Amazon E-commerce Services | **Team # 8**
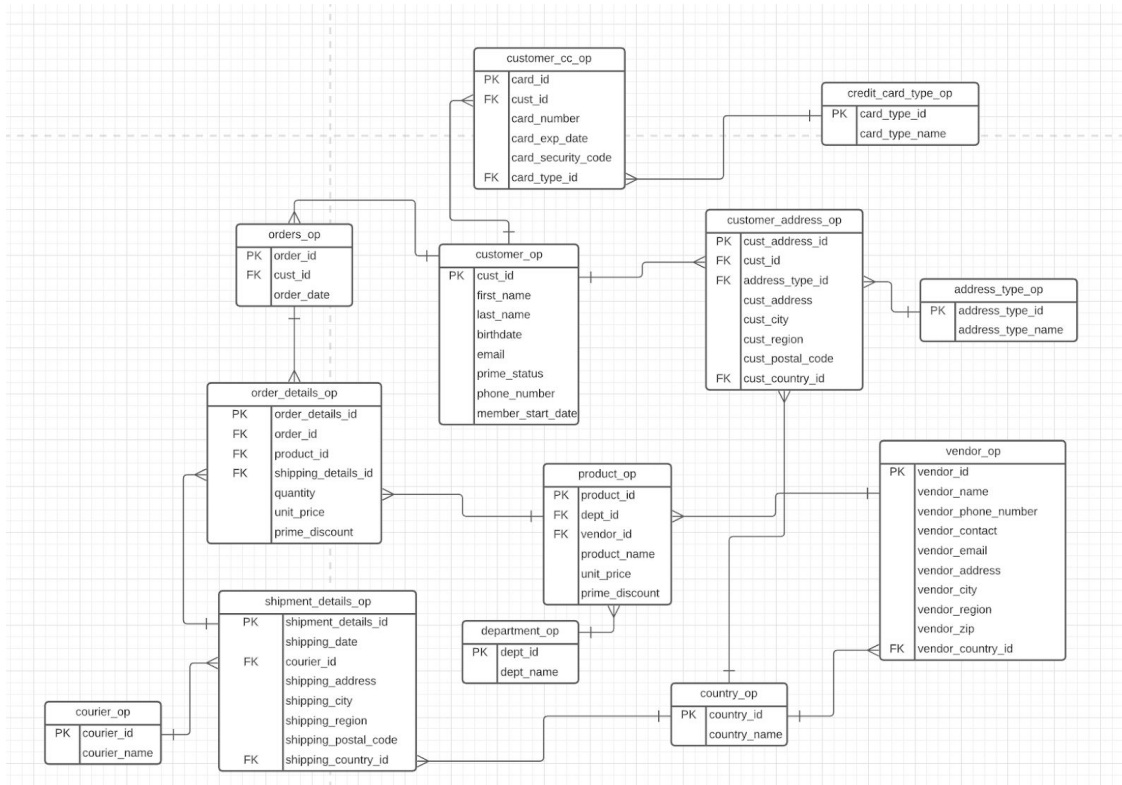MIS 381N - Introduction to Data Management – Fall 2020
Final Project
Siddhant Chauhan(sc54788), Samir Epili (se7982), Ryan Rue (rjr2856),
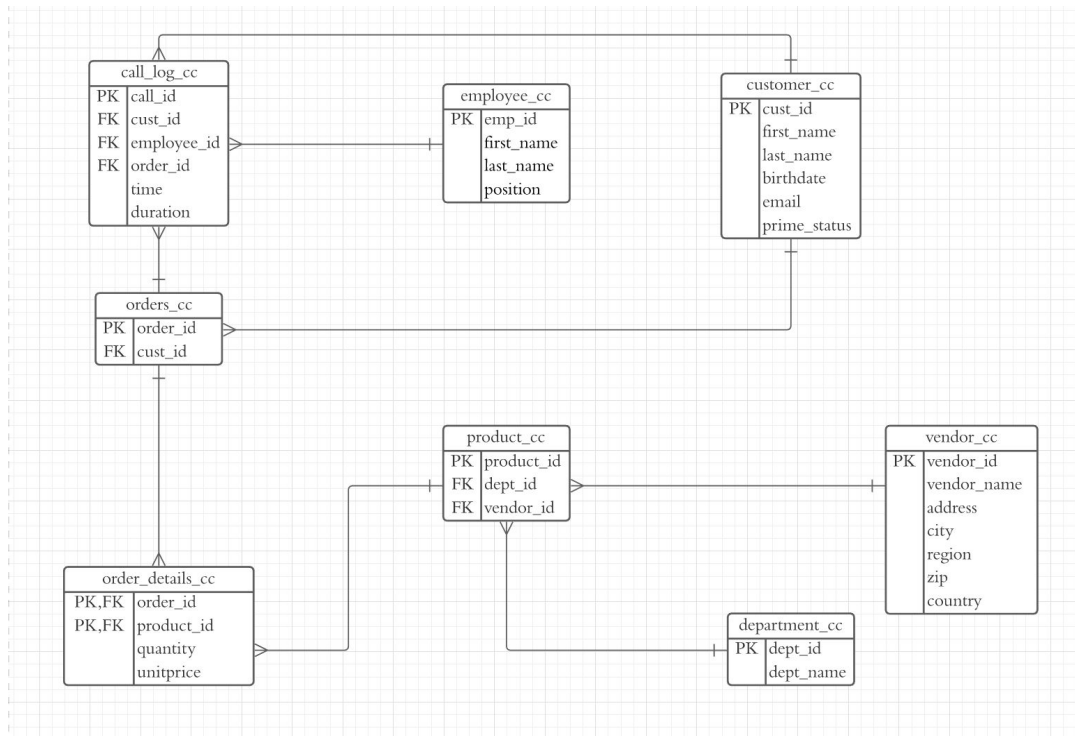Paridhi Sheth (ps33835) & Grayson Taylor (gwt349)
November 30th, 2020
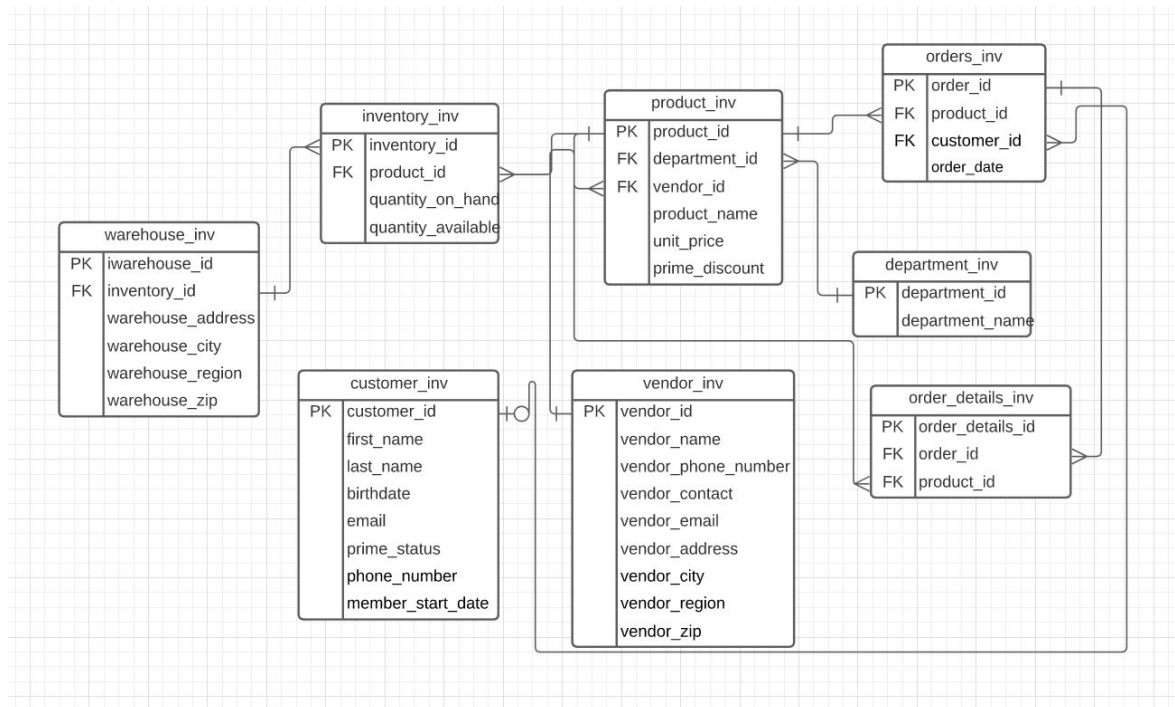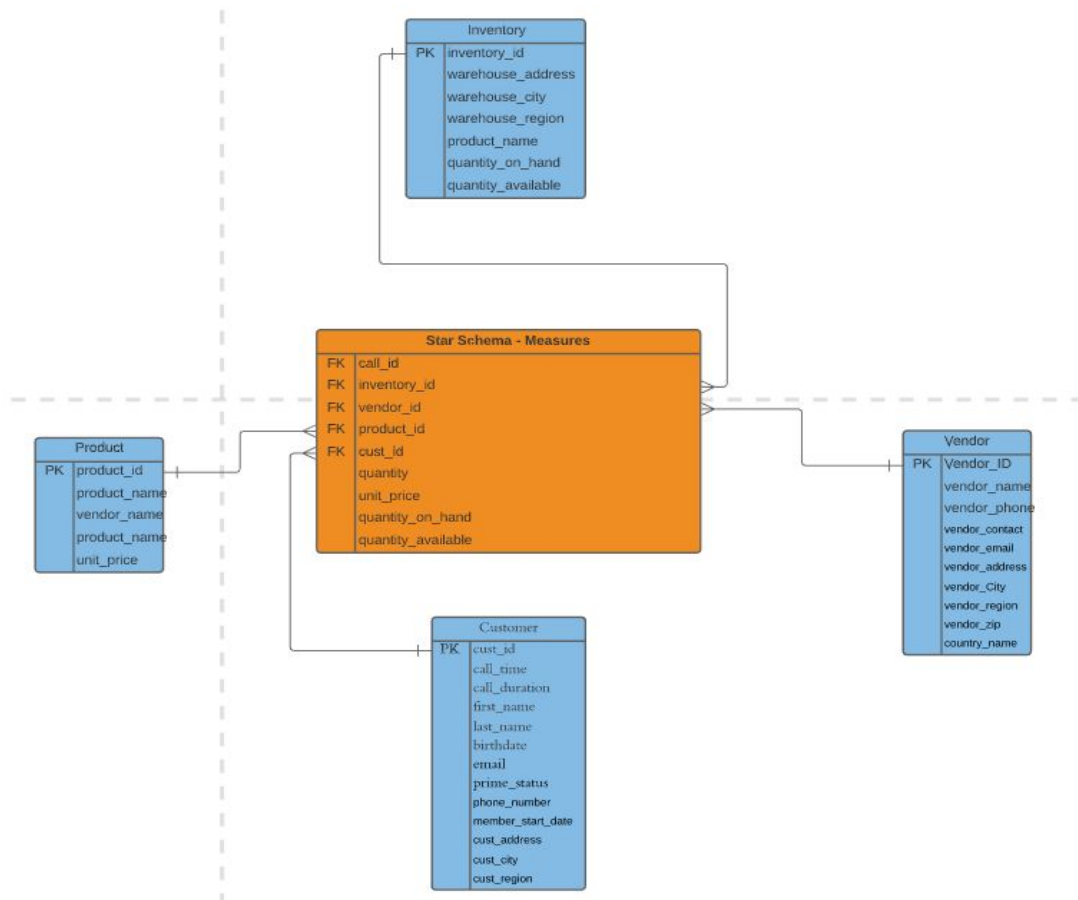
Section 1 - Data Models:

