



## **Shipt: Grocery Delivery Made Simple**

### **Business Case**

**New York University School of Professional Studies**

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**Section Number: 100**

**Team Name: Tycoons**

**Assignment: Project Report**

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#### **About Our Team**

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## **Company Overview: Shipt**

Shipt (owned by Target) is a local delivery service that was founded in 2014 by Bill Smith and is currently headquartered in Birmingham, Alabama. The company serves members, shoppers, and communities by offering convenience and freedom. The service offers delivery of fresh groceries and everyday essentials from local and national retailers using a user-friendly app and a local network of reliable shoppers. The main goal of the company is to help users save time, fuel and headspace by providing next-hour, same day grocery delivery.

Shipt operates in the Couriers and Local Delivery Services industry is a \$114 billion-dollar industry with top competitors leading growth such as Amazon Groceries, Instacart, Peapod, and Cornershop.

Target acquired Shipt for \$550 million in December 2017 and currently the company operates in 260 cities and counting. The business model offers a monthly or annual membership fee for users to gain access to vetted shoppers and partnerships with retailers in each city. As of 2018, Shipt has reported a revenue of \$1 billion.

## **Business Case Introduction**

### **Shipt Business Model and Problem Areas**

Shipt's current business model members of the local community sign up to work as delivery workers or drivers for grocery and everyday essentials. Shipt has a large data set of both delivery workers as well as customers (end users of the platforms).

1. The first problem we have identified is that Shipt currently allows users to place orders for out of stock products.
2. The second problem identified is that a few workers are overbooked for deliveries and not all workers are able to maximize their working hours due to misallocation of delivery orders.
3. The third problem identified is that the estimated time delivery for the products is inaccurate and unreliable.

## **Company: Financial and Target Market Analysis**

Shipt has raised a total of \$65.2M in funding over 3 rounds from investors Harbert Venture Partners, Eventures and Greycroft. In 2017, Target bought Shipt for a total of \$550 million.

- **Customer Segments:** Customers who want/need groceries and essentials delivered at their doorstep
- **Shoppers**
  - Anyone can sign up to work for Shipt and shop for customers' needs
  - Shoppers must have their own vehicle to deliver the products to their customers
  - Free-lancers who want some extra money
- **Stores:** Shipt helps various stores to increase their sales/revenue

## **Goals & Purpose**

Our aim is to create a relational database that can help Shipt manage their customer relationships and delivery management by improving their data model efficiency.

