INTERNSHIP INDIVIDUAL PROJECT
E Stores sales Data model

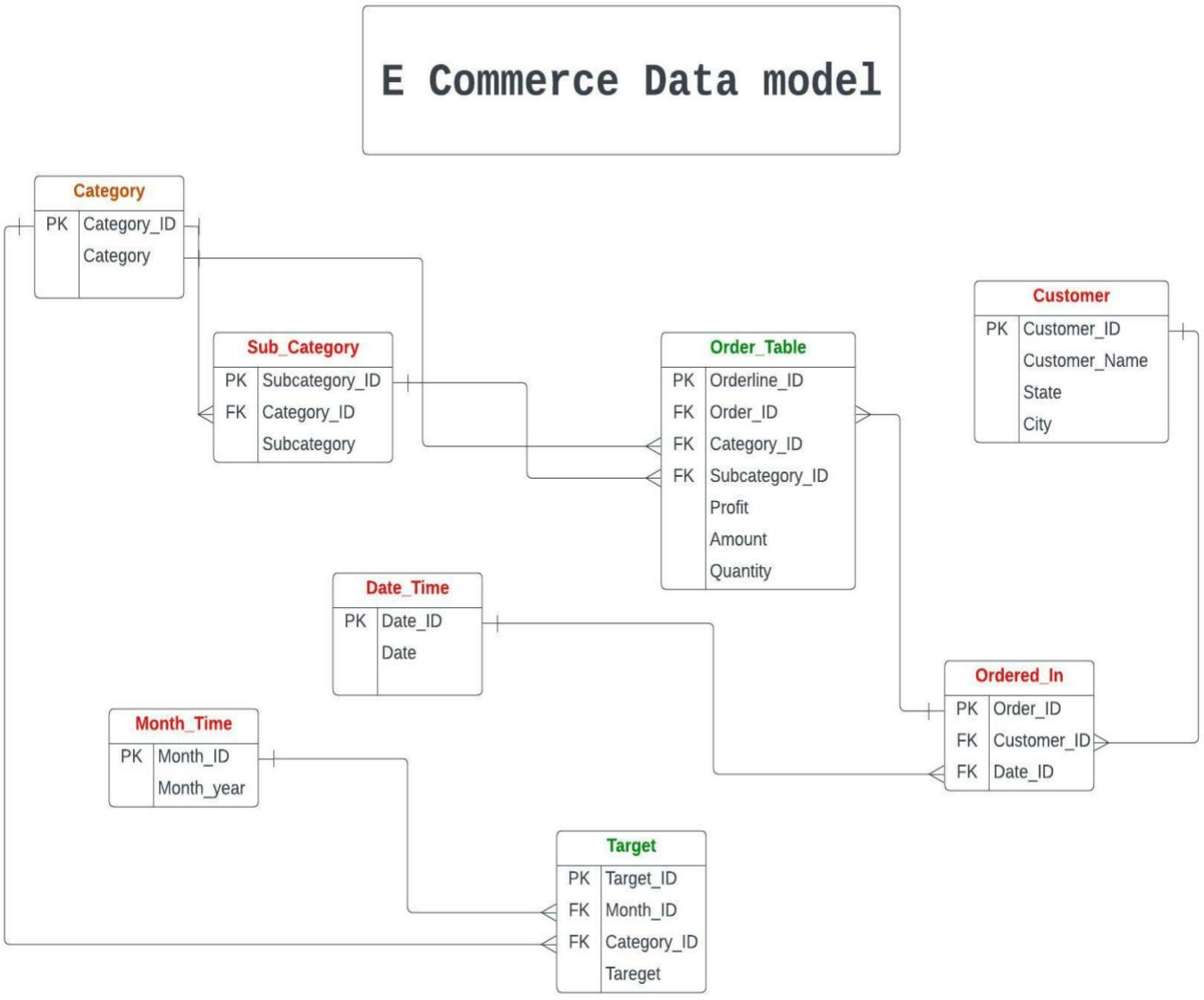
Phase-1

There are 3 data sets

1. List of Orders-This dataset contains purchase information. The information includes ID, Date of Purchase and customer details
2. Order Details- This dataset contains order ID, with the order price, quantity, profit, category and subcategory of product
3. Sales target-This dataset contains sales target amount and date for each product category

These data sets have modified to make a model as below.