1. Order Processing

customer_cc_op
PK	card_id
FK	cust_id
	card_number
	card_exp_date
	card_security_code
FK	card_type_id

credit_card_type_op
PK	card_type_id
	card_type_name

orders_op
PK	order_id
FK	cust_id
	order_date

customer_op
PK	cust_id
	first_name
	last_name
	birthdate
	email
	prime_status
	phone_number
	member_start_date

customer_address_op
PK	cust_address_id
FK	cust_id
FK	address_type_id
	cust_address
	cust_city
	cust_region
	cust_postal_code
FK	cust_country_id

address_type_op
PK	address_type_id
	address_type_name

order_details_op
PK	order_details_id
FK	order_id
FK	product_id
FK	shipping_details_id
	quantity
	unit_price
	prime_discount

product_op
PK	product_id
FK	dept_id
FK	vendor_id
	product_name
	unit_price
	prime_discount

vendor_op
PK	vendor_id
	vendor_name
	vendor_phone_number
	vendor_contact
	vendor_email
	vendor_address
	vendor_city
	vendor_region
	vendor_zip
FK	vendor_country_id

shipment_details_op
PK	shipment_details_id
	shipping_date
FK	courier_id
	shipping_address
	shipping_city
	shipping_region
	shipping_postal_code
FK	shipping_country_id

department_op
PK	dept_id
	dept_name

country_op
PK	country_id
	country_name

courier_op
PK	courier_id
	courier_name

2. Call Center

call_log_cc

PK	call_id
FK	cust_id
FK	employee_id
FK	order_id
	time
	duration

employee_cc

PK	emp_id
	first_name
	last_name
	position

customer_cc

PK	cust_id
	first_name
	last_name
	birthdate
	email
	prime_status

orders_cc

PK	order_id
FK	cust_id

product_cc

PK	product_id
FK	dept_id
FK	vendor_id

vendor_cc

PK	vendor_id
	vendor_name
	address
	city
	region
	zip
	country

order_details_cc

PK,FK	order_id
PK,FK	product_id
	quantity
	unitprice

department_cc

PK	dept_id
	dept_name

3. Inventory

inventory_inv

PK	inventory_id
FK	product_id
	quantity_on_hand
	quantity_available

product_inv

PK	product_id
FK	department_id
FK	vendor_id
	product_name
	unit_price
	prime_discount

orders_inv

PK	order_id
FK	product_id
FK	customer_id
	order_date

warehouse_inv

PK	iwarehouse_id
FK	inventory_id
	warehouse_address
	warehouse_city
	warehouse_region
	warehouse_zip

department_inv

PK	department_id
	department_name

customer_inv

PK	customer_id
	first_name
	last_name
	birthdate
	email
	prime_status
	phone_number
	member_start_date

vendor_inv

PK	vendor_id
	vendor_name
	vendor_phone_number
	vendor_contact
	vendor_email
	vendor_address
	vendor_city
	vendor_region
	vendor_zip

order_details_inv

PK	order_details_id
FK	order_id
FK	product_id

4. **Data Warehouse**

Section 2 - DDL and Inserts:

Order Processing DDL:

DROP TABLE PRODUCT_OP CASCADE CONSTRAINTS;

DROP TABLE VENDOR_OP CASCADE CONSTRAINTS;

DROP TABLE CREDIT_CARD_TYPE_OP CASCADE CONSTRAINTS;

DROP TABLE SHIPMENT_DETAILS_OP CASCADE CONSTRAINTS;

DROP TABLE COUNTRY_OP CASCADE CONSTRAINTS;

DROP TABLE COURIER_OP CASCADE CONSTRAINTS;

DROP TABLE CUSTOMER_CC_OP CASCADE CONSTRAINTS;

```sql
DROP TABLE department_OP CASCADE CONSTRAINTS;

DROP TABLE order_details_OP CASCADE CONSTRAINTS;

DROP TABLE customer_address_OP CASCADE CONSTRAINTS;

DROP TABLE address_type_OP CASCADE CONSTRAINTS;

DROP TABLE orders_OP CASCADE CONSTRAINTS;

DROP TABLE customer_OP CASCADE CONSTRAINTS;


CREATE TABLE address_type_op (
  address_type_id NUMBER(20) NOT NULL,
  address_type_name VARCHAR2(50) NOT NULL,
  PRIMARY KEY (address_type_id)
);

CREATE TABLE country_op (
  country_id NUMBER(20) NOT NULL,
  country_name VARCHAR2(50) NOT NULL,
  PRIMARY KEY (country_id)
);

CREATE TABLE department_op (
  dept_id NUMBER(20) NOT NULL,
  dept_name VARCHAR2(50) NOT NULL,
  PRIMARY KEY (dept_id)
);

CREATE TABLE courier_op (
  courier_id NUMBER(20) NOT NULL,
  courier_name VARCHAR2(50) NOT NULL,
```

```sql
    PRIMARY KEY (courier_id)
);


CREATE TABLE credit_card_type_op (
  card_type_id NUMBER(20) NOT NULL,
  card_type_name VARCHAR2(50) NOT NULL,
  PRIMARY KEY (card_type_id)
);


CREATE TABLE customer_op (
  cust_id NUMBER(20) NOT NULL,
  first_name VARCHAR2(50) NOT NULL,
  last_name VARCHAR2(50) NOT NULL,
  birthdate DATE NOT NULL,
  email VARCHAR2(50) UNIQUE NOT NULL,
  prime_status VARCHAR2(1) DEFAULT 'N' NOT NULL,
  systemdate DATE DEFAULT SYSDATE NOT NULL,
  phone_number VARCHAR2(50),
  member_start_date  DATE,
  PRIMARY KEY (cust_id)
);



CREATE TABLE customer_address_op (
  cust_address_id NUMBER (20) NOT NULL,
  cust_id NUMBER (20) NOT NULL,
  address_type_id NUMBER(20) NOT NULL,
  cust_address VARCHAR2(50) NOT NULL,
  cust_city VARCHAR2(50) NOT NULL,
  cust_region VARCHAR2(50),
  cust_postal_code NUMBER (20) NOT NULL,
```

```sql
   cust_country_id NUMBER(10) NOT NULL,

  PRIMARY KEY (cust_address_id),

  CONSTRAINT FK_CUSTADD_CUSTOMER FOREIGN KEY (cust_id) REFERENCES
CUSTOMER_op(cust_id),

  CONSTRAINT FK_CUSTADD_ADDRTYPE FOREIGN KEY (address_type_id) REFERENCES
ADDRESS_TYPE_op(address_type_id),

  CONSTRAINT FK_CUSTADD_COUNTRY FOREIGN KEY (cust_country_id) REFERENCES
COUNTRY_op(country_id)

);


CREATE TABLE customer_cc_op (

  card_id NUMBER (20) NOT NULL,

  cust_id NUMBER (20) NOT NULL,

  card_number NUMBER (20) NOT NULL,

  card_exp_date DATE NOT NULL,

  card_security_code NUMBER (20) NOT NULL,

  card_type_id NUMBER(20) NOT NULL,

  PRIMARY KEY (card_id),

  CONSTRAINT FK_CC_CUSTOMER FOREIGN KEY (cust_id) REFERENCES
CUSTOMER_op(cust_id),

  CONSTRAINT FK_CC_CARDTYPE FOREIGN KEY (card_type_id) REFERENCES
credit_card_type_op(card_type_id)

);


CREATE TABLE vendor_op (

  vendor_id NUMBER(20) NOT NULL,

  vendor_name VARCHAR2(50) NOT NULL,

  vendor_phone_number VARCHAR2(50) NOT NULL,

  vendor_contact VARCHAR2(50) NOT NULL,

  vendor_email VARCHAR2(50),

  vendor_address VARCHAR2(50) NOT NULL,

  vendor_city VARCHAR2(50) NOT NULL,

  vendor_region VARCHAR2(50),
```

```sql
  vendor_zip NUMBER(20) NOT NULL,

  vendor_country_id NUMBER(20) NOT NULL,

  PRIMARY KEY (vendor_id),

  CONSTRAINT FK_VENDOR_COUNTRY FOREIGN KEY (vendor_country_id) REFERENCES
COUNTRY_op(country_id)
);


CREATE TABLE product_op (

  product_id NUMBER(20) NOT NULL,

  product_name VARCHAR2(50) NOT NULL,

  dept_id NUMBER(20) NOT NULL,

  vendor_id NUMBER(20),

  UNIT_PRICE NUMBER (7,2) NOT NULL,

  prime_discount NUMBER(7,2),

  PRIMARY KEY (product_id),

  CONSTRAINT FK_PRODUCT_DEPT FOREIGN KEY (dept_id) REFERENCES
DEPARTMENT_op(dept_id),

  CONSTRAINT FK_PRODUCT_VENDOR FOREIGN KEY (vendor_id) REFERENCES
vendor_op(vendor_id)
);


CREATE TABLE orders_op (

  order_id NUMBER(20) NOT NULL,

  cust_id NUMBER(20) NOT NULL,

  order_date DATE DEFAULT SYSDATE NOT NULL,

  PRIMARY KEY (order_id),

  CONSTRAINT FK_ORDERS_CUST FOREIGN KEY (cust_id) REFERENCES
CUSTOMER_op(cust_id)
);
```

```sql
CREATE TABLE shipment_details_op (
  shipment_details_id NUMBER(20) NOT NULL,
  shipping_date DATE NOT NULL,
  courier_id NUMBER(20) NOT NULL,
  shipping_address VARCHAR2(50) NOT NULL,
  shipping_city VARCHAR2(50) NOT NULL,
  shipping_region VARCHAR2(50),
  shipping_postal_code NUMBER(20) NOT NULL,
  shipping_country_id NUMBER(20) NOT NULL,
  PRIMARY KEY (shipment_details_id),
  CONSTRAINT SHIPDETAILS_courier FOREIGN KEY (courier_id) REFERENCES courier_op(courier_id),
  CONSTRAINT SHIPDETAILS_COUNTRY FOREIGN KEY (shipping_country_id) REFERENCES COUNTRY_op(country_id)
);


CREATE TABLE order_details_op (
  order_details_id NUMBER (20) NOT NULL,
  order_id NUMBER(20) NOT NULL,
  product_id NUMBER(20) NOT NULL,
  shipping_details_id NUMBER(20),
  quantity NUMBER NOT NULL,
  unitprice NUMBER(7,2) NOT NULL,
  PRIMARY KEY (order_details_id),
  CONSTRAINT FK_ORDERDET_ORDERS FOREIGN KEY (order_id) REFERENCES orders_op(order_id),
  CONSTRAINT FK_ORDERDET_PRODUCT FOREIGN KEY (product_id) REFERENCES PRODUCT_op(product_id),
  CONSTRAINT FK_ORDERDET_SHIPDET FOREIGN KEY (shipping_details_id) REFERENCES shipment_details_op(shipment_details_id)
);


-- ADDRESS_TYPE TABLE
```

INSERT INTO "ADDRESS_TYPE_OP" (ADDRESS_TYPE_ID, ADDRESS_TYPE_NAME) VALUES ('1', 'Billing');

INSERT INTO "ADDRESS_TYPE_OP" (ADDRESS_TYPE_ID, ADDRESS_TYPE_NAME) VALUES ('2', 'Shipping');

commit;

-- DEPARTMENT TABLE

INSERT INTO "DEPARTMENT_OP" (DEPT_ID, DEPT_NAME) VALUES ('1', 'groccery');

INSERT INTO "DEPARTMENT_OP" (DEPT_ID, DEPT_NAME) VALUES ('2', 'books');

INSERT INTO "DEPARTMENT_OP" (DEPT_ID, DEPT_NAME) VALUES ('3', 'electronics');

INSERT INTO "DEPARTMENT_OP" (DEPT_ID, DEPT_NAME) VALUES ('4', 'wellness');

INSERT INTO "DEPARTMENT_OP" (DEPT_ID, DEPT_NAME) VALUES ('5', 'clothing');

commit;

-- COUNTRY TABLE

INSERT INTO "COUNTRY_OP" (COUNTRY_ID, COUNTRY_NAME) VALUES ('1', 'United States');

INSERT INTO "COUNTRY_OP" (COUNTRY_ID, COUNTRY_NAME) VALUES ('2', 'China');

INSERT INTO "COUNTRY_OP" (COUNTRY_ID, COUNTRY_NAME) VALUES ('3', 'United Kingdom');

INSERT INTO "COUNTRY_OP" (COUNTRY_ID, COUNTRY_NAME) VALUES ('4', 'Australia');

INSERT INTO "COUNTRY_OP" (COUNTRY_ID, COUNTRY_NAME) VALUES ('5', 'Mexico');

commit;

-- VENDOR TABLE

INSERT INTO "VENDOR_OP" (VENDOR_ID, VENDOR_NAME, VENDOR_PHONE_NUMBER, VENDOR_CONTACT, VENDOR_EMAIL, VENDOR_ADDRESS, VENDOR_CITY, VENDOR_REGION, VENDOR_ZIP, VENDOR_COUNTRY_ID) VALUES ('1', 'GAP', '214-934-0220', 'Caroline Jordan', 'cjordan@gmail.com', '123 Hut St.', 'Brookshire', 'Northwest', '76889', '4');

INSERT INTO "VENDOR_OP" (VENDOR_ID, VENDOR_NAME, VENDOR_PHONE_NUMBER, VENDOR_CONTACT, VENDOR_EMAIL, VENDOR_ADDRESS, VENDOR_CITY, VENDOR_REGION, VENDOR_ZIP, VENDOR_COUNTRY_ID) VALUES ('2', 'Apple',

