
MGMT 544 Final Project ~ Design & Implement Database

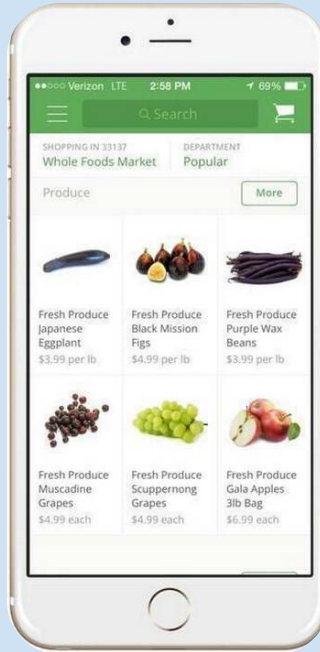


DataQueen
December 5th, 2017

Instacart Overview



Choose Location



Choose Grocery Items



Receive Groceries

Purpose of Analysis ~ Marketing & Sales

1

Normalize & Organize
Transactional Data

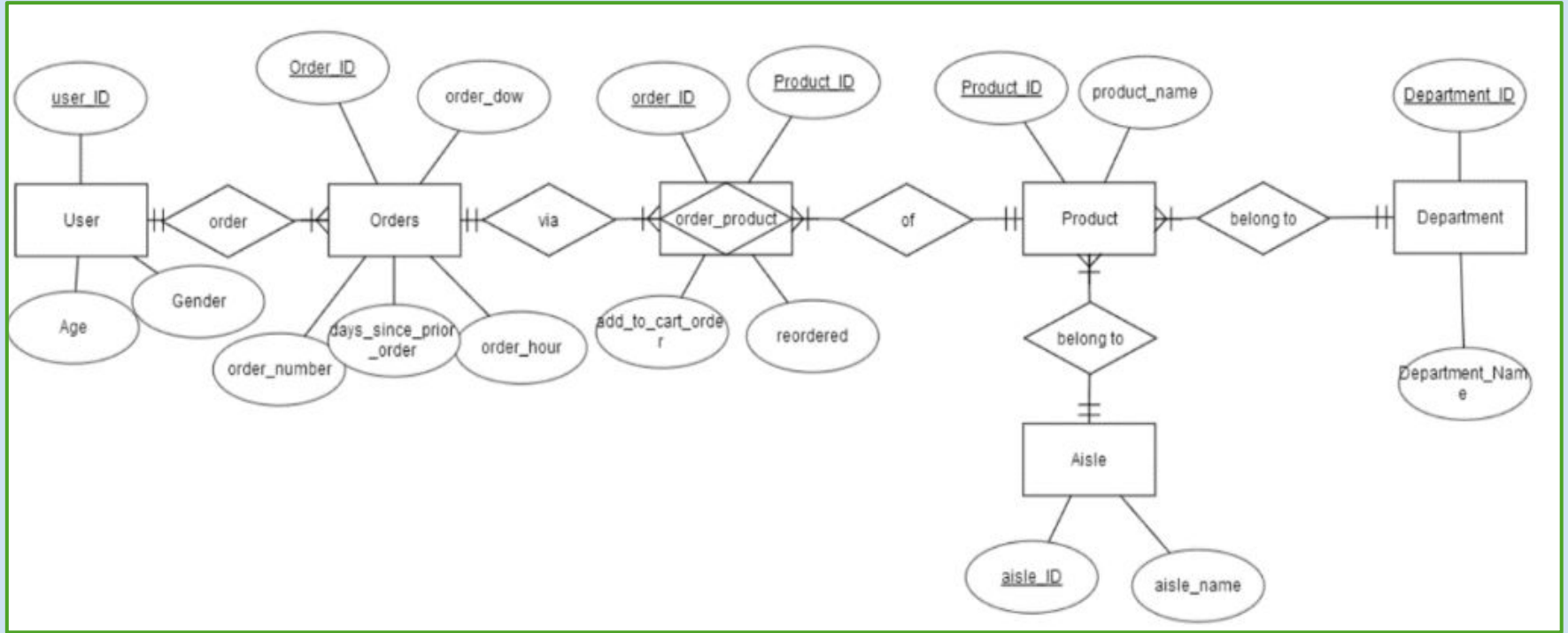
2

Identify & Analyze
trends in orders,
customer segments,
and products

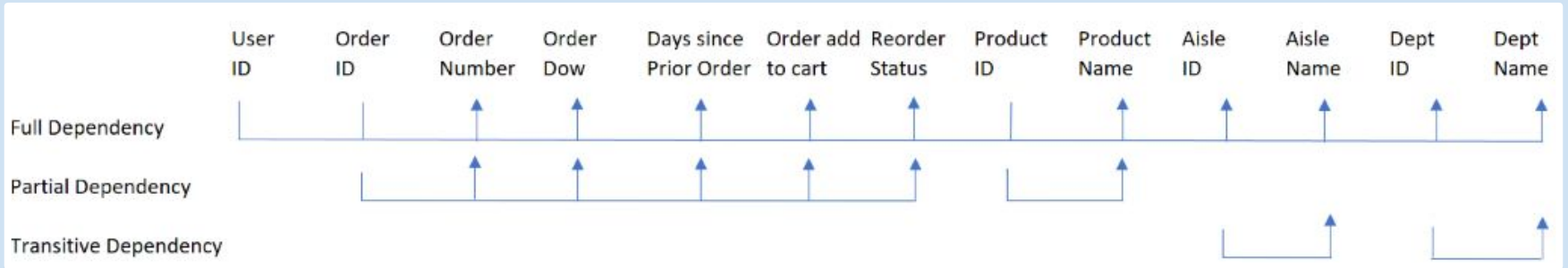
3

Recommend ideas to
increase customer
