Liam Daniell
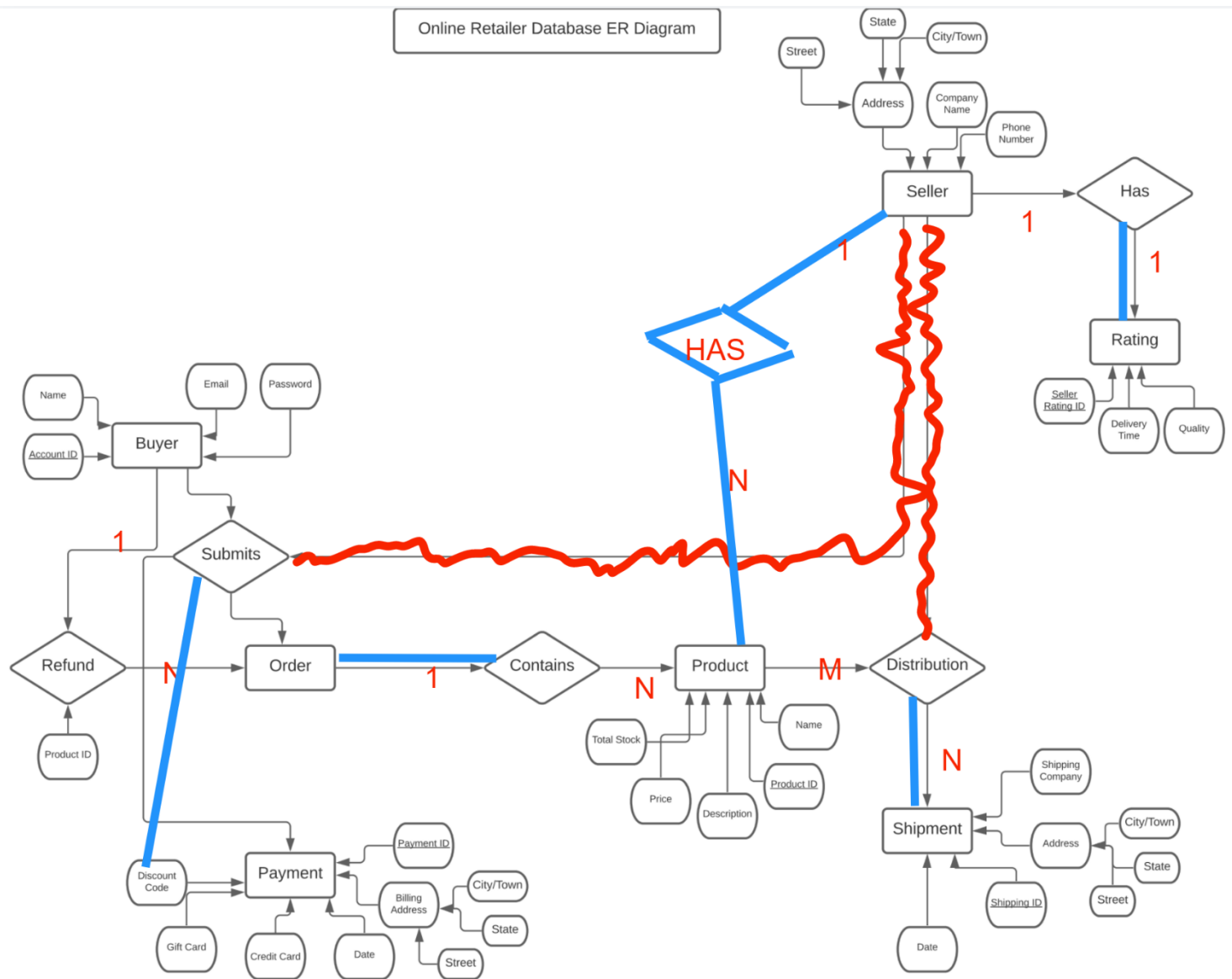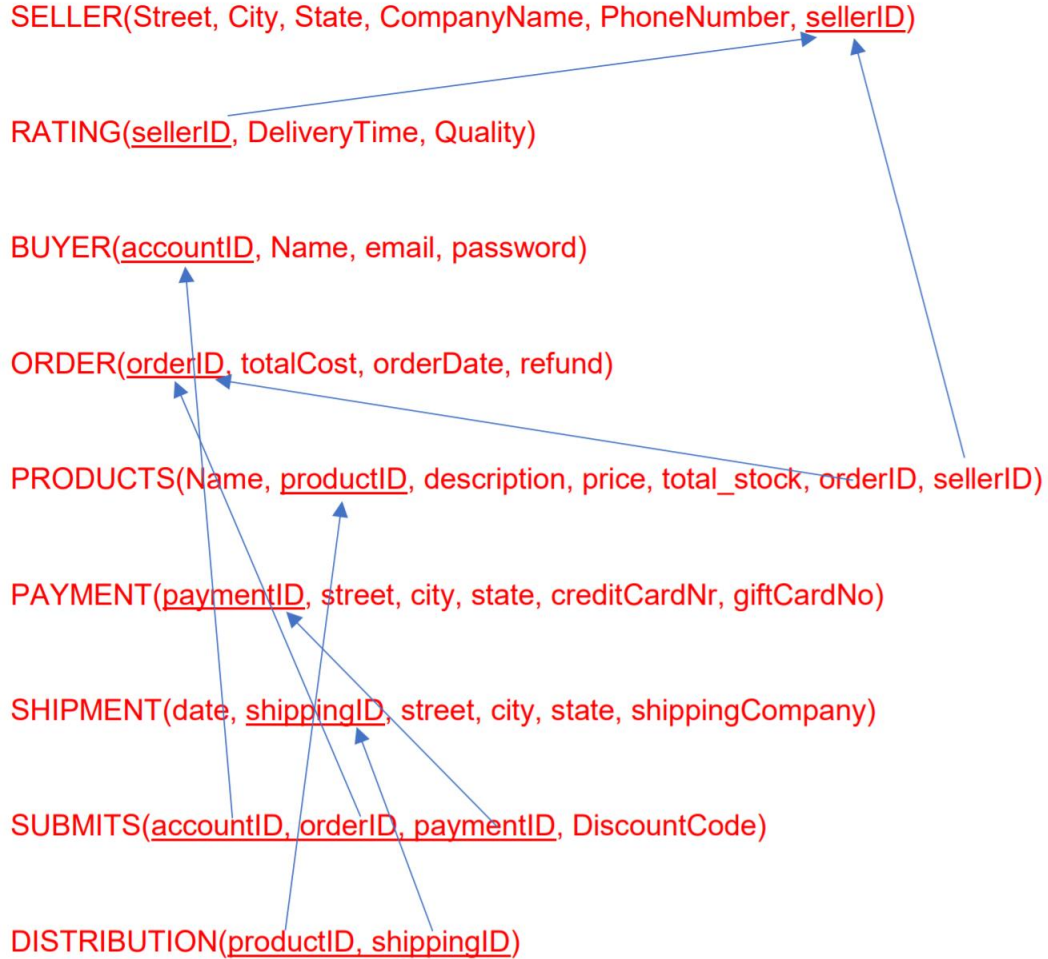
Project Report