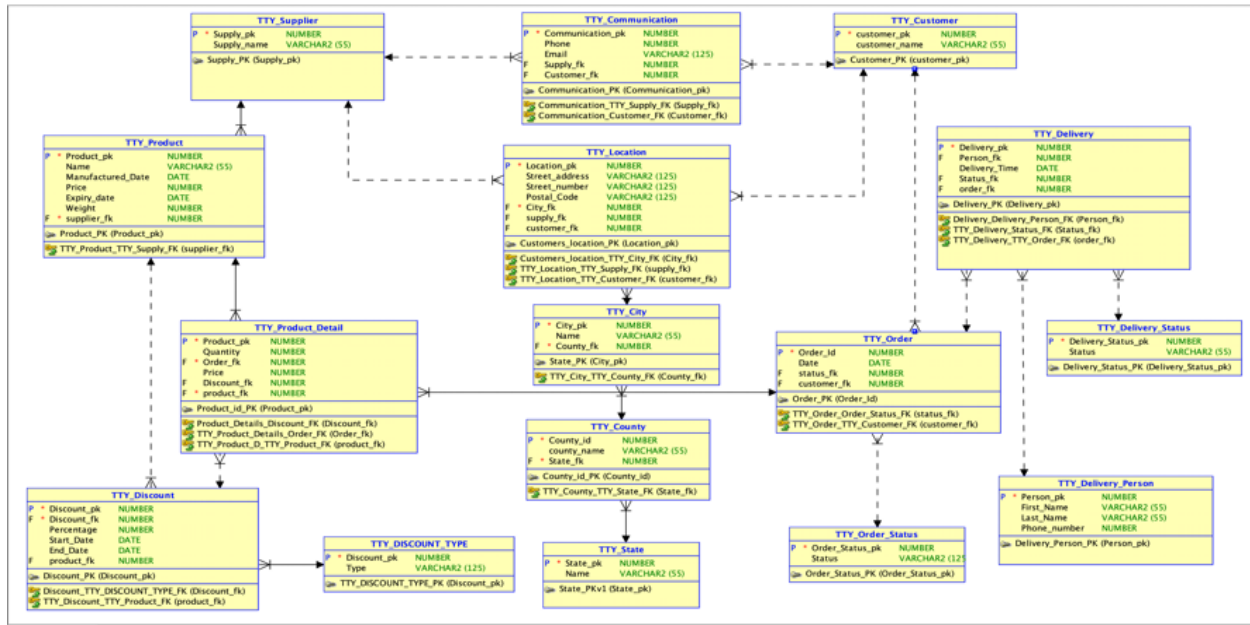
## **Problem Statement**

- Overbooked for deliveries & misallocation of delivery order
- Data Redundancy
- Estimated Time Arrival for Delivery is inaccurate
- Allows users to place orders for out of stock products

## **Deliverables**

- Introduction to the data Model and preparation
- Reports about the details of the customer and suppliers based on their geographical location
- Limitations and Summary about the report.

## Data Modeler



- Details of supplier & customer details of Shipt
- Details of orders, their status, time they are delivered, delivery person
- Number of states, city and county Shipt operates in

## Data Preparation

We included the whole dataset we found online , the data set includes suppliers, customers, products , etc. We further added some data in order to make a data model which shows the complete process of how the company functions.

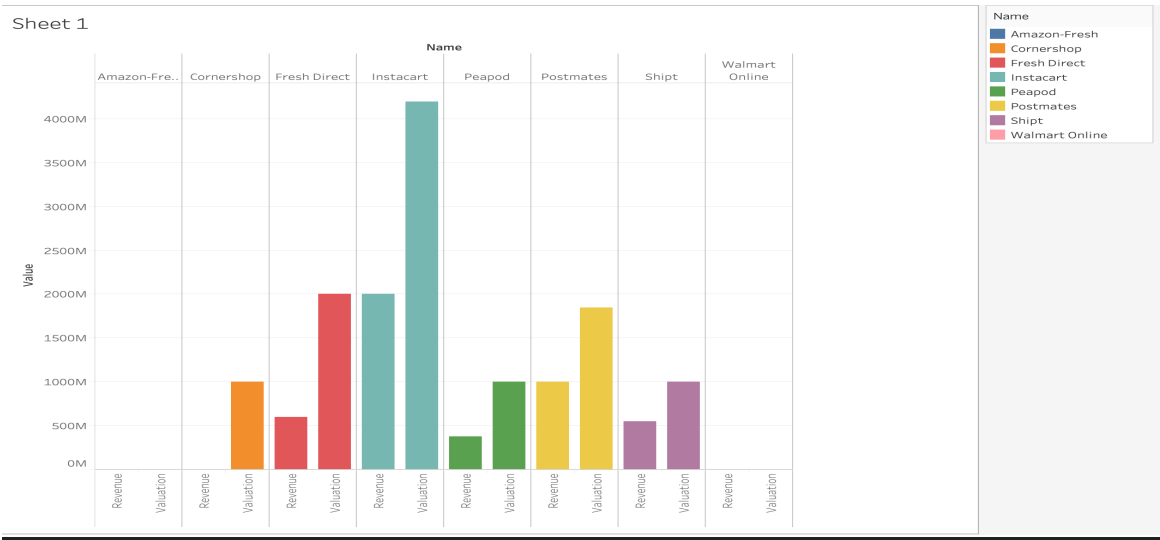
## Analysis

### Competitors Analysis

Shipt key competitors include Instacart, Peapod, Cornershop, Fresh Direct, and Postmates.