Data Model



SQL Queries to load the data to fit in the above model:

```
DROP TABLE IF EXISTS dim_Category;
CREATE TABLE dim_Category(Category_ID  SERIAL,
                                        Category VARCHAR(50),
                                        PRIMARY KEY (Category_ID)
                                        );


DROP TABLE IF EXISTS dim_Sub_Category;
CREATE TABLE dim_Sub_Category(Subcategory_ID SERIAL,
                                                Category_ID INT,
                                                Subcategory VARCHAR(50),
                                                PRIMARY KEY (Subcategory_ID),
                                                FOREIGN KEY (Category_ID) REFERENCES
dim_Category(Category_ID)
                                                );
DROP TABLE IF EXISTS dim_Date_time;
CREATE TABLE dim_Date_time(Date_ID SERIAL,
                                        Full_Date DATE,
                                        PRIMARY KEY (Date_ID)
                                        );
DROP TABLE IF EXISTS dim_Month_time ;

CREATE TABLE dim_Month_time(Month_ID SERIAL,
                                         Month_year VARCHAR(50),
                                         PRIMARY KEY (Month_ID)
                                         );



DROP TABLE IF EXISTS fact_Target;
CREATE TABLE fact_Target(Target_ID SERIAL,
                                    Month_ID INT,
                                    Category_ID INT,
                                    Target INT,
                                    PRIMARY KEY (Target_ID),
                                    FOREIGN KEY (Month_ID) REFERENCES dim_Month_time(Month_ID),
                                    FOREIGN KEY (Category_ID) REFERENCES dim_Category(Category_ID)
                                    );
DROP TABLE  IF EXISTS dim_Customer;
CREATE TABLE dim_Customer(Customer_ID SERIAL,
                                        Customer_Name VARCHAR(100),
                                        State VARCHAR(50),
                                        City VARCHAR(100),
                                        PRIMARY KEY (Customer_ID)
                                        );

DROP TABLE IF EXISTS dim_Ordered_In;
CREATE TABLE dim_Ordered_In(Order_ID VARCHAR(20),
```

```
                                        Customer_ID INT,
                                        Date_ID INT,
                                        PRIMARY KEY (Order_ID),
                                        FOREIGN KEY (Customer_ID) REFERENCES
Customer(Customer_ID),
                                        FOREIGN KEY (Date_ID) REFERENCES Date_Time(Date_ID)
                                        );

DROP TABLE IF EXISTS fact_Order_Table;
CREATE TABLE fact_Order_Table(Orderline_ID SERIAL,
                                                Order_ID VARCHAR (20),
                                                Category_ID INT,
                                                Subcategory_ID INT,
                                                Profit INT,
                                                Amount INT,
                                                Quantity INT,
                                                PRIMARY KEY (Orderline_ID),
                                                FOREIGN KEY (Order_ID) REFERENCES
dim_Ordered_In(Order_ID),
                                                FOREIGN KEY (Category_ID) REFERENCES
dim_Category(Category_ID),
                                                FOREIGN KEY (Subcategory_ID) REFERENCES
dim_Sub_category(Subcategory_ID)
                                                );


CREATE TABLE list_of_orders(Order_ID VARCHAR(50),
                                                  Order_Date VARCHAR(50),
                                                  Customer_Name VARCHAR(100),
                                                  State VARCHAR(50),
                                                  City VARCHAR(100));

COPY list_of_orders FROM '/Users/shriyareddypulagam/Downloads/List_of_Orders.csv' DELIMITER ',' CSV
HEADER;


CREATE TABLE Order_Table(Order_ID VARCHAR(20),
                                                Amount FLOAT(3),
                                                Profit FLOAT(3),
                                                Quantity INT,
                                                Category VARCHAR(50),
                                                Subcategory VARCHAR(50));

COPY Order_Table FROM '/Users/shriyareddypulagam/Downloads/Order_Details.csv' DELIMITER ',' CSV
HEADER;

CREATE TABLE Sales_target(Month_year VARCHAR(50),
                                                 Category VARCHAR(50),
                                                 Target float(2));
```

```
COPY Sales_target FROM '/Users/shriyareddypulagam/Downloads/Sales_target.csv' DELIMITER ',' CSV
HEADER;

insert into dim_Category(Category) (select distinct Category from Order_Table);


create or replace view order_details_view as
(select ot.Category, ot.Subcategory, (select dc.Category_ID from dim_Category dc where dc.Category =
ot.Category)
from Order_Table ot);


INSERT INTO dim_Sub_Category(category_ID, subcategory) (select distinct category_ID, subcategory from
order_details_view )
select * from dim_Sub_Category;

insert into dim_Date_time(Full_Date) (select distinct Order_Date from list_of_orderss order by Order_Date);

delete from dim_Date_time where full_date is null;


CREATE OR REPLACE VIEW month_date as
(SELECT ddt.Date_Id,
 to_char((select ddt1.full_date from dim_Date_time ddt1 where ddt.Date_ID = ddt1.Date_ID), 'Mon-YY')
month_year, ddt.full_date
from dim_Date_time ddt );


insert into dim_Month_time(Month_Year)
(select DISTINCT month_year from  month_date order by month_year);


insert into fact_target(target, MONTH_ID, Category_ID)
select st.target,
(select dmt.Month_ID FROM dim_Month_time dmt where dmt.Month_Year = st.Month_Year),
(select dc.Category_ID FROM dim_Category dc where dc.category = st.category)
from sales_target st;

INSERT INTO dim_Customer(customer_name,state,city)
select distinct customer_name, state, city from list_of_orders;

delete from dim_customer where customer_name is null;

insert into dim_ordered_in (order_ID, Customer_ID, Date_ID)
select lo.order_ID, (select dc.customer_ID from dim_customer dc where dc.customer_name =
lo.customer_name
                                        and dc.state = lo.state and dc.city = lo.city),
(select ddt.Date_ID from dim_date_time ddt where ddt.full_date = lo.order_date)
from list_of_orderss lo;
```

```
select * from list_of_orderss;

delete from list_of_orderss where order_id is null;

select * from dim_ordered_in;

insert into fact_Order_Table(profit, amount, quantity,Order_ID, Category_ID, Subcategory_ID)
select ot.profit, ot.amount, ot.quantity,
(select doi.order_ID from dim_ordered_in doi where doi.Order_ID = ot.Order_ID),
(select dc.category_ID FROM dim_category dc where dc.category = ot.category),
(select dsc.subcategory_ID FROM dim_sub_category dsc where dsc.subcategory = ot.subcategory)
from order_table ot;
```