Online Retailer Database

The application database that I chose was an online retail website were companies and customers can buy and sell products ex. Amazon. The ER diagram starts off with the Member Entity which has the attributes (Password, Email, Name, Account ID), then it moves into the IS A statement where everyone in the database is either a buyer or a seller. The next entity is the Seller entity that has the attributes (Address (Street, State, City/Town), Company Name, Phone Number). The seller entity has three relationships which are [Has] and [Distribution], and [Fills]. [Has] connects to the Rating entity with attributes (Seller Rating ID, Delivery Time, Quality). The [Distribution] Relationship connects to the Shipment Entity with attributes (Date, Shipping ID, Shipping Company, Address (Street, State, City/Town)). The third relationship [Fills] connects to the Order entity. Order has two relationships [Contains] and [Requires]. [Requires] relationship connects to the Payment entity with attributes (Discount Code, Gift Card, Credit Card, Date, Payment ID, Billing Address ((Street, State, City/Town)). The [Contains] relationship connects to the Product Entity with attributes (Total Stock, Price, Description, Product ID, Name). Then the Product entity has a relationship with [Distribution] where it connects to shipment. Finally, the Buyer entity has two relationships [Refund] and [Submits]. [Refund] connects to Order entity. [Submit] also connects to order as well.

The assumptions that I have is to have a working online retail database where you can keep track of the sellers(companies) on the website and the products that they have and being able to match those to orders that buyers(customers) make on the database. The design goals that I have are to just be able to actual understand the project that I am making and that I know how to both properly make the diagrams and do the SQL for the database.