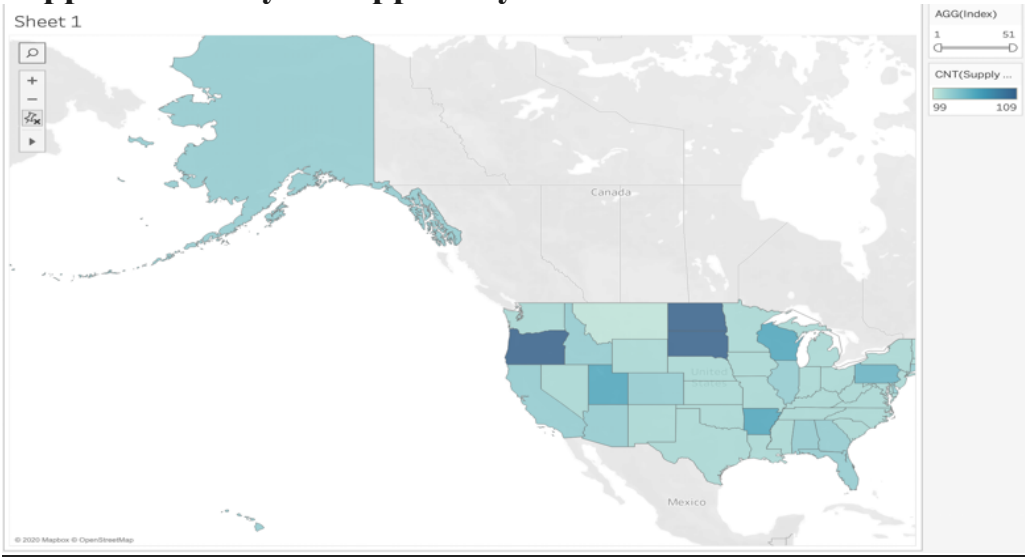
Instacart is the largest competitor with a market Capitalization of \$4.2 billion and revenues of \$2 billion followed by Fresh Direct with a market capitalization of \$2 billion and revenues of \$600 million. Postmates, established in 2011, has a market capitalization of \$1.85 Billion and revenues of around \$1 Billion and finally Peapod, established in 1989, has a market capitalization of \$1 billion and revenues of \$375.

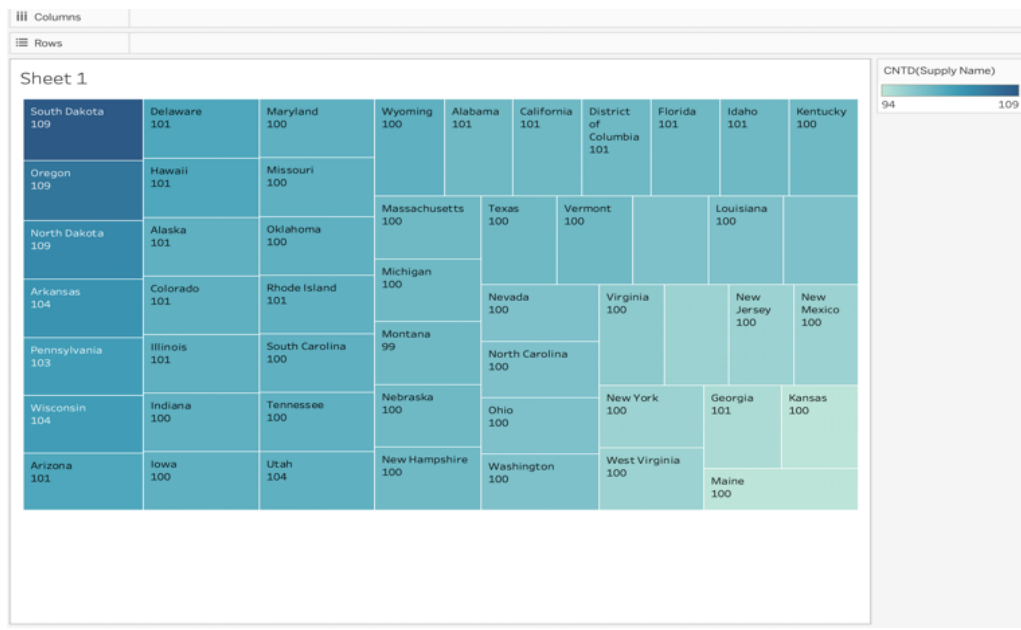
The graph below shows the revenue and valuation of Shipt’s competitors with Instacart having the highest market share of 57% and Walmart of 25%.



