215','5037523800');
INSERT INTO review VALUES ('9290057620','4.5','Interns and employees love the tshirt','10-Jun-18','1','6','6054296998','2045201575');
INSERT INTO review VALUES ('1442924602','2.5','Runs short, material is nice though','20-Aug-19','1','6','8127783337','4927973242');

--Save_for_later
INSERT INTO save_for_later VALUES ('1234567890','9283048395','0000000321','11-May-20');
INSERT INTO save_for_later VALUES ('2298387651','9936475125','2123987345','23-May-20');
INSERT INTO save_for_later VALUES ('7184545773','987345623','4983783429','10-May-20');
INSERT INTO save_for_later VALUES ('1000','202020','1000','30-May-20');
INSERT INTO save_for_later VALUES ('9405830483','3970544620','2784287834','04-Feb-19');
INSERT INTO save_for_later VALUES ('9304395215','3399768191','5037523800','10-May-18');
INSERT INTO save_for_later VALUES ('6054296998','9174404786','2045201575','01-Apr-18');
INSERT INTO save_for_later VALUES ('8127783337','4031868220','4927973242','01-Jun-19');

QUERIES AND SYNTAX

Analysis
--Display all account's fname,lname,emails, phone# and date when
account is created on, that are not from NY.
```
select
account.fname, account.lname, account.email, account.cell_num, account.create_date,
customer_order.S_State
from
   customer_order,
   account
where
   account.account_id = customer_order.account_id
   and customer_order.S_State <> 'NY';
```

--Display order_id,payment date, returns date, total amount, refund
amount and difference of refund from total amount.
```
select
   payment.order_id,
   payment.payment_date,
   returns.returns_date,
   payment.total_amount,
   returns.refund_amount,
   (payment.total_amount-returns.refund_amount) as Difference
from
   payment, returns
where
   returns.card_n = payment.card_n;
```

--Display total amount, total refund and difference of total refund from
total amount for customer order who are not from city of Philadelphia
```
select
   sum(payment.total_amount) as Total_sales,
   sum(returns.refund_amount) as Refunds_Given,
   (sum(payment.total_amount)-sum(returns.refund_amount)) as Difference
from
   payment,
   customer_order,
   returns
where
   customer_order.S_city <> 'Philadelphia'
   and customer_order.order_ID = payment.order_ID
   and customer_order.order_ID = returns.order_ID;
```

-- update review flag from 0 to 1
```
update review set useful_flag='1' where useful_flag='0';
```

-- update review's r_star from 4.5 stars to 5 stars.

```
update review set r_star = '5' where r_star='4.5';
```

-- Update order_status where it says shipped to 'on its way'
```
update order_status set status = 'On its way' where status='Shipped';
```

--from payment remove any transaction which were less than $1000.00
```
delete from payment where total_amount<1000.00;
```

--delete reviews that has less than 4 stars
```
delete from review where R_star<4;
```

--delete any save for later items that are older than 01-Jan-20
```
delete from save_for_later where save_date<'01-Jan-20';
```

rollback;