'972-972-4692', 'Sarah Holiday', 'sholiday@gmail.com', '227 Logistics Street', 'Shanghai', 'South', '43040', '2');

INSERT INTO "VENDOR_OP" (VENDOR_ID, VENDOR_NAME, VENDOR_PHONE_NUMBER, VENDOR_CONTACT, VENDOR_EMAIL, VENDOR_ADDRESS, VENDOR_CITY, VENDOR_REGION, VENDOR_ZIP, VENDOR_COUNTRY_ID) VALUES ('3', 'Microsoft', '469-342-8400', 'John Smith', 'johns@yahoo.com', '1 Microsoft Way', 'Redmond', 'East', '98052', '3');

INSERT INTO "VENDOR_OP" (VENDOR_ID, VENDOR_NAME, VENDOR_PHONE_NUMBER, VENDOR_CONTACT, VENDOR_EMAIL, VENDOR_ADDRESS, VENDOR_CITY, VENDOR_REGION, VENDOR_ZIP, VENDOR_COUNTRY_ID) VALUES ('4', 'Whole Foods Market', '512-442-9200', 'Jordan Howard', 'Jordanh@gmail.com', '550 Bowie St.', 'Austin', 'South', '78703', '1');

INSERT INTO "VENDOR_OP" (VENDOR_ID, VENDOR_NAME, VENDOR_PHONE_NUMBER, VENDOR_CONTACT, VENDOR_EMAIL, VENDOR_ADDRESS, VENDOR_CITY, VENDOR_REGION, VENDOR_ZIP, VENDOR_COUNTRY_ID) VALUES ('5', 'Samsung', '512-420-7666', 'Mike Smith', 'Smike@gmail.com', '433 Maple St.', 'Chicago', 'North', '87990', '1');

commit;

-- CREDIT_CARD_TYPE_TABLE

INSERT INTO "CREDIT_CARD_TYPE_OP" (CARD_TYPE_ID, CARD_TYPE_NAME) VALUES ('1', 'Visa');

INSERT INTO "CREDIT_CARD_TYPE_OP" (CARD_TYPE_ID, CARD_TYPE_NAME) VALUES ('2', 'Mastercard');

INSERT INTO "CREDIT_CARD_TYPE_OP" (CARD_TYPE_ID, CARD_TYPE_NAME) VALUES ('3', 'American Express');

INSERT INTO "CREDIT_CARD_TYPE_OP" (CARD_TYPE_ID, CARD_TYPE_NAME) VALUES ('4', 'Discover');

commit;

-- COURIER TABLE

INSERT INTO "COURIER_OP" (COURIER_ID, COURIER_NAME) VALUES ('1', 'Amazon');

INSERT INTO "COURIER_OP" (COURIER_ID, COURIER_NAME) VALUES ('2', 'FedEx');

INSERT INTO "COURIER_OP" (COURIER_ID, COURIER_NAME) VALUES ('3', 'UPS');

commit;

-- CUSTOMER TABLE

INSERT INTO "CUSTOMER_OP" (CUST_ID, FIRST_NAME, LAST_NAME, BIRTHDATE, EMAIL, PRIME_STATUS, SYSTEMDATE, PHONE_NUMBER, MEMBER_START_DATE) VALUES ('1', 'YOU', 'AMAZING', TO_DATE('2020-11-25 11:43:51', 'YYYY-MM-DD HH24:MI:SS'), 'YOUAMAZING@AMAZING.COM

', 'Y', TO_DATE('2020-11-25 11:49:43', 'YYYY-MM-DD HH24:MI:SS'), '214-442-8766', TO_DATE('2008-11-15 00:00:00', 'YYYY-MM-DD HH24:MI:SS'));

INSERT INTO "CUSTOMER_OP" (CUST_ID, FIRST_NAME, LAST_NAME, BIRTHDATE, EMAIL, PRIME_STATUS, SYSTEMDATE, PHONE_NUMBER, MEMBER_START_DATE) VALUES ('2', 'Mike', 'Thomas', TO_DATE('1992-12-24 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), 'mike.thomas@gmai.com', 'N', TO_DATE('2020-11-25 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), '214-945-0220', TO_DATE('2012-07-04 00:00:00', 'YYYY-MM-DD HH24:MI:SS'));

INSERT INTO "CUSTOMER_OP" (CUST_ID, FIRST_NAME, LAST_NAME, BIRTHDATE, EMAIL, PRIME_STATUS, SYSTEMDATE, PHONE_NUMBER, MEMBER_START_DATE) VALUES ('3', 'Grayson', 'Taylor', TO_DATE('1996-09-23 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), 'grayson.taylor@yahoo.com', 'Y', TO_DATE('2020-11-25 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), '932-468-2300', TO_DATE('2014-11-07 00:00:00', 'YYYY-MM-DD HH24:MI:SS'));

INSERT INTO "CUSTOMER_OP" (CUST_ID, FIRST_NAME, LAST_NAME, BIRTHDATE, EMAIL, PRIME_STATUS, SYSTEMDATE, PHONE_NUMBER, MEMBER_START_DATE) VALUES ('4', 'Julie', 'Karnes', TO_DATE('1986-01-24 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), 'juliek@gmail.com', 'N', TO_DATE('2020-11-25 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), '865-421-5600', TO_DATE('2017-11-04 00:00:00', 'YYYY-MM-DD HH24:MI:SS'));

INSERT INTO "CUSTOMER_OP" (CUST_ID, FIRST_NAME, LAST_NAME, BIRTHDATE, EMAIL, PRIME_STATUS, SYSTEMDATE, PHONE_NUMBER, MEMBER_START_DATE) VALUES ('5', 'Donald', 'Glover', TO_DATE('1985-10-09 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), 'dglover@gmail.com', 'N', TO_DATE('2020-11-25 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), '432-655-9100', TO_DATE('2019-12-07 00:00:00', 'YYYY-MM-DD HH24:MI:SS'));

commit;

-- ORDER TABLE

INSERT INTO "ORDERS_OP" (ORDER_ID, CUST_ID, ORDER_DATE) VALUES ('10001', '1', TO_DATE('2020-11-16 00:00:00', 'YYYY-MM-DD HH24:MI:SS'));

INSERT INTO "ORDERS_OP" (ORDER_ID, CUST_ID, ORDER_DATE) VALUES ('10002', '1', TO_DATE('2020-11-08 00:00:00', 'YYYY-MM-DD HH24:MI:SS'));

```sql
INSERT INTO "ORDERS_OP" (ORDER_ID, CUST_ID, ORDER_DATE) VALUES ('10003', '2',
TO_DATE('2020-11-19 00:00:00', 'YYYY-MM-DD HH24:MI:SS'));

INSERT INTO "ORDERS_OP" (ORDER_ID, CUST_ID, ORDER_DATE) VALUES ('10004', '3',
TO_DATE('2020-11-01 00:00:00', 'YYYY-MM-DD HH24:MI:SS'));

INSERT INTO "ORDERS_OP" (ORDER_ID, CUST_ID, ORDER_DATE) VALUES ('10005', '5',
TO_DATE('2020-11-05 00:00:00', 'YYYY-MM-DD HH24:MI:SS'));

commit;


-- SHIPMENT DETAILS TABLE


INSERT INTO "SHIPMENT_DETAILS_OP" (SHIPMENT_DETAILS_ID, SHIPPING_DATE,
COURIER_ID, SHIPPING_ADDRESS, SHIPPING_CITY, SHIPPING_REGION,
SHIPPING_POSTAL_CODE, SHIPPING_COUNTRY_ID) VALUES ('5001',
TO_DATE('2020-11-11 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), '1', '5740 Cadence Lane',
'Plano', 'North', '75024', '1');

INSERT INTO "SHIPMENT_DETAILS_OP"  (SHIPMENT_DETAILS_ID, SHIPPING_DATE,
COURIER_ID, SHIPPING_ADDRESS, SHIPPING_CITY, SHIPPING_REGION,
SHIPPING_POSTAL_CODE, SHIPPING_COUNTRY_ID) VALUES ('5002',
TO_DATE('2020-11-07 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), '1', '5400 Live Oak', 'London',
'South', '533425', '3');

INSERT INTO "SHIPMENT_DETAILS_OP"  (SHIPMENT_DETAILS_ID, SHIPPING_DATE,
COURIER_ID, SHIPPING_ADDRESS, SHIPPING_CITY, SHIPPING_REGION,
SHIPPING_POSTAL_CODE, SHIPPING_COUNTRY_ID) VALUES ('5003',
TO_DATE('2020-11-20 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), '2', '5748 Twin Oaks', 'Los
Angeles', 'West', '90210', '1');

INSERT INTO "SHIPMENT_DETAILS_OP"  (SHIPMENT_DETAILS_ID, SHIPPING_DATE,
COURIER_ID, SHIPPING_ADDRESS, SHIPPING_CITY, SHIPPING_REGION,
SHIPPING_POSTAL_CODE, SHIPPING_COUNTRY_ID) VALUES ('5004',
TO_DATE('2020-11-21 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), '3', '4500 Briargrove Lane',
'Dallas', 'Texas', '75093', '1');

INSERT INTO "SHIPMENT_DETAILS_OP"  (SHIPMENT_DETAILS_ID, SHIPPING_DATE,
COURIER_ID, SHIPPING_ADDRESS, SHIPPING_CITY, SHIPPING_REGION,
SHIPPING_POSTAL_CODE, SHIPPING_COUNTRY_ID) VALUES ('5005',
TO_DATE('2020-11-01 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), '1', '6500 Melshire',
'Melbourne', 'East', '39991', '4');


commit;
```

-- PRODUCT TABLE

INSERT INTO "PRODUCT_OP" (PRODUCT_ID, PRODUCT_NAME, DEPT_ID, VENDOR_ID, UNIT_PRICE, PRIME_DISCOUNT) VALUES ('123', 'Borden Whole Milk', '1', '4', '6.99', '3.00');

INSERT INTO "PRODUCT_OP" (PRODUCT_ID, PRODUCT_NAME, DEPT_ID, VENDOR_ID, UNIT_PRICE, PRIME_DISCOUNT) VALUES ('234', 'Lunchable 6 Pack', '1', '4', '15.99', '3.00');

INSERT INTO "PRODUCT_OP" (PRODUCT_ID, PRODUCT_NAME, DEPT_ID, VENDOR_ID, UNIT_PRICE, PRIME_DISCOUNT) VALUES ('345', 'Mouse Pad', '3', '3', '10.49', '3.00');

INSERT INTO "PRODUCT_OP" (PRODUCT_ID, PRODUCT_NAME, DEPT_ID, VENDOR_ID, UNIT_PRICE, PRIME_DISCOUNT) VALUES ('456', 'Microsoft Mouse 3600', '3', '3', '34.99', '3.00');

INSERT INTO "PRODUCT_OP" (PRODUCT_ID, PRODUCT_NAME, DEPT_ID, VENDOR_ID, UNIT_PRICE, PRIME_DISCOUNT) VALUES ('567', 'Hair Ties', '5', '1', '3.99', '0');

commit;

-- CUSTOMER_CC TABLE

INSERT INTO "CUSTOMER_CC_OP" (CARD_ID, CUST_ID, CARD_NUMBER, CARD_EXP_DATE, CARD_SECURITY_CODE, CARD_TYPE_ID) VALUES ('70001', '2', '5480883108534840', TO_DATE('2025-12-01 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), '947', '2');

INSERT INTO "CUSTOMER_CC_OP" (CARD_ID, CUST_ID, CARD_NUMBER, CARD_EXP_DATE, CARD_SECURITY_CODE, CARD_TYPE_ID) VALUES ('70002', '1', '2221007701739686', TO_DATE('2022-01-01 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), '752', '2');

INSERT INTO "CUSTOMER_CC_OP" (CARD_ID, CUST_ID, CARD_NUMBER, CARD_EXP_DATE, CARD_SECURITY_CODE, CARD_TYPE_ID) VALUES ('70003', '3', '4539148550460413', TO_DATE('2021-01-01 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), '478', '1');

INSERT INTO "CUSTOMER_CC_OP" (CARD_ID, CUST_ID, CARD_NUMBER, CARD_EXP_DATE, CARD_SECURITY_CODE, CARD_TYPE_ID) VALUES ('70004', '2', '4485960822519303', TO_DATE('2023-09-01 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), '342', '1');

INSERT INTO "CUSTOMER_CC_OP"(CARD_ID, CUST_ID, CARD_NUMBER, CARD_EXP_DATE, CARD_SECURITY_CODE, CARD_TYPE_ID) VALUES ('70005', '1', '378217231970827', TO_DATE('2024-07-02 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), '890', '3');

commit;