**Data Visualization using Tableau**

**Supplier: Density of Supplier by State**





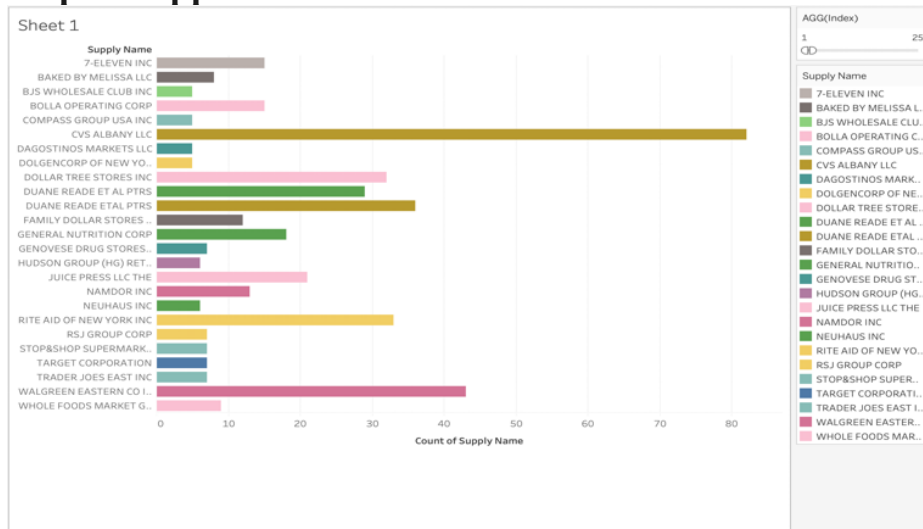
These two visualizations show the number of suppliers by state across the United States. It is clear that the number of suppliers are evenly distributed across all states in the country and there is a range of 99 - 109 suppliers in each state.

## Customer: Number of Customers per City



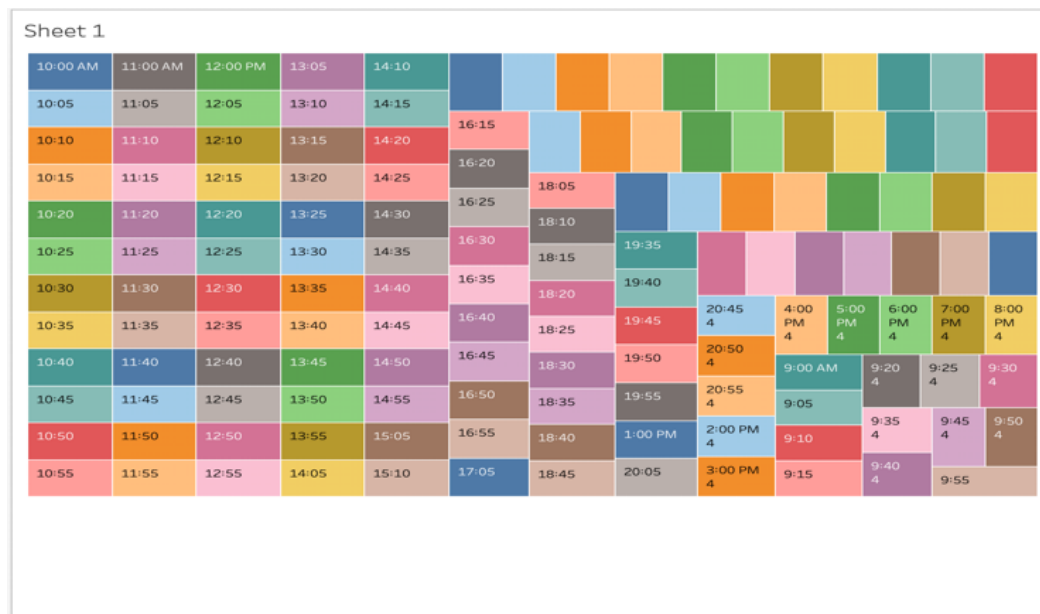
The Following View shows the number of customers per City in the United States. As you can see, the number of customers across the cities is overall similar so the company should look into expanding into more cities with higher population density such as New York City.