Phase: 2

1. Rank of states according to the business it makes throughout business year.

```
select dc.state, sum(fot.amount)as state_rank
from dim_customer dc join dim_ordered_in doi on dc.customer_ID = doi.customer_ID
join fact_order_table fot on fot.order_ID = doi.order_ID
group by dc.state
order by state_rank desc;
```

Output

	state character varying (50)	state_rank bigint
1	Madhya Pradesh	105140
2	Maharashtra	95348
3	Delhi	22531
4	Uttar Pradesh	22359
5	Rajasthan	21149
6	Gujarat	21058
7	Punjab	16786
8	Karnataka	15058
9	West Bengal	14086
10	Kerala	13459
11	Andhra Pradesh	13256
12	Bihar	12943
13	Nagaland	11903
14	Jammu and Kashmir	10829

2. Months which met the target.

```
create or replace view dtdmt
as
(select month_year, sum(target) targetsum
from fact_target ft join dim_month_time dmt on ft.month_ID = dmt.month_ID
group by month_year
order by targetsum desc);



create or replace view monthamount
as
(select  to_char(ddt.full_date, 'Mon-YY') groupedmonth, sum(amount) amountsum
from dim_ordered_in doi join dim_date_time ddt on doi.date_ID = ddt.date_ID join
fact_order_table fot on fot.order_id = doi.order_id
group by to_char(ddt.full_date, 'Mon-YY')
order by amountsum desc);

select groupedmonth
from monthamount ma join dtdmt dt
on ma.groupedmonth = dt.month_year
where ma.amountsum > dt.targetsum;
```

Output:

	groupedmonth text
1	Jan-19
2	Mar-19
3	Nov-18
4	Dec-18
5	Apr-18

3. The subcategory that was bought the maximum for each category:

```
CREATE OR REPLACE VIEW category as
(select dc.category, dsc.subcategory, count(fot.order_id) as countorders
from fact_order_table fot join dim_category dc on fot.category_ID = dc.category_ID
join dim_sub_category dsc on fot.subcategory_ID = dsc.subcategory_ID
group by dc.category, dsc.subcategory);

select c.category, c.subcategory
from category c
where countorders IN
(select MAX(countorders) OVER(PARTITION BY c1.category)
```

from category c1 where c1.category = c.category);

Output:

	category character varying (50)	subcategory character varying (50)
1	Furniture	Bookcases
2	Electronics	Phones
3	Clothing	Saree

4. Order of category, subcategory with most profitperquantity.

```
select dc.category, sum(profit)/count(quantity) as profitsum
from fact_order_table fot join dim_category dc on fot.category_ID = dc.category_ID
group by dc.category
```