-- customer_address_table

INSERT INTO "CUSTOMER_ADDRESS_OP" (CUST_ADDRESS_ID, CUST_ID, ADDRESS_TYPE_ID, CUST_ADDRESS, CUST_CITY, CUST_REGION, CUST_POSTAL_CODE, CUST_COUNTRY_ID) VALUES ('87001', '1', '1', '4700 Carolyns Circle', 'Norwalk', 'South', '90652', '1');

INSERT INTO "CUSTOMER_ADDRESS_OP" (CUST_ADDRESS_ID, CUST_ID, ADDRESS_TYPE_ID, CUST_ADDRESS, CUST_CITY, CUST_REGION, CUST_POSTAL_CODE, CUST_COUNTRY_ID) VALUES ('87002', '2', '1', '85 Thirsk Road', 'London', 'South', '109823', '3');

INSERT INTO "CUSTOMER_ADDRESS_OP" (CUST_ADDRESS_ID, CUST_ID, ADDRESS_TYPE_ID, CUST_ADDRESS, CUST_CITY, CUST_REGION, CUST_POSTAL_CODE, CUST_COUNTRY_ID) VALUES ('87003', '3', '1', '42 Umbridge Road', 'Manchester', 'North', '100480', '3');

INSERT INTO "CUSTOMER_ADDRESS_OP" (CUST_ADDRESS_ID, CUST_ID, ADDRESS_TYPE_ID, CUST_ADDRESS, CUST_CITY, CUST_REGION, CUST_POSTAL_CODE, CUST_COUNTRY_ID) VALUES ('87004', '4', '2', '3663 Fort Street', 'Washington', 'Northeast', '27889', '1');

INSERT INTO "CUSTOMER_ADDRESS_OP" (CUST_ADDRESS_ID, CUST_ID, ADDRESS_TYPE_ID, CUST_ADDRESS, CUST_CITY, CUST_REGION, CUST_POSTAL_CODE, CUST_COUNTRY_ID) VALUES ('87005', '5', '2', '4500 South Oak', 'Los Angeles', 'Southwest', '90212', '1');

--INSERT INTO "CUSTOMER_ADDRESS_OP" (CUST_ADDRESS_ID, CUST_ID, ADDRESS_TYPE_ID, CUST_ADDRESS, CUST_CITY, CUST_REGION, CUST_POSTAL_CODE, CUST_COUNTRY_ID) VALUES ('87006', '1', '2', 'La Concepcion Coatipac 5240', 'Mexico City', 'Northeast', '52333', '5');

commit;

-- ORDER_DETAILS_TABLE

INSERT INTO "ORDER_DETAILS_OP" (ORDER_DETAILS_ID, ORDER_ID, PRODUCT_ID, SHIPPING_DETAILS_ID, QUANTITY, UNITPRICE) VALUES ('20001', '10001', '123', '5001', '2', '6.99');

INSERT INTO "ORDER_DETAILS_OP" (ORDER_DETAILS_ID, ORDER_ID, PRODUCT_ID, SHIPPING_DETAILS_ID, QUANTITY, UNITPRICE) VALUES ('20002', '10002', '123', '5002', '4', '6.99');

INSERT INTO "ORDER_DETAILS_OP" (ORDER_DETAILS_ID, ORDER_ID, PRODUCT_ID, SHIPPING_DETAILS_ID, QUANTITY, UNITPRICE) VALUES ('20003', '10003', '456', '5003', '1', '34.99');

INSERT INTO "ORDER_DETAILS_OP" (ORDER_DETAILS_ID, ORDER_ID, PRODUCT_ID, SHIPPING_DETAILS_ID, QUANTITY, UNITPRICE) VALUES ('20004', '10004', '567', '5004', '1', '3.99');

INSERT INTO "ORDER_DETAILS_OP" (ORDER_DETAILS_ID, ORDER_ID, PRODUCT_ID, SHIPPING_DETAILS_ID, QUANTITY, UNITPRICE) VALUES ('20005', '10005', '567', '5005', '3', '3.99');

commit;

Call Center Operations DDL and Inserts:

DROP TABLE call_log_cc;
DROP TABLE order_details_cc;
DROP TABLE product_cc;
DROP TABLE vendor_cc;
DROP TABLE orders_cc;
DROP TABLE customer_cc;
DROP TABLE department_cc;
DROP TABLE employee_cc;

CREATE TABLE department_cc (
 dept_id   NUMBER(20)   NOT NULL,
 dept_name   VARCHAR(50)   NOT NULL,
 PRIMARY KEY (dept_id)
);

```sql
CREATE TABLE customer_cc (
 cust_id        NUMBER(20),
 first_name     VARCHAR(50)                    NOT NULL,
 last_name      VARCHAR(50)                    NOT NULL,
 systemdate     DATE           DEFAULT SYSDATE,
 birthdate      DATE                           NOT NULL,
 email          VARCHAR(50)    UNIQUE          NOT NULL,
 prime_status   VARCHAR(1)     DEFAULT 'N'     NOT NULL,
 PRIMARY KEY (cust_id)
);

CREATE TABLE employee_cc (
 emp_id         NUMBER(20),
 first_name     VARCHAR(50)    NOT NULL,
 last_name      VARCHAR(50)    NOT NULL,
 position       VARCHAR(50)    NOT NULL,
 PRIMARY KEY (emp_id)
);

CREATE TABLE orders_cc (
 order_id       NUMBER(20)     NOT NULL,
 cust_id        NUMBER(20)     NOT NULL,
 PRIMARY KEY (order_id),
 CONSTRAINT FK_orderid_customerid FOREIGN KEY (cust_id) REFERENCES
customer_cc(cust_id)
);

CREATE TABLE vendor_cc (
 vendor_id      NUMBER(20)     NOT NULL,
 vendor_name    VARCHAR(50)    NOT NULL,
 address        VARCHAR(50)    NOT NULL,
 city           VARCHAR(50)    NOT NULL,
 region         VARCHAR(50)    NOT NULL,
 zip            NUMBER(20)     NOT NULL,
 country        VARCHAR(50)    NOT NULL,
 PRIMARY KEY (vendor_id)
);

CREATE TABLE product_cc (
 product_id     NUMBER(20)     NOT NULL,
 dept_id        NUMBER(20)     NOT NULL,
 vendor_id      NUMBER(20)     NOT NULL,
 PRIMARY KEY (product_id)
);
```

```sql
CREATE TABLE order_details_cc (
  order_id      NUMBER(20)    NOT NULL,
  product_id    NUMBER(20)    NOT NULL,
  quantity      NUMBER(20)    NOT NULL,
  unitprice     NUMBER(20)    NOT NULL,
  PRIMARY KEY (order_id, product_id),
  CONSTRAINT FK_od_prodid FOREIGN KEY (product_id) REFERENCES
product_cc(product_id),
  CONSTRAINT FK_od_orderid FOREIGN KEY (order_id) REFERENCES orders_cc(order_id)
);

CREATE TABLE call_log_cc (
  call_id       NUMBER(20),
  cust_id       NUMBER(20),
  employee_id   NUMBER(20),
  order_id      NUMBER(20),
  time          DATE                      NOT NULL,
  duration      NUMBER                    NOT NULL,
  PRIMARY KEY (call_id),
  CONSTRAINT FK_callid_custid FOREIGN KEY (cust_id) REFERENCES
customer_cc(cust_id),
  CONSTRAINT FK_callid_employeeid FOREIGN KEY (employee_id) REFERENCES
employee_cc(emp_id),
  CONSTRAINT FK_callid_orderid FOREIGN KEY (order_id) REFERENCES
orders_cc(order_id)
);


-- INSERT STATEMENTS FOR DEPARTMENT TABLE
INSERT INTO "DEPARTMENT_CC" (DEPT_ID, DEPT_NAME) VALUES ('1', 'Grocery');
INSERT INTO "DEPARTMENT_CC" (DEPT_ID, DEPT_NAME) VALUES ('2', 'Books');
INSERT INTO "DEPARTMENT_CC" (DEPT_ID, DEPT_NAME) VALUES ('3', 'Electronics');
INSERT INTO "DEPARTMENT_CC" (DEPT_ID, DEPT_NAME) VALUES ('4', 'Wellness');
INSERT INTO "DEPARTMENT_CC" (DEPT_ID, DEPT_NAME) VALUES ('5', 'Clothing');
COMMIT;

-- INSERT STATEMENTS FOR VENDOR TABLE
INSERT INTO "VENDOR_CC" (VENDOR_ID, VENDOR_NAME, ADDRESS, CITY, REGION,
ZIP, COUNTRY) VALUES ('1', 'GAP', '123 Hut St.', 'Brookshire', 'Northwest', '76889', 'Australia');
INSERT INTO "VENDOR_CC" (VENDOR_ID, VENDOR_NAME, ADDRESS, CITY, REGION,
ZIP, COUNTRY) VALUES ('2', 'Apple', '229 Logistics Dr.', 'Shanghai', 'East', '43040', 'China');
```

INSERT INTO "VENDOR_CC" (VENDOR_ID, VENDOR_NAME, ADDRESS, CITY, REGION, ZIP, COUNTRY) VALUES ('3', 'Microsoft', '1 Microsoft Way', 'Redmond', 'East', '98052', 'United Kingdom');
INSERT INTO "VENDOR_CC" (VENDOR_ID, VENDOR_NAME, ADDRESS, CITY, REGION, ZIP, COUNTRY) VALUES ('4', 'Whole Foods Market', '550 Bowie St.', 'Austin', 'South', '78703', 'United States');
INSERT INTO "VENDOR_CC" (VENDOR_ID, VENDOR_NAME, ADDRESS, CITY, REGION, ZIP, COUNTRY) VALUES ('5', 'Samsung', '433 Maple St.', 'Chicago', 'North', '87990', 'United States');COMMIT;

-- INSERT STATEMENTS FOR CUSTOMER TABLE
INSERT INTO "CUSTOMER_CC"(CUST_ID, FIRST_NAME, LAST_NAME, SYSTEMDATE, BIRTHDATE, EMAIL, PRIME_STATUS) VALUES ('1', 'You', 'Amazing', TO_DATE('2020-11-03 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), TO_DATE('1992-12-24 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), 'youamazing@amazing.com', 'N');
INSERT INTO "CUSTOMER_CC"(CUST_ID, FIRST_NAME, LAST_NAME, SYSTEMDATE, BIRTHDATE, EMAIL, PRIME_STATUS) VALUES ('2', 'Mike', 'Thomas', TO_DATE('2020-11-25 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), TO_DATE('1992-12-24 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), 'mike.thomas@gmail.com', 'N');
INSERT INTO "CUSTOMER_CC" (CUST_ID, FIRST_NAME, LAST_NAME, SYSTEMDATE, BIRTHDATE, EMAIL, PRIME_STATUS) VALUES ('3', 'Grayson', 'Taylor', TO_DATE('2020-11-25 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), TO_DATE('1996-09-23 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), 'grayson.taylor@yahoo.com', 'Y');
INSERT INTO "CUSTOMER_CC" (CUST_ID, FIRST_NAME, LAST_NAME, SYSTEMDATE, BIRTHDATE, EMAIL, PRIME_STATUS) VALUES ('4', 'Julie', 'Karnes', TO_DATE('2020-11-25 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), TO_DATE('1986-01-24 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), 'juliek@gmail.com', 'N');
INSERT INTO "CUSTOMER_CC"(CUST_ID, FIRST_NAME, LAST_NAME, SYSTEMDATE, BIRTHDATE, EMAIL, PRIME_STATUS) VALUES ('5', 'Donald', 'Glover', TO_DATE('2020-11-25 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), TO_DATE('1985-10-09 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), 'dglover@gmail.com', 'Y');
COMMIT;