## Shipt's Suppliers



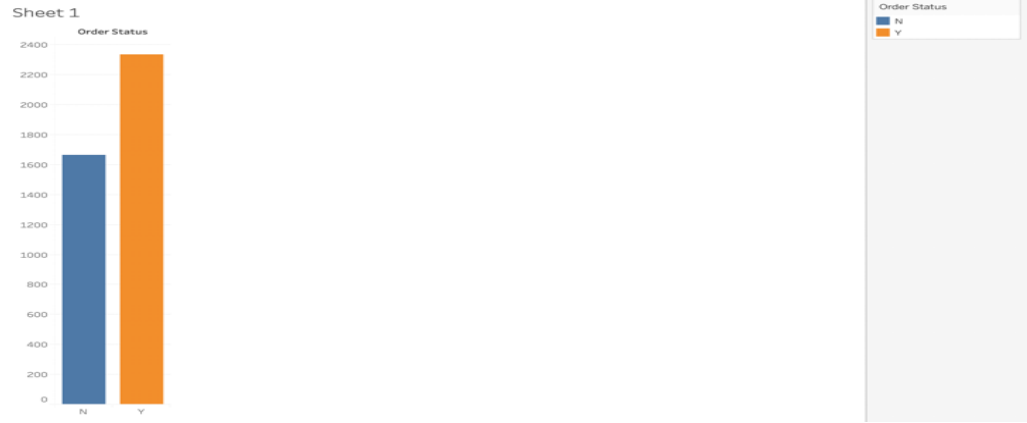
As you can see in this visualization, these are the top 25 suppliers to Shipt. Currently, CVS is the biggest supplier to Shipt which also could highlight that there is a high customer demand for CVS deliveries.

## Delivery Time



This view shows the different delivery times when a customer's order was delivered.

# Current Status of Orders



This table shows the current status of all the orders where the Y (Orange) bar represents orders delivered and N (Blue) represents orders not delivered. This includes the order status of around 3800 Shipt Delivery orders placed by customers.

# Suppliers: Product Specialty

Sheet 1

13TH AVE KOSHER BAKERY INC	ASTORIA FINE GOURMET DELI INC	DAN'S SUPREME SUPERMARKETS INC		FRIENDZ DELI & GROCERY INC Canned orange	FRUIT BASKET INC Whole and 2% yogurt &	GOETHAM 1ST AVENUE GOURMET DELI CO Bakery			HOLLIS AVENUE MINI MARKET CORP
1613 FOOD CORP Whole grain bread, rolls, rice,	BAN THAI GIFT CENTER INC Non-alcoholic	DAVE'S 1958 DISCOUNT CO LLC Low fat yogurt &							
178 J.J.H INC Canned fish	BOROUGH LINE DELI CORP Whole grain	DR PLAZA INC Canned meat	HONG EN FOOD PRODUCTS INC Low fat milk		MID WESTSIDE		MOON MINI MARKET LLC		NARZIO NEW YORK INC Canned dark green vegetables
31 TOPKITCHEN INC Ready to cook	BRIGHTON HALAL MEAT MARKET INC	DSST PHARMACY CORP Canned Legumes	KARAN FRIED CHICKEN INC Oils						
433 FOOD MARKET CORP Water	BROADWAY FINEST DELI CORP	DUANE READE ETAL PTRS Solid fats	KINGSWAY BAKERY INC Fruit Juice		NOR TOPIA SERVICE CENTER INC	PLAZA FOOD MARKET CORP	ROCCO & FRANKS	SABOR FOOD MARKET CORP Raw sugars	SEOUL
ALAHERI RATFAN M other bread, rolls,	BROADVKE MEAT MARKET INC Fresh/Frozen	DYLAN GROCERY STORE INC Whole and 2%	LA NEWYORKINA LLC Packaged		NOR-MEADOW S/S INC Canned poultry				
ANUJEE GROCERY INC Ready to eat deli	CVS ALBANY LLC Canned other vegetables	ELJAHMI MAJID Eggs	LAMA TRADING III INC Whole and 2%		NORTH 3RD CORP Fresh/Frozen other vegetables	THANKSGIVING SUPERMARKET INC other flour and	WALGREEN EASTERN CO INC Low fat cheese	WING FAT COMPANY INC Raw nuts and seeds	
			LITTLE NECK DELI CORP Canned select	ONE STOP FRESH INC other		UNION CONVENIENCE STORE INC Fresh/frozen		YU HUA TRADING INC Packaged snacks	

This view shows the name of the Supplier and the Specialty Product for that specific supplier.

# Proposed Solutions

1. The company needs to expand further into cities with higher population density , cities such as Los Angeles, New York City, Chicago. This is because currently all of Shipt customers are evenly distributed across all cities and increasing deliveries in cities could contribute to a significant increase in Shipt revenue.