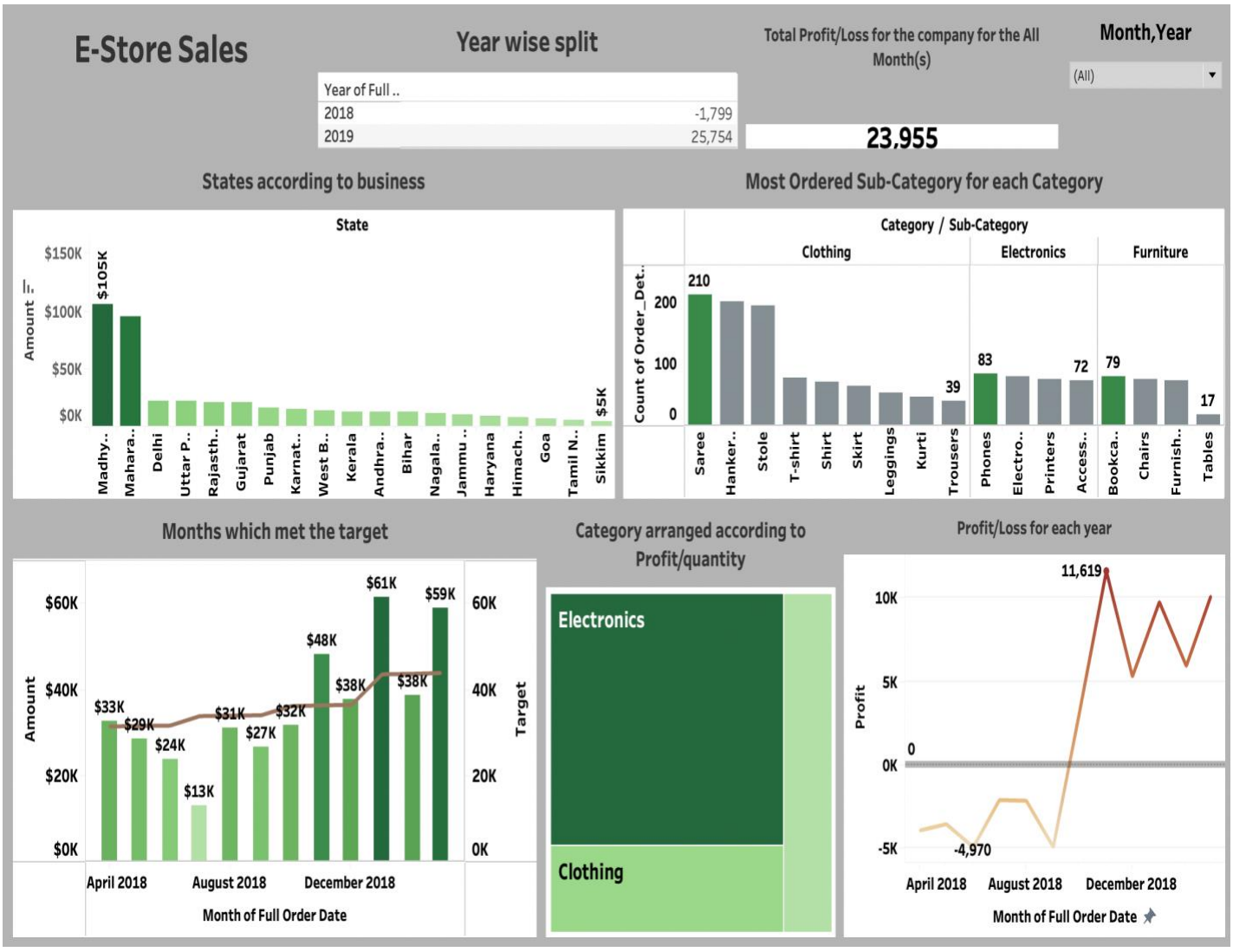
Output:

	category character varying (50)	subcategory character varying (50)	profitperquantity bigint
1	Clothing	Shirt	16
2	Clothing	Skirt	3
3	Clothing	Trousers	73
4	Furniture	Furnishings	11
5	Clothing	Hankerchief	10
6	Furniture	Chairs	7
7	Clothing	Kurti	3
8	Furniture	Tables	-235
9	Furniture	Bookcases	61
10	Clothing	Leggings	4
11	Clothing	Stole	13
12	Electronics	Phones	26
13	Electronics	Accessories	49

Phase 3:

Tableau Visualization

https://public.tableau.com/app/profile/shriya.reddy.pulagam/viz/individual_project_gathi/salesdashboard?publish=yes



-Shriya Reddy Pulagam