-- INSERT STATEMENTS FOR EMPLOYEE TABLE
INSERT INTO "EMPLOYEE_CC" (EMP_ID, FIRST_NAME, LAST_NAME, POSITION) VALUES ('12', 'Abigail', 'Lopez', 'Customer Service Manager');
INSERT INTO "EMPLOYEE_CC" (EMP_ID, FIRST_NAME, LAST_NAME, POSITION) VALUES ('13', 'Mario', 'Velasquez', 'Customer Service Specialist');
INSERT INTO "EMPLOYEE_CC" (EMP_ID, FIRST_NAME, LAST_NAME, POSITION) VALUES ('14', 'Ryan', 'Robertson', 'Customer Service Specialist ');
INSERT INTO "EMPLOYEE_CC" (EMP_ID, FIRST_NAME, LAST_NAME, POSITION) VALUES ('15', 'Maya', 'Angelou', 'Customer Service Specialist');
INSERT INTO "EMPLOYEE_CC" (EMP_ID, FIRST_NAME, LAST_NAME, POSITION) VALUES ('16', 'Kim', 'Kardy', 'Customer Service Specialist');

```sql
COMMIT;

-- INSERT STATEMENTS FOR ORDERS
INSERT INTO "ORDERS_CC" (ORDER_ID, CUST_ID) VALUES ('10001', '1');
INSERT INTO "ORDERS_CC" (ORDER_ID, CUST_ID) VALUES ('10002', '1');
INSERT INTO "ORDERS_CC" (ORDER_ID, CUST_ID) VALUES ('10003', '2');
INSERT INTO "ORDERS_CC" (ORDER_ID, CUST_ID) VALUES ('10004', '3');
INSERT INTO "ORDERS_CC" (ORDER_ID, CUST_ID) VALUES ('10005', '5');
COMMIT;

-- Product
INSERT INTO "PRODUCT_CC" (PRODUCT_ID, DEPT_ID, VENDOR_ID) VALUES ('123', '1',
'4');
INSERT INTO "PRODUCT_CC" (PRODUCT_ID, DEPT_ID, VENDOR_ID) VALUES ('234', '1',
'4');
INSERT INTO "PRODUCT_CC" (PRODUCT_ID, DEPT_ID, VENDOR_ID) VALUES ('345', '3',
'3');
INSERT INTO "PRODUCT_CC" (PRODUCT_ID, DEPT_ID, VENDOR_ID) VALUES ('456', '3',
'3');
INSERT INTO "PRODUCT_CC" (PRODUCT_ID, DEPT_ID, VENDOR_ID) VALUES ('567', '5',
'1');
commit;

-- INSERT STATEMENTS FOR ORDER_DETAILS
INSERT INTO "ORDER_DETAILS_CC" (ORDER_ID, PRODUCT_ID, QUANTITY, UNITPRICE)
VALUES ('10001', '123', '2', '6.99');
INSERT INTO "ORDER_DETAILS_CC" (ORDER_ID, PRODUCT_ID, QUANTITY, UNITPRICE)
VALUES ('10002', '234', '1', '15.99');
INSERT INTO "ORDER_DETAILS_CC"  (ORDER_ID, PRODUCT_ID, QUANTITY,
UNITPRICE) VALUES ('10003', '345', '3', '10.49');
INSERT INTO "ORDER_DETAILS_CC"  (ORDER_ID, PRODUCT_ID, QUANTITY,
UNITPRICE) VALUES ('10004', '456', '1', '34.99');
INSERT INTO "ORDER_DETAILS_CC"  (ORDER_ID, PRODUCT_ID, QUANTITY,
UNITPRICE) VALUES ('10005', '567', '1', '3.99');
COMMIT;

-- INSERT STATEMENTS FOR CALL_LOG
INSERT INTO "CALL_LOG_CC" (CALL_ID, CUST_ID, EMPLOYEE_ID, ORDER_ID, TIME,
DURATION) VALUES ('111', '1', '12', '10001', TO_DATE('2020-11-03 13:18:41', 'YYYY-MM-DD
HH24:MI:SS'), '12');
INSERT INTO "CALL_LOG_CC"  (CALL_ID, CUST_ID, EMPLOYEE_ID, ORDER_ID, TIME,
DURATION) VALUES ('112', '2', '13', '10002', TO_DATE('2020-11-05 05:18:51', 'YYYY-MM-DD
HH24:MI:SS'), '5');
```

```
INSERT INTO "CALL_LOG_CC" (CALL_ID, CUST_ID, EMPLOYEE_ID, ORDER_ID, TIME,
DURATION) VALUES ('113', '3', '14', '10003', TO_DATE('2020-06-06 09:19:02', 'YYYY-MM-DD
HH24:MI:SS'), '10');
INSERT INTO "CALL_LOG_CC"  (CALL_ID, CUST_ID, EMPLOYEE_ID, ORDER_ID, TIME,
DURATION) VALUES ('114', '4', '15', '10004', TO_DATE('2020-09-29 04:19:13', 'YYYY-MM-DD
HH24:MI:SS'), '30');
INSERT INTO "CALL_LOG_CC" (CALL_ID, CUST_ID, EMPLOYEE_ID, ORDER_ID, TIME,
DURATION) VALUES ('115', '5', '16', '10005', TO_DATE('2020-08-11 07:19:23', 'YYYY-MM-DD
HH24:MI:SS'), '25');
COMMIT;
```

Inventory Management DDL and Inserts

```
DROP TABLE order_details_inv CASCADE CONSTRAINTS;
DROP TABLE orders_inv CASCADE CONSTRAINTS;
DROP TABLE inventory_inv CASCADE CONSTRAINTS;
DROP TABLE product_inv CASCADE CONSTRAINTS;
DROP TABLE warehouse_inv CASCADE CONSTRAINTS;
DROP TABLE department_inv CASCADE CONSTRAINTS;
DROP TABLE vendor_inv CASCADE CONSTRAINTS;
DROP TABLE customer_inv CASCADE CONSTRAINTS;


CREATE TABLE customer_inv (
 customer_id      NUMBER(20)    NOT NULL,
 first_name       VARCHAR2(50)   NOT NULL,
 last_name        VARCHAR2(50)   NOT NULL,
 birthdate        DATE        NOT NULL,
 email          VARCHAR2(50)   UNIQUE    NOT NULL,
 prime_status    VARCHAR2(1)    DEFAULT 'N' NOT NULL,
 phone_number     VARCHAR2(50),
 member_start_date DATE,
 PRIMARY KEY (customer_id)
);

CREATE TABLE vendor_inv (
 vendor_id          NUMBER(20)     NOT NULL,
 vendor_name         VARCHAR2(50)   NOT NULL,
 vendor_phone_number  VARCHAR2(50)   NOT NULL,
 vendor_contact      VARCHAR2(50)   NOT NULL,
 vendor_email        VARCHAR2(50)   NOT NULL,
 vendor_address       VARCHAR2(50)   NOT NULL,
```

```sql
  vendor_city        VARCHAR2(50)    NOT NULL,
  vendor_region       VARCHAR2(50)    NOT NULL,
  vendor_zip         VARCHAR2(5)     NOT NULL,
  PRIMARY KEY (vendor_id)
);

CREATE TABLE department_inv (
  department_id    NUMBER(20)     NOT NULL,
  department_name   VARCHAR2(50),
  PRIMARY KEY (department_id)
);

CREATE TABLE warehouse_inv (
  warehouse_id       NUMBER(20)     NOT NULL,
  warehouse_address   VARCHAR2(50)   NOT NULL,
  warehouse_city     VARCHAR2(50)   NOT NULL,
  warehouse_region    VARCHAR2(50)   NOT NULL,
  warehouse_zip      VARCHAR2(5)    NOT NULL,
  PRIMARY KEY (warehouse_id)
);

CREATE TABLE product_inv (
  product_id       NUMBER(20)     NOT NULL,
  department_id     NUMBER(20)      NOT NULL,
  vendor_id        NUMBER(20)      NOT NULL,
  product_name      VARCHAR2(50)   NOT NULL,
  unit_price       NUMBER(10)      NOT NULL,
  prime_discount    NUMBER(7,2),
  PRIMARY KEY (product_id),
  CONSTRAINT FK_product_department_id FOREIGN KEY (department_id) REFERENCES
department_inv(department_id),
  CONSTRAINT FK_product_vendor_id FOREIGN KEY (vendor_id) REFERENCES
vendor_inv(vendor_id)
);

CREATE TABLE inventory_inv (
  inventory_id        NUMBER(20)     NOT NULL,
  warehouse_id        NUMBER(20)      NOT NULL,
  product_id         NUMBER(20)      NOT NULL,
  quantity_on_hand     NUMBER(10)     NOT NULL,
  quantity_available   NUMBER(20)      NOT NULL,
  PRIMARY KEY (inventory_id),
  CONSTRAINT FK_inventory_product_id FOREIGN KEY (product_id) REFERENCES
product_inv(product_id),
```

```sql
  CONSTRAINT FK_inventory_warehouse_id FOREIGN KEY (warehouse_id) REFERENCES
warehouse_inv(warehouse_id)
);

CREATE TABLE orders_inv (
 order_id     NUMBER(20)    NOT NULL,
 customer_id  NUMBER(20)    NOT NULL,
 order_date   DATE          NOT NULL,
 PRIMARY KEY (order_id),
 CONSTRAINT FK_orders_customer_id FOREIGN KEY (customer_id) REFERENCES
customer_inv(customer_id)
);

CREATE TABLE order_details_inv (
 order_details_id  NUMBER(20)    NOT NULL,
 order_id          NUMBER(20)    NOT NULL,
 product_id        NUMBER(20)     NOT NULL,
 quantity          NUMBER(20)     NOT NULL,
 PRIMARY KEY (order_details_id),
 CONSTRAINT FK_od_order_id FOREIGN KEY (order_id) REFERENCES
orders_inv(order_id),
 CONSTRAINT FK_od_product_id FOREIGN KEY (product_id) REFERENCES
product_inv(product_id)
);

-- CUSTOMER TABLE
INSERT INTO "CUSTOMER_INV" (CUSTOMER_ID, FIRST_NAME, LAST_NAME,
BIRTHDATE, EMAIL, PRIME_STATUS, PHONE_NUMBER, MEMBER_START_DATE)
VALUES ('1', 'YOU', 'AMAZING', TO_DATE('2020-11-25 11:43:51', 'YYYY-MM-DD
HH24:MI:SS'), 'YOUAMAZING@AMAZING.COM
', 'Y', '214-442-8766', TO_DATE('2008-11-15 00:00:00', 'YYYY-MM-DD HH24:MI:SS'));
INSERT INTO "CUSTOMER_INV" (CUSTOMER_ID, FIRST_NAME, LAST_NAME,
BIRTHDATE, EMAIL, PRIME_STATUS, PHONE_NUMBER, MEMBER_START_DATE)
VALUES ('2', 'Mike', 'Thomas', TO_DATE('1992-12-24 00:00:00', 'YYYY-MM-DD HH24:MI:SS'),
'mike.thomas@gmai.com', 'N', '214-945-0220', TO_DATE('2012-07-04 00:00:00',
'YYYY-MM-DD HH24:MI:SS'));
INSERT INTO "CUSTOMER_INV" (CUSTOMER_ID, FIRST_NAME, LAST_NAME,
BIRTHDATE, EMAIL, PRIME_STATUS, PHONE_NUMBER, MEMBER_START_DATE)
VALUES ('3', 'Grayson', 'Taylor', TO_DATE('1996-09-23 00:00:00', 'YYYY-MM-DD
HH24:MI:SS'), 'grayson.taylor@yahoo.com', 'Y', '932-468-2300', TO_DATE('2014-11-07
00:00:00', 'YYYY-MM-DD HH24:MI:SS'));
INSERT INTO "CUSTOMER_INV" (CUSTOMER_ID, FIRST_NAME, LAST_NAME,
BIRTHDATE, EMAIL, PRIME_STATUS, PHONE_NUMBER, MEMBER_START_DATE)
VALUES ('4', 'Julie', 'Karnes', TO_DATE('1986-01-24 00:00:00', 'YYYY-MM-DD HH24:MI:SS'),
```

'juliek@gmail.com', 'N', '865-421-5600', TO_DATE('2017-11-04 00:00:00', 'YYYY-MM-DD HH24:MI:SS'));
INSERT INTO "CUSTOMER_INV" (CUSTOMER_ID, FIRST_NAME, LAST_NAME, BIRTHDATE, EMAIL, PRIME_STATUS, PHONE_NUMBER, MEMBER_START_DATE) VALUES ('5', 'Donald', 'Glover', TO_DATE('1985-10-09 00:00:00', 'YYYY-MM-DD HH24:MI:SS'), 'dglover@gmail.com', 'N', '432-655-9100', TO_DATE('2019-12-07 00:00:00', 'YYYY-MM-DD HH24:MI:SS'));
commit;