ER Diagram

Online Retailer Database ER Diagram

State

City/Town

Street

Address

Company Name

Phone Number

Seller

Has

1

1

1

Rating

Seller Rating ID

Delivery Time

Quality

Name

Email

Password

Account ID

Buyer

HAS

N

1

Submits

Refund

N

Order

1

Contains

N

Product

M

Distribution

N

Product ID

Total Stock

Name

Price

Description

Product ID

Shipping Company

Shipment

Address

City/Town

State

Street

Shipping ID

Date

Discount Code

Payment

Payment ID

Billing Address

City/Town

State

Street

Gift Card

Credit Card

Date

Relation Schema

SELLER(Street, City, State, CompanyName, PhoneNumber, sellerID)

RATING(sellerID, DeliveryTime, Quality)

BUYER(accountID, Name, email, password)

ORDER(orderID, totalCost, orderDate, refund)

PRODUCTS(Name, productID, description, price, total_stock, orderID, sellerID)

PAYMENT(paymentID, street, city, state, creditCardNr, giftCardNo)

SHIPMENT(date, shippingID, street, city, state, shippingCompany)

SUBMITS(accountID, orderID, paymentID, DiscountCode)

DISTRIBUTION(productID, shippingID)

Source Code

```
create table Seller(

  Street varchar2(100),

  City varchar2(50),

  State varchar2(20),

  CompanyName varchar2(100),

  PhoneNumber varchar2(15),

  sellerId number(8)


);
```

```sql
create table Rating(
  sellerId number(8),
  DeliveyTime number(4),
  Quality decimal(2,1)
FOREIGN KEY (sellerId) REFERENCES Seller(sellerId)
);
create table Buyer(
  accountId number(10),
  Name varchar2(25),
  email varchar2(25),
  password varchar2(25)
);
create table Ordering(
  orderId number(9),
  TotalCost decimal(10,2),
  orderDate varchar(10),
  refund char(1)
);
create table Products(
  Name varchar2(25),
  productID number(6),
  description varchar2(200),
  price decimal(10,2),
  totalStock number(5),
  orderId number(9),
  sellerId number(8)
FOREIGN KEY (sellerId) REFERENCES Seller(sellerId)
FOREIGN KEY (orderId) REFERENCES Ordering(orderId)
```

```sql
);
create table Payment(
  paymentId number(5),
  Street varchar2(100),
  City varchar2(50),
  State varchar2(20),
  creditCardNo number(16),
  giftCardNo number(16)
);
create table shipment(
  TDate varchar2(10),
  shippingId number(4),
  Street varchar2(100),
  City varchar2(50),
  State varchar2(20),
  shippingCompany varchar2(50)
);
create table submits(
  AccountId number(10),
  OrderId number(9),
  paymentId number(5),
  DiscountCode varchar2(6)
FOREIGN KEY (accountId) REFERENCES Buyer(accountId)
FOREIGN KEY (orderId) REFERENCES Ordering(orderId)
FOREIGN KEY (paymentId) REFERENCES Payment(paymentId)
);
create table distribution(
  productID number(6),
  shippingId number(4)
```

FOREIGN KEY (productId) REFERENCES Products(productId)

FOREIGN KEY (shippingId) REFERENCES Shipment(shippingId)

);

INSERT INTO STATEMENTS

insert into Seller values ('123 testing lane', 'star land','Arizona', 'Space company', '401-234-2356', 11113423);

insert into Seller values ('4 car lane', 'grove,'Arkansas', 'car company', '501-647-2346', 12223423);

insert into Seller values ('4234 testing blvd, 'paris',' texas', 'Sponge company', '421-131-5358', 11555523);

insert into Seller values ('chance road, 'resting','Kansas', 'paper company', '991-294-9359', 61613626);

insert into Seller values (56 long bay', 'starry','florida', 'test company', '671-774-2356', 18973423);

insert into Seller values ('43 circle', 'land','kentucky', 'cup company', '555-664-2356', 18886723);

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insert into Rating values (11113423, 21, 3.5);

insert into Rating values (12223423, 15, 4.5);

insert into Rating values (11555523, 13, 5);

insert into Rating values (61613626, 22, 1);

insert into Rating values (18973423, 3, 2);

insert into Rating values (18886723, 9, 3.1);