2. The company also needs to increase the number of suppliers it has more so that customers have a greater number of stores to choose from when placing delivery orders.
3. The delivery time of the order needs to be quicker so that more orders can be shipped quickly increasing business operational efficiency and customer satisfaction.
4. Improve database recording practices to increase database accuracy and delivery efficiency and reduce misallocation of resources

## **Data Limitations**

In the data modeler, we have tried to decrease ambiguity of the company's tables in the database. In the case that certain tables had misleading column names, the table has been split and a new table has been created to make sure the process of analyzing the data becomes more streamlined and efficient.

The data was not as clean as expected with too many repeating variables and data points. There were also some tables that had misleading or missing data points that had to be cleaned up and fixed to ensure a more accurate database for Shipt.

## Appendix - SQL Views

### -----Ranking States Based On the number of stores in the state-----

```
CREATE VIEW RANK_OF_STATE
AS
SELECT *
FROM      (SELECT tts.state_name state_name,
                  RANK() OVER (ORDER BY COUNT(SUPPLY_NAME) DESC)
                  RANK_OF_STATE,
                  COUNT(SUPPLY_NAME) AS NUMBER_OF_SUPPLIERS
            FROM    TTY_LOCATION ttl
            JOIN    TTY_CITY ttc
            ON      ttc.city_pk = ttl.city_fk
            JOIN    TTY_SUPPLIER tts
            ON      ttl.supply_fk = tts.supply_pk
            JOIN    TTY_COUNTY tco
            ON      ttc.county_fk = tco.county_pk
            JOIN    TTY_STATE tts ON
                  tco.state_fk = tts.state_pk
            WHERE   tts.supply_name IS NOT NULL
                  AND TTC.city_name IS NOT NULL
            GROUP BY tts.state_name)
```

### -----Cities With More Than 1 customer-----

```
CREATE VIEW CITY_WITH_NUMBER_OF_CUSTOMER
AS
SELECT *
FROM      (SELECT ttc.city_name city_name,
                  COUNT(Customer_Name) AS NUMBER_OF_Customer
            FROM    TTY_LOCATION ttl
            JOIN    TTY_CITY ttc
            ON      ttc.city_pk = ttl.city_fk)
```

```

JOIN TTY_Customer tyc
ON ttl.customer_fk = tyc.customer_pk
WHERE tyc.customer_name IS NOT NULL
AND ttc.city_name IS NOT NULL
GROUP BY ttc.city_name
HAVING COUNT(Customer_Name) > 1
ORDER BY COUNT(Customer_Name) DESC
)

```

-----This view shows the product and the discount on the product-----

```

CREATE VIEW PRODUCT_DISCOUNT
AS
WITH pdc AS
    (SELECT
        PRODUCT_PK,
        PRODUCT_NAME,
        PRICE
        FROM TTY_PRODUCT),
    dsc AS
    (SELECT
        PERCENTAGE,
        START_DATE,
        END_DATE,
        discount_type_fk,
        product_fk
        FROM TTY_DISCOUNT),
    dst AS
    (SELECT
        DISCOUNT_TYPE,
        DISCOUNT_PK
        FROM TTY_DISCOUNT_TYPE)

```

```

SELECT  PRODUCT_NAME,
        PRICE,
        PERCENTAGE,

```

```
        DISCOUNT_TYPE
FROM      pdc, dsc, dst
WHERE     dst.discount_pk = dsc.discount_type_fk
AND       dsc.product_fk = pdc.product_pk
```

-----Create View which shows the status of all the current orders-----

```
CREATE VIEW STATUS_OF_ORDER
AS
SELECT
*
FROM
    (SELECT ORDER_STATUS,
    COUNT (ORDER_STATUS) AS NUMBER_OF_ORDERS
    FROM      TTY_ORDER tto
    JOIN      TTY_CUSTOMER ttc
    ON        tto.customer_fk = ttc.customer_pk
    JOIN      TTY_ORDER_STATUS tos
    ON        tto.status_fk = tos.ORDER_STATUS_PK
    GROUP BY ORDER_STATUS)
```

-----Supplier and the product exclusively sold by them-----

```
CREATE VIEW SUPPLIER_SPECALITY
AS
SELECT * FROM
    (SELECT SUPPLY_NAME, PRODUCT_NAME
    FROM      TTY_SUPPLIER tts
    JOIN      TTY_PRODUCT ttp
    ON        tts.supply_pk = ttp.supplier_fk)
```