-- VENDOR TABLE
INSERT INTO "VENDOR_INV" (VENDOR_ID, VENDOR_NAME, VENDOR_PHONE_NUMBER, VENDOR_CONTACT, VENDOR_EMAIL, VENDOR_ADDRESS, VENDOR_CITY, VENDOR_REGION, VENDOR_ZIP) VALUES ('1', 'GAP', '214-934-0220', 'Caroline Jordan', 'cjordan@gmail.com', '123 Hut St.', 'Brookshire', 'Northwest', '76889');
INSERT INTO "VENDOR_INV" (VENDOR_ID, VENDOR_NAME, VENDOR_PHONE_NUMBER, VENDOR_CONTACT, VENDOR_EMAIL, VENDOR_ADDRESS, VENDOR_CITY, VENDOR_REGION, VENDOR_ZIP) VALUES ('2', 'Apple', '972-972-4692', 'Sarah Holiday', 'sholiday@gmail.com', '227 Logistics Street', 'Shanghai', 'South', '43040');
INSERT INTO "VENDOR_INV" (VENDOR_ID, VENDOR_NAME, VENDOR_PHONE_NUMBER, VENDOR_CONTACT, VENDOR_EMAIL, VENDOR_ADDRESS, VENDOR_CITY, VENDOR_REGION, VENDOR_ZIP) VALUES ('3', 'Microsoft', '469-342-8400', 'John Smith', 'johns@yahoo.com', '1 Microsoft Way', 'Redmond', 'East', '98052');
INSERT INTO "VENDOR_INV" (VENDOR_ID, VENDOR_NAME, VENDOR_PHONE_NUMBER, VENDOR_CONTACT, VENDOR_EMAIL, VENDOR_ADDRESS, VENDOR_CITY, VENDOR_REGION, VENDOR_ZIP) VALUES ('4', 'Whole Foods Market', '512-442-9200', 'Jordan Howard', 'Jordanh@gmail.com', '550 Bowie St.', 'Austin', 'South', '78703');
INSERT INTO "VENDOR_INV" (VENDOR_ID, VENDOR_NAME, VENDOR_PHONE_NUMBER, VENDOR_CONTACT, VENDOR_EMAIL, VENDOR_ADDRESS, VENDOR_CITY, VENDOR_REGION, VENDOR_ZIP) VALUES ('5', 'Samsung', '512-420-7666', 'Mike Smith', 'Smike@gmail.com', '433 Maple St.', 'Chicago', 'North', '87990');
commit;

-- DEPARTMENT TABLE
INSERT INTO "DEPARTMENT_INV" (DEPARTMENT_ID, DEPARTMENT_NAME) VALUES ('1', 'groccery');
INSERT INTO "DEPARTMENT_INV" (DEPARTMENT_ID, DEPARTMENT_NAME) VALUES ('2', 'books');
INSERT INTO "DEPARTMENT_INV" (DEPARTMENT_ID, DEPARTMENT_NAME) VALUES ('3', 'electronics');
INSERT INTO "DEPARTMENT_INV" (DEPARTMENT_ID, DEPARTMENT_NAME) VALUES ('4', 'wellness');
INSERT INTO "DEPARTMENT_INV" (DEPARTMENT_ID, DEPARTMENT_NAME) VALUES ('5', 'clothing');

commit;

-- WAREHOUSE TABLE
INSERT INTO "WAREHOUSE_INV" (WAREHOUSE_ID, WAREHOUSE_ADDRESS, WAREHOUSE_CITY, WAREHOUSE_REGION, WAREHOUSE_ZIP) VALUES ('10','100 BEVO WAY','AUSTIN','TX','78705');
INSERT INTO "WAREHOUSE_INV" (WAREHOUSE_ID, WAREHOUSE_ADDRESS, WAREHOUSE_CITY, WAREHOUSE_REGION, WAREHOUSE_ZIP) VALUES ('11','200 COWBOY CIR','DALLAS','TX','75251');
INSERT INTO "WAREHOUSE_INV" (WAREHOUSE_ID, WAREHOUSE_ADDRESS, WAREHOUSE_CITY, WAREHOUSE_REGION, WAREHOUSE_ZIP) VALUES ('12','300 TEXAN ST','HOUSTON','TX','71001');
INSERT INTO "WAREHOUSE_INV" (WAREHOUSE_ID, WAREHOUSE_ADDRESS, WAREHOUSE_CITY, WAREHOUSE_REGION, WAREHOUSE_ZIP) VALUES ('13','400 SPURS RD','SAN ANTONIO','TX','72002');
INSERT INTO "WAREHOUSE_INV" (WAREHOUSE_ID, WAREHOUSE_ADDRESS, WAREHOUSE_CITY, WAREHOUSE_REGION, WAREHOUSE_ZIP) VALUES ('14','500 DESERT DR','EL PASO','TX','73003');
commit;

-- PRODUCT TABLE
INSERT INTO "PRODUCT_INV" (PRODUCT_ID, PRODUCT_NAME, DEPARTMENT_ID, VENDOR_ID, UNIT_PRICE, PRIME_DISCOUNT) VALUES ('123', 'Borden Whole Milk', '1', '4', '6.99', '3.00');
INSERT INTO "PRODUCT_INV" (PRODUCT_ID, PRODUCT_NAME, DEPARTMENT_ID, VENDOR_ID, UNIT_PRICE, PRIME_DISCOUNT) VALUES ('234', 'Lunchable 6 Pack', '1', '4', '15.99', '3.00');
INSERT INTO "PRODUCT_INV" (PRODUCT_ID, PRODUCT_NAME, DEPARTMENT_ID, VENDOR_ID, UNIT_PRICE, PRIME_DISCOUNT) VALUES ('345', 'Mouse Pad', '3', '3', '10.49', '3.00');
INSERT INTO "PRODUCT_INV" (PRODUCT_ID, PRODUCT_NAME, DEPARTMENT_ID, VENDOR_ID, UNIT_PRICE, PRIME_DISCOUNT) VALUES ('456', 'Microsoft Mouse 3600', '3', '3', '34.99', '3.00');
INSERT INTO "PRODUCT_INV" (PRODUCT_ID, PRODUCT_NAME, DEPARTMENT_ID, VENDOR_ID, UNIT_PRICE, PRIME_DISCOUNT) VALUES ('567', 'Hair Ties', '5', '1', '3.99', '0');
commit;

-- INVENTORY TABLE
INSERT INTO "INVENTORY_INV" (INVENTORY_ID, WAREHOUSE_ID, PRODUCT_ID, QUANTITY_ON_HAND, QUANTITY_AVAILABLE) VALUES ('100', '12', '123', '300', '200');
INSERT INTO "INVENTORY_INV" (INVENTORY_ID, WAREHOUSE_ID, PRODUCT_ID, QUANTITY_ON_HAND, QUANTITY_AVAILABLE) VALUES ('101', '12', '234', '200', '100');
INSERT INTO "INVENTORY_INV" (INVENTORY_ID, WAREHOUSE_ID, PRODUCT_ID, QUANTITY_ON_HAND, QUANTITY_AVAILABLE) VALUES ('102', '12', '345', '350', '250');

```sql
INSERT INTO "INVENTORY_INV" (INVENTORY_ID, WAREHOUSE_ID, PRODUCT_ID,
QUANTITY_ON_HAND, QUANTITY_AVAILABLE) VALUES ('103', '13', '456', '250', '150');
INSERT INTO "INVENTORY_INV" (INVENTORY_ID, WAREHOUSE_ID, PRODUCT_ID,
QUANTITY_ON_HAND, QUANTITY_AVAILABLE) VALUES ('104', '14', '567', '1000', '500');
commit;

-- ORDERS TABLE
INSERT INTO "ORDERS_INV" (ORDER_ID, CUSTOMER_ID, ORDER_DATE) VALUES
('10001', '1', TO_DATE('2020-11-16 00:00:00', 'YYYY-MM-DD HH24:MI:SS'));
INSERT INTO "ORDERS_INV" (ORDER_ID, CUSTOMER_ID, ORDER_DATE) VALUES
('10002', '1', TO_DATE('2020-11-08 00:00:00', 'YYYY-MM-DD HH24:MI:SS'));
INSERT INTO "ORDERS_INV" (ORDER_ID, CUSTOMER_ID, ORDER_DATE) VALUES
('10003', '2', TO_DATE('2020-11-19 00:00:00', 'YYYY-MM-DD HH24:MI:SS'));
INSERT INTO "ORDERS_INV" (ORDER_ID, CUSTOMER_ID, ORDER_DATE) VALUES
('10004', '3', TO_DATE('2020-11-01 00:00:00', 'YYYY-MM-DD HH24:MI:SS'));
INSERT INTO "ORDERS_INV" (ORDER_ID, CUSTOMER_ID, ORDER_DATE) VALUES
('10005', '5', TO_DATE('2020-11-05 00:00:00', 'YYYY-MM-DD HH24:MI:SS'));
commit;

-- ORDER_DETAILS TABLE
INSERT INTO "ORDER_DETAILS_INV" (ORDER_DETAILS_ID, ORDER_ID, PRODUCT_ID,
QUANTITY) VALUES ('20001', '10001', '123', '2');
INSERT INTO "ORDER_DETAILS_INV" (ORDER_DETAILS_ID, ORDER_ID, PRODUCT_ID,
QUANTITY) VALUES ('20002', '10002', '123', '4');
INSERT INTO "ORDER_DETAILS_INV" (ORDER_DETAILS_ID, ORDER_ID, PRODUCT_ID,
QUANTITY) VALUES ('20003', '10003', '456', '1');
INSERT INTO "ORDER_DETAILS_INV" (ORDER_DETAILS_ID, ORDER_ID, PRODUCT_ID,
QUANTITY) VALUES ('20004', '10004', '567', '1');
INSERT INTO "ORDER_DETAILS_INV" (ORDER_DETAILS_ID, ORDER_ID, PRODUCT_ID,
QUANTITY) VALUES ('20005', '10005', '567', '3');
Commit;
```

Data Warehouse DDL

```sql
DROP TABLE product_dw;
DROP TABLE customer_dw;
DROP TABLE inventory_dw;
DROP TABLE vendor_dw;
DROP TABLE measures_dw;

CREATE TABLE product_dw (
    product_id      NUMBER(20),
    dept_name       VARCHAR(50)        NOT NULL,
```

```sql
    vendor_name     VARCHAR(50)        NOT NULL,
    product_name    VARCHAR(50)        NOT NULL,
    unit_price      NUMBER(7,2)       NOT NULL,
    CONSTRAINT     pk_prod_dept_vend_id
      PRIMARY KEY    (product_id)
);

CREATE TABLE inventory_dw (
    inventory_id        NUMBER(20)    NOT NULL,
    warehouse_address   VARCHAR2(50)   NOT NULL,
    warehouse_city      VARCHAR2(50)   NOT NULL,
    warehouse_region    VARCHAR2(50)   NOT NULL,
    product_name        VARCHAR2(50)   NOT NULL,
    quantity_on_hand    NUMBER(10)     NOT NULL,
    quantity_available  NUMBER(20)     NOT NULL,
    PRIMARY KEY (inventory_id)
);

CREATE TABLE customer_dw (
    cust_id         NUMBER(10)    NOT NULL,
    call_time       DATE                       NOT NULL,
    call_duration   NUMBER                      NOT NULL,
    first_name      VARCHAR2(50)   NOT NULL,
    last_name       VARCHAR2(50)   NOT NULL,
    birthdate       DATE          NOT NULL,
    email           VARCHAR2(50)   UNIQUE    NOT NULL,
    prime_status    VARCHAR2(1)   DEFAULT 'N' NOT NULL,
    phone_number    VARCHAR2(50),
    member_start_date DATE,
    cust_address     VARCHAR2(50) NOT NULL,
    cust_city       VARCHAR2(50) NOT NULL,
    cust_region      VARCHAR2(50),
    CONSTRAINT     pk_cust_id
      PRIMARY KEY    (cust_id)
);

CREATE TABLE vendor_dw (
  vendor_id NUMBER(20) NOT NULL,
  vendor_name VARCHAR2(50) NOT NULL,
  vendor_phone_number VARCHAR2(50) NOT NULL,
  vendor_contact VARCHAR2(50) NOT NULL,
  vendor_email VARCHAR2(50),
  vendor_address VARCHAR2(50) NOT NULL,
  vendor_city VARCHAR2(50) NOT NULL,
```

```
  vendor_region VARCHAR2(50),
  vendor_zip NUMBER(20) NOT NULL,
  country_name VARCHAR2(50) NOT NULL,
    PRIMARY KEY (vendor_id)
);

CREATE TABLE measures_dw (
  call_id          NUMBER(20)    NOT NULL,
  inventory_id       NUMBER(20)     NOT NULL,
  vendor_id         NUMBER(20)     NOT NULL,
  cust_id          NUMBER(20)    NOT NULL,
  product_id        NUMBER(20)     NOT NULL,
  quantity         NUMBER(10)    NOT NULL,
  unit_price        NUMBER(7,2)    NOT NULL,
  quantity_on_hand   NUMBER(10)     NOT NULL,
  quantity_available  NUMBER(10)     NOT NULL
);
```