----

insert into Buyer values (5555432143, 'Lark Manson', 'Lmanson@yahoo.com','TeStingCh4r');

insert into Buyer values (5555666666, 'Test Person', 'Tperson@yahoo.com','password123');

insert into Buyer values (5569434562, 'Chuck Bar', 'CBAR@yahoo.com','apr23');

insert into Buyer values (1678435732, 'kylie card', 'KYCAR@yahoo.com','pASsWord321');

insert into Buyer values (4444234215, 'mark marlin', 'MM@yahoo.com','placeholder5');

insert into Buyer values (5654321112, 'ethan hawke', 'EtHaw@yahoo.com','testpaSS34');

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insert into Ordering values (123456789, 24.35, '12/24/2003', 'N');

insert into Ordering values (521312312, 3524.55, '1/4/2013', 'Y');

insert into Ordering values (786546423, 40000.53, '2/16/2012', 'N');

insert into Ordering values (954835632, 54.35, '5/2/2005', 'Y');

insert into Ordering values (123423564, 675.21, '6/14/2020', 'N');

insert into Ordering values (175423467, 29.00, '8/4/2016', 'N');

----

insert into Products values ('Narmo Dark', 56785, 'This is a test product so that the user can see descriptions', 50.99, 356, 123456789, 11113423);

insert into Products values ('paper, 57645, 'This is a test ', 12.99, 4, 521312312, 12223423);

insert into Products values ('car seat', 11432, 'product so that the user can see descriptions', 505.99, 55, 786546423, 11555523);

insert into Products values ('flashlight', 66425, 'This is a test product can see descriptions', 65.99, 600, 954835632, 61613626);

insert into Products values ('pencil', 89776, 'This user can see descriptions', 40.45, 354, 123423564, 18973423);

insert into Products values ('testing', 14545, 'This can see descriptions', 3213.67, 404, 175423467, 18886723);

----

insert into Payment values (00003, 'testing lane blvd', 'car den', 'arkansas', 6022345600098789, 1234543287675656);

insert into Payment values (04532, car road', 'carmden', 'kansas', 6789234558670038, 1234543287675656);

insert into Payment values (11113, '24 station', 'fayete', 'texas', 7463650381729506, 1234543287675656);

insert into Payment values (00243, 'random circle, 'paris', 'france', 047947365193047, 1234543287675656);

insert into Payment values (00541, '242 lane, 'mountain home', 'arkansas', 6022345600098789, 1234543287675656);

insert into Payment values (02678, 'lane blvd', 'caddem', 'arkansas', 6034876593058327, 1234543287675656);

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insert into shipment values ('03/30/2024', 0023, 'bat cave 224', 'tempe', 'CA', 'Best Shipping Company');

insert into shipment values ('04/24/2021', 1123, 'car cave 24', 'temper', 'CO', 'Bestest Shipping Company');

insert into shipment values ('12/11/2022', 2254, ' 25 lane ', 'texas', 'TX', 'Shipping Company');

insert into shipment values ('06/10/2024', 1231, ' cave 22', 'tempest', 'AR', 'Best Company');

insert into shipment values ('11/20/2025', 4654, 'bat 2224', 'paris', 'CA', 'Best Shipping ');

insert into shipment values ('09/31/2021', 0623, 'space cave 214', 'test', 'KY', 'Company');

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insert into submits values (5555432143,123456789,00003, 'Disc20');

insert into submits values (6436348974,078987900,01234, 'Disc21');

insert into submits values (5432131112,122345213,05603, 'Disc45');

insert into submits values (0763894574,123452334,25403, 'Disc20');

insert into submits values (0005748345,156436739,00342, 'Disc65');

insert into submits values (1453243232,123435789,11003, 'none');

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insert into distribution values (56785,0023);

insert into distribution values (53243,0143);

insert into distribution values (11085,6313);

insert into distribution values (42145,5653);

insert into distribution values (67785,0543);

insert into distribution values (53445,1123);

Sample Queries

Queries

select COMPANYNAME

from seller

where state = 'Arkansas' or PHONENUMBER = '991-294-9359'

COMPANYNAME
paper company
car company

select name

from products

where totalstock > 355

NAME
Narmo Dark
flashlight
testing

select productid, description

from products

where totalstock > 400 AND price > 20.00

PRODUCTID	DESCRIPTION
66425	This is a test product can see descriptions

select accountid,name

from buyer

where email like '%yahoo.com%'

ACCOUNTID	NAME
5555432143	Lark Manson
5555666666	Test Person
5569434562	Chuck Bar
1678435732	kylie card
4444234215	mark marlin
5654321112	ethan hawke