Section 3 - Data Warehouse ETL:

```
DROP VIEW op_product_view;
DROP VIEW op_department_view;
DROP VIEW op_vendor_view;
DROP VIEW op_cust_view;
DROP VIEW cc_call_view;
DROP VIEW op_cust_add;
DROP VIEW inv_inv_view;
DROP VIEW wh_inv_view;
DROP VIEW prod_inv_view;
DROP VIEW op_vend_view;
DROP VIEW op_ctry_view;
DROP VIEW op_prod_view;
DROP VIEW order_details_view;

-- product views --
CREATE OR REPLACE VIEW op_product_view AS
SELECT *
FROM product_op;

CREATE OR REPLACE VIEW op_department_view AS
SELECT*
FROM department_op;
```

```sql
CREATE OR REPLACE VIEW op_vendor_view AS
SELECT*
FROM vendor_op;

-- inventory views --
CREATE OR REPLACE VIEW inv_inv_view AS
SELECT *
FROM inventory_inv;

CREATE OR REPLACE VIEW wh_inv_view AS
SELECT *
FROM warehouse_inv;

CREATE OR REPLACE VIEW prod_inv_view AS
SELECT *
FROM product_inv;

-- customer views --
CREATE OR REPLACE VIEW op_cust_view AS
SELECT *
FROM customer_op;

CREATE OR REPLACE VIEW cc_call_view AS
SELECT *
FROM call_log_cc;

CREATE OR REPLACE VIEW op_cust_add AS
SELECT *
FROM customer_address_op;

-- vendor views --

CREATE OR REPLACE VIEW op_vend_view AS
SELECT *
FROM vendor_op;

CREATE OR REPLACE VIEW op_ctry_view AS
SELECT *
FROM country_op;

CREATE OR REPLACE VIEW op_prod_view AS
SELECT *
FROM product_op;
```

```sql
CREATE OR REPLACE VIEW order_details_view AS
SELECT *
FROM order_details_op;

commit;

-- MEASURES TABLE ETL --

CREATE OR REPLACE PROCEDURE measures_etl_proc
AS
BEGIN
    INSERT INTO measures_dw
    SELECT ccv.call_id, iiv.inventory_id, piv.vendor_id, ccv.cust_id, iiv.product_id, odv.quantity,
odv.unitprice, iiv.quantity_on_hand, iiv.quantity_available
    FROM cc_call_view ccv
    JOIN order_details_view odv ON ccv.order_id = odv.order_id
    JOIN inv_inv_view iiv ON odv.product_id = iiv.product_id
    JOIN prod_inv_view piv ON piv.product_id = odv.product_id
    LEFT JOIN measures_dw mdw
    ON ccv.call_id = mdw.call_id
    WHERE mdw.call_id IS NULL;

    -- UPDATE from opv_view --
    MERGE INTO measures_dw mdw
        USING (SELECT ccv.call_id, iiv.inventory_id, piv.vendor_id, ccv.cust_id, iiv.product_id,
odv.quantity, odv.unitprice, iiv.quantity_on_hand, iiv.quantity_available
    FROM cc_call_view ccv
    JOIN order_details_view odv ON ccv.order_id = odv.order_id
    JOIN inv_inv_view iiv ON odv.product_id = iiv.product_id
    JOIN prod_inv_view piv ON piv.product_id = odv.product_id) oip
        ON (oip.call_id = mdw.call_id)
    WHEN MATCHED THEN
        UPDATE SET
        mdw.inventory_id = oip.inventory_id,
        mdw.vendor_id = oip.vendor_id,
        mdw.cust_id = oip.cust_id,
        mdw.product_id = oip.product_id,
        mdw.quantity = oip.quantity,
        mdw.unit_price = oip.unitprice,
        mdw.quantity_on_hand = oip.quantity_on_hand,
        mdw.quantity_available = oip.quantity_available
    WHEN NOT MATCHED THEN
        INSERT (call_id, inventory_id, vendor_id, cust_id, product_id, quantity, unit_price,
quantity_on_hand, quantity_available)
```

```
        VALUES (oip.call_id, oip.inventory_id, oip.vendor_id, oip.cust_id, oip.product_id,
oip.quantity, oip.unitprice, oip.quantity_on_hand, oip.quantity_available);

    COMMIT;
END;
/

-- PRODUCT TABLE ETL --
CREATE OR REPLACE PROCEDURE product_etl_proc
AS
BEGIN
    INSERT INTO product_dw
    SELECT opv.product_id, opv.product_name, odv.dept_name, ovv.vendor_name,
opv.unit_price
    FROM op_product_view opv
    JOIN op_department_view odv ON opv.dept_id = odv.dept_id
    JOIN op_vendor_view ovv ON ovv.vendor_id = opv.vendor_id
    LEFT JOIN product_dw prod_dw
    ON opv.product_id = prod_dw.product_id
    WHERE prod_dw.product_id IS NULL;

    -- UPDATE from opv_view --
    MERGE INTO product_dw prod_dw
        USING (SELECT opv.product_id, opv.product_name, odv.dept_name, ovv.vendor_name,
opv.unit_price
    FROM op_product_view opv
    JOIN op_department_view odv ON opv.dept_id = odv.dept_id
    JOIN op_vendor_view ovv ON ovv.vendor_id = opv.vendor_id) pvd
        ON (pvd.product_id = prod_dw.product_id)
    WHEN MATCHED THEN
        UPDATE SET
        prod_dw.product_name = pvd.product_name,
        prod_dw.dept_name = pvd.dept_name,
        prod_dw.vendor_name = pvd.vendor_name,
        prod_dw.unit_price = pvd.unit_price
    WHEN NOT MATCHED THEN
        INSERT (product_id, product_name, dept_name, vendor_name, unit_price)
        VALUES (pvd.product_id, pvd.product_name, pvd.dept_name, pvd.vendor_name,
pvd.unit_price);

    COMMIT;
END;
/
```

```sql
-- INVENTORY TABLE ETL --
CREATE OR REPLACE PROCEDURE inventory_etl_proc
AS
BEGIN
    INSERT INTO inventory_dw
    SELECT iiv.inventory_id, whv.warehouse_address, whv.warehouse_city,
whv.warehouse_region, piv.product_name, iiv.quantity_on_hand, iiv.quantity_available
    FROM inv_inv_view iiv
    JOIN wh_inv_view whv ON whv.warehouse_id = iiv.warehouse_id
    JOIN prod_inv_view piv ON piv.product_id = iiv.product_id
    LEFT JOIN inventory_dw inv_dw
    ON iiv.inventory_id = inv_dw.inventory_id
    WHERE inv_dw.inventory_id IS NULL;

    -- UPDATE from iiv_view --
    MERGE INTO inventory_dw inv_dw
        USING (SELECT iiv.inventory_id, whv.warehouse_address, whv.warehouse_city,
whv.warehouse_region, piv.product_name, iiv.quantity_on_hand, iiv.quantity_available
    FROM inv_inv_view iiv
    JOIN wh_inv_view whv ON whv.warehouse_id = iiv.warehouse_id
    JOIN prod_inv_view piv ON piv.product_id = iiv.product_id) iwp
        ON (iwp.inventory_id = inv_dw.inventory_id)
    WHEN MATCHED THEN
        UPDATE SET
        inv_dw.warehouse_address = iwp.warehouse_address,
        inv_dw.warehouse_city = iwp.warehouse_city,
        inv_dw.warehouse_region = iwp.warehouse_region,
        inv_dw.product_name = iwp.product_name,
        inv_dw.quantity_on_hand = iwp.quantity_on_hand,
        inv_dw.quantity_available = iwp.quantity_available
    WHEN NOT MATCHED THEN
        INSERT (inventory_id, warehouse_address, warehouse_city, warehouse_region,
product_name, quantity_on_hand, quantity_available)
        VALUES (iwp.inventory_id, iwp.warehouse_address, iwp.warehouse_city,
iwp.warehouse_region, iwp.product_name, iwp.quantity_on_hand, iwp.quantity_available);

    COMMIT;
END;
/

-- CUSTOMER ETL --
CREATE OR REPLACE PROCEDURE customer_etl_proc
AS
BEGIN
```

```sql
    INSERT INTO customer_dw
    SELECT cust.cust_id, cv.time, cv.duration, cust.first_name, cust.last_name, cust.birthdate,
cust.email, cust.prime_status, cust.phone_number, cust.member_start_date,
        oca.cust_address, oca.cust_city, oca.cust_region
    FROM op_cust_view cust
    JOIN cc_call_view cv ON cust.cust_id = cv.cust_id
    JOIN op_cust_add oca ON cust.cust_id = oca.cust_id
    LEFT JOIN customer_dw cdw
    ON cust.cust_id = cdw.cust_id;

    -- UPDATE from opv_view --
    MERGE INTO customer_dw cust_dw
        USING (SELECT cust.cust_id, cv.time, cv.duration, cust.first_name, cust.last_name,
cust.birthdate, cust.email, cust.prime_status, cust.phone_number, cust.member_start_date,
        oca.cust_address, oca.cust_city, oca.cust_region
    FROM op_cust_view cust
    JOIN cc_call_view cv ON cust.cust_id = cv.cust_id
    JOIN op_cust_add oca ON cust.cust_id = oca.cust_id) cco
        ON (cco.cust_id = cust_dw.cust_id)
    WHEN MATCHED THEN
        UPDATE SET
        cust_dw.call_time = cco.time,
        cust_dw.call_duration = cco.duration,
        cust_dw.first_name = cco.first_name,
        cust_dw.last_name = cco.last_name,
        cust_dw.birthdate = cco.birthdate,
        cust_dw.email = cco.email,
        cust_dw.prime_status = cco.prime_status,
        cust_dw.phone_number = cco.phone_number,
        cust_dw.member_start_date = cco.member_start_date,
        cust_dw.cust_address = cco.cust_address,
        cust_dw.cust_city = cco.cust_city,
        cust_dw.cust_region = cco.cust_region
    WHEN NOT MATCHED THEN
        INSERT (cust_id, call_time, call_duration, first_name, last_name, birthdate, email,
prime_status, phone_number, member_start_date,
        cust_address, cust_city, cust_region)
        VALUES (cco.cust_id, cco.time, cco.duration, cco.first_name, cco.last_name,
cco.birthdate, cco.email, cco.prime_status, cco.phone_number, cco.member_start_date,
        cco.cust_address, cco.cust_city, cco.cust_region);

    COMMIT;
END;
/
```

```
-- vendor ETL --
CREATE OR REPLACE PROCEDURE vendor_etl_proc
AS
BEGIN
   INSERT INTO vendor_dw
   SELECT  ovv.vendor_id, ovv.vendor_name, ovv.vendor_phone_number, ovv.vendor_contact,
ovv.vendor_email, ovv.vendor_address, ovv.vendor_city, ovv.vendor_region,
         ovv.vendor_zip, ocv.country_name
   FROM op_vend_view ovv
   JOIN op_ctry_view ocv ON ovv.vendor_country_id = ocv.country_id
   LEFT JOIN vendor_dw vend_dw
   ON ovv.vendor_id = vend_dw.vendor_id
   WHERE vend_dw.vendor_id IS NULL;

   -- UPDATE from opv_view --
   MERGE INTO vendor_dw vdw
      USING (SELECT ovv.vendor_id, ovv.vendor_name, ovv.vendor_phone_number,
ovv.vendor_contact, ovv.vendor_email, ovv.vendor_address, ovv.vendor_city,
ovv.vendor_region,
         ovv.vendor_zip, ocv.country_name
   FROM op_vend_view ovv
   JOIN op_ctry_view ocv ON ovv.vendor_country_id = ocv.country_id) vc
      ON (vc.vendor_id = vdw.vendor_id)
   WHEN MATCHED THEN
   UPDATE SET
      vdw.vendor_name = vc.vendor_name,
      vdw.vendor_phone_number = vc.vendor_phone_number,
      vdw.vendor_contact = vc.vendor_contact,
      vdw.vendor_email = vc.vendor_email,
      vdw.vendor_address = vc.vendor_address,
      vdw.vendor_city = vc.vendor_city,
      vdw.vendor_region = vc.vendor_region,
      vdw.vendor_zip = vc.vendor_zip,
      vdw.country_name = vc.country_name
   WHEN NOT MATCHED THEN
      INSERT (vendor_id, vendor_name, vendor_phone_number, vendor_contact,
vendor_email, vendor_address, vendor_city, vendor_region,
         vendor_zip, country_name)
      VALUES (vc.vendor_id, vc.vendor_name, vc.vendor_phone_number, vc.vendor_contact,
vc.vendor_email, vc.vendor_address, vc.vendor_city, vc.vendor_region,
         vc.vendor_zip, vc.country_name);

   COMMIT;
```
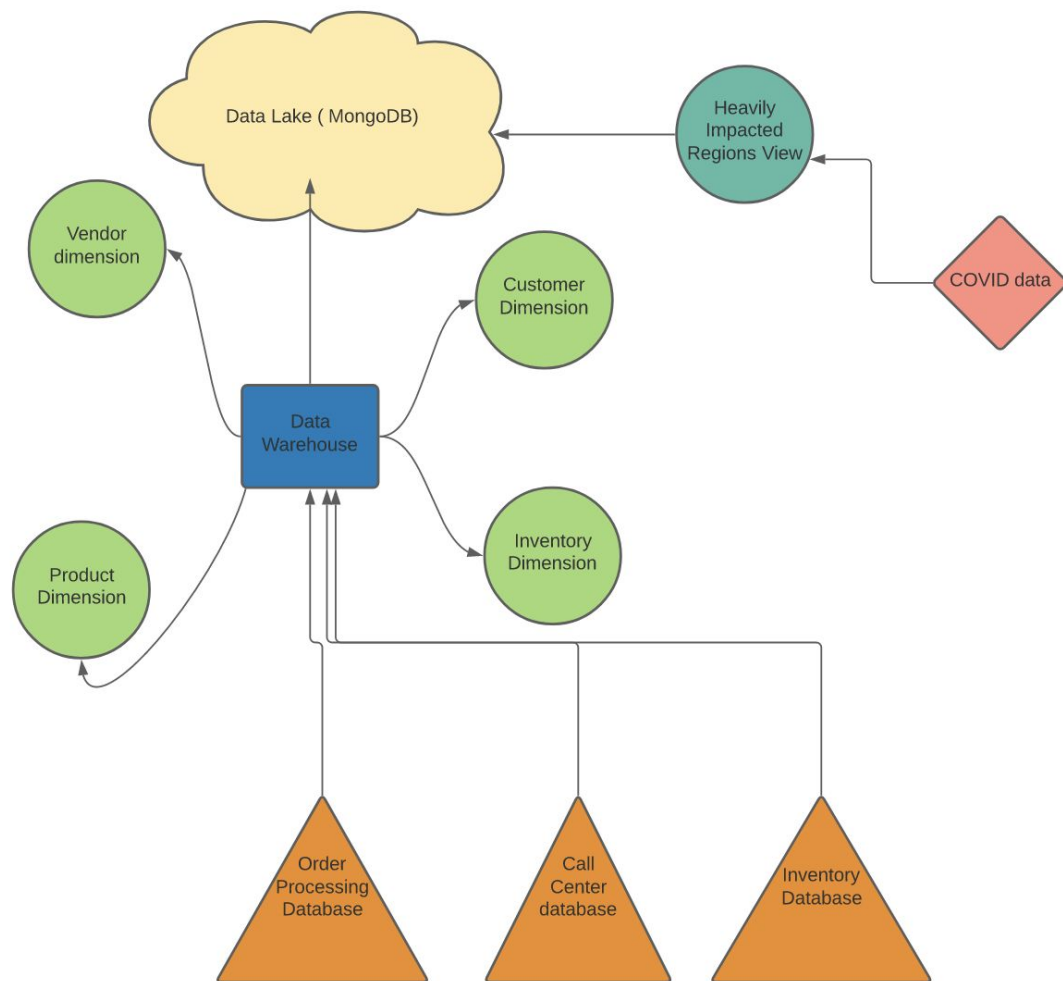
```
END;
/

EXECUTE measures_etl_proc;
EXECUTE product_etl_proc;
EXECUTE inventory_etl_proc;
EXECUTE customer_etl_proc;
EXECUTE vendor_etl_proc;
```

Section 4: Data Lake Model

Section 5: Analytics Code

Code for 3rd chart:

```
[
 {
   "$group": {
     "_id": {
       "__alias_0": "$PRODUCT_ID"
     },
     "__alias_1": {
       "$addToSet": "$CALL_ID"
     }
   }
 },
 {
   "$project": {
     "_id": 0,
     "__alias_0": "$_id.__alias_0",
     "__alias_1": {
       "$size": "$__alias_1"
     }
   }
 },
 {
   "$project": {
     "x": "$__alias_1",
     "y": "$__alias_0",
     "_id": 0
   }
 },
 {
   "$addFields": {
     "__agg_sum": {
       "$sum": [
         "$x"
       ]
     }
   }
 },
 {
   "$sort": {
     "__agg_sum": 1
```

```
      }
    },
    {
      "$project": {
        "__agg_sum": 0
      }
    },
    {
      "$limit": 5000
    }
]

Code for 2nd chart:
[
  {
    "$group": {
      "_id": {
        "__alias_0": "$COUNTRY_NAME"
      },
      "__alias_1": {
        "$sum": {
          "$cond": [
            {
              "$ne": [
                {
                  "$type": "$VENDOR_CITY"
                },
                "missing"
              ]
            },
            1,
            0
          ]
        }
      }
    }
  },
  {
    "$project": {
      "_id": 0,
      "__alias_0": "$_id.__alias_0",
      "__alias_1": 1
```

```
      }
    },
    {
      "$project": {
        "x": "$__alias_0",
        "y": "$__alias_1",
        "_id": 0
      }
    },
    {
      "$addFields": {
        "__agg_sum": {
          "$sum": [
            "$y"
          ]
        }
      }
    },
    {
      "$sort": {
        "__agg_sum": -1
      }
    },
    {
      "$project": {
        "__agg_sum": 0
      }
    },
    {
      "$limit": 5000
    }
]
```

Code for 1st chart:

```
[
  {
    "$group": {
      "_id": {
        "__alias_0": "$COUNTRY_NAME"
      },
      "__alias_1": {
```

```
      "$sum": {
        "$cond": [
          {
            "$ne": [
              {
                "$type": "$VENDOR_CITY"
              },
              "missing"
            ]
          },
          1,
          0
        ]
      }
    }
  }
},
{
  "$project": {
    "_id": 0,
    "__alias_0": "$_id.__alias_0",
    "__alias_1": 1
  }
},
{
  "$project": {
    "y": "$__alias_1",
    "x": "$__alias_0",
    "_id": 0
  }
},
{
  "$addFields": {
    "__agg_sum": {
      "$sum": [
        "$y"
      ]
    }
  }
},
{
  "$sort": {
```
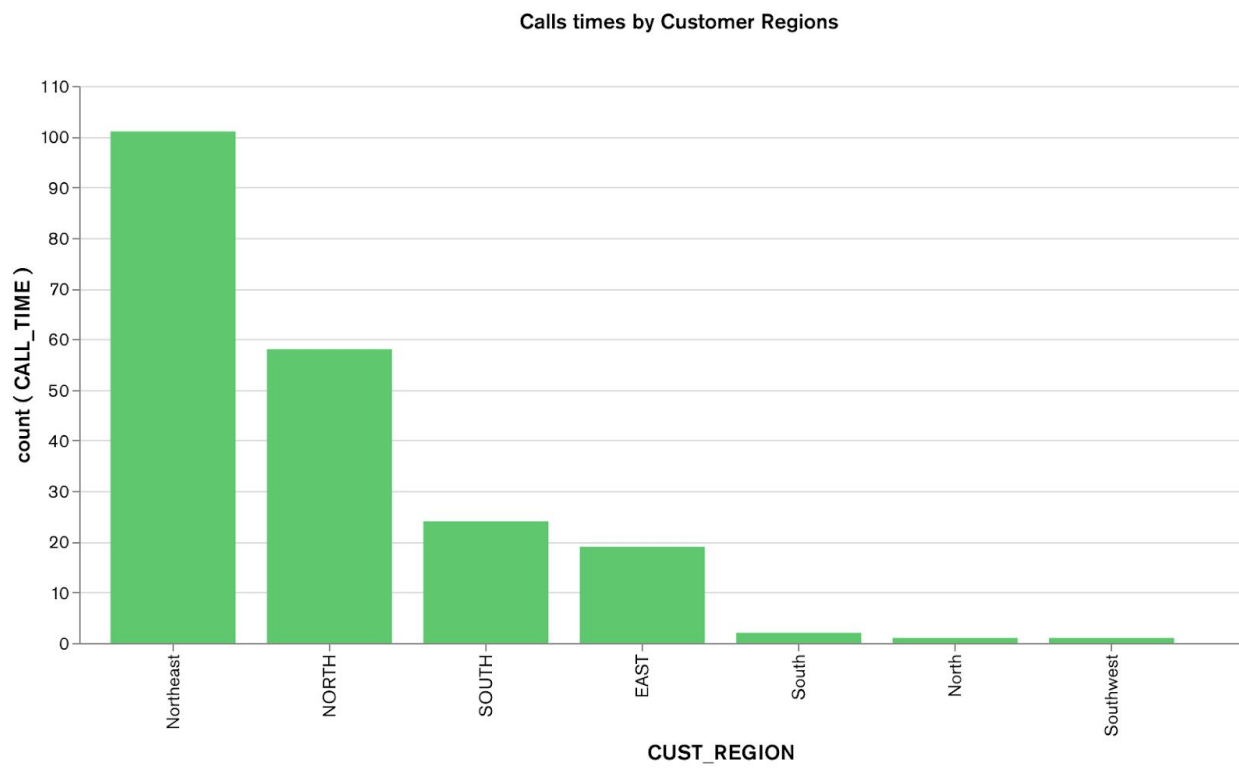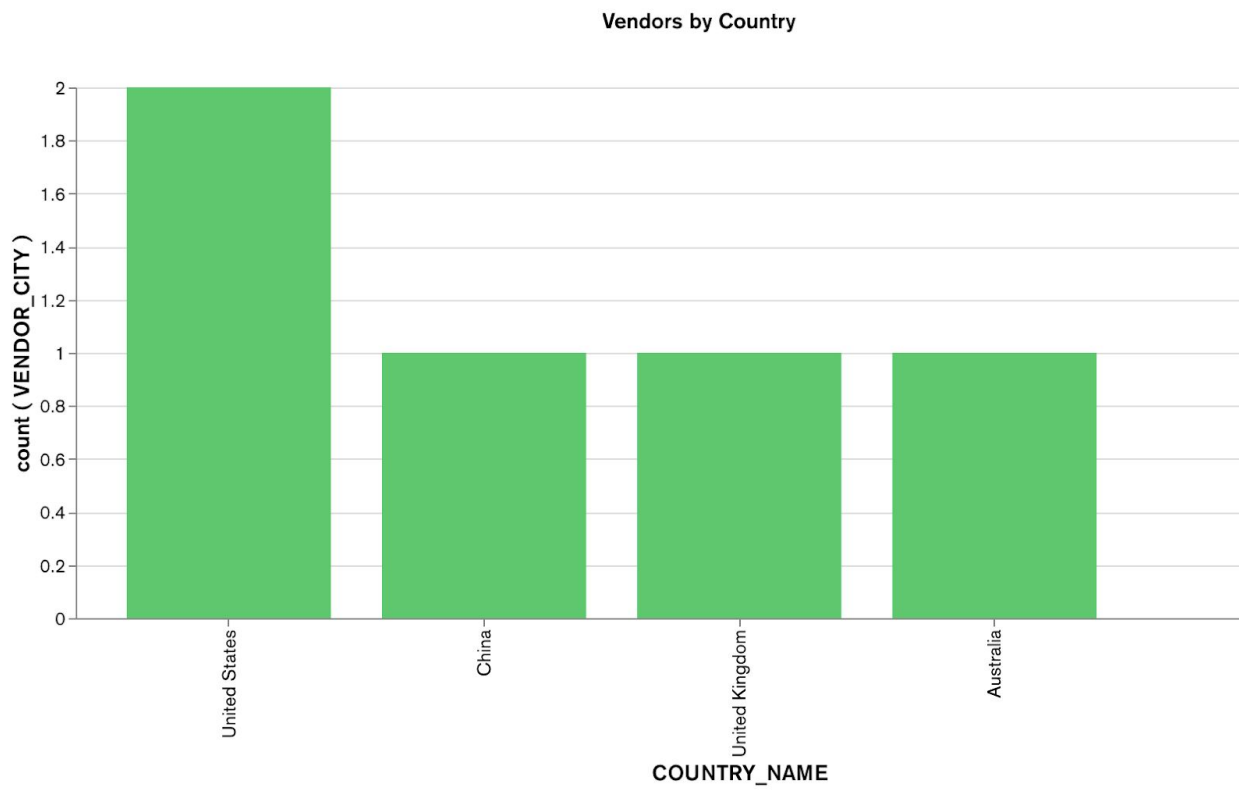
```
      "__agg_sum": -1
    }
  },
  {
    "$project": {
      "__agg_sum": 0
    }
  },
  {
    "$limit": 5000
  }
]
```

Vendors by Country

Calls times by Customer Regions

Distinct Calls per Product