convenience & satisfaction
and the company's
process efficiency

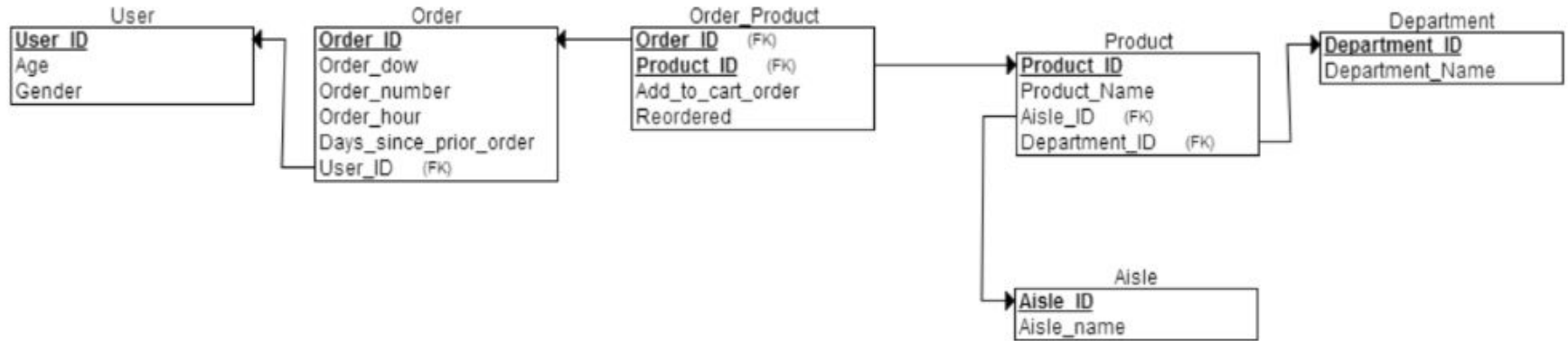
ERD



Normalization



Relational Schema



SQL Create Tables

```
CREATE TABLE orders(  
  order_ID int,  
  user_ID int,  
  order_number int,  
  order_dow int,  
  order_hour int,  
  days_since_prior_order int default  
  null,  
  PRIMARY KEY (order_ID)  
);
```

```
CREATE TABLE user(  
  user_ID int,  
  gender varchar(100),  
  age int,  
  PRIMARY KEY (user_ID)  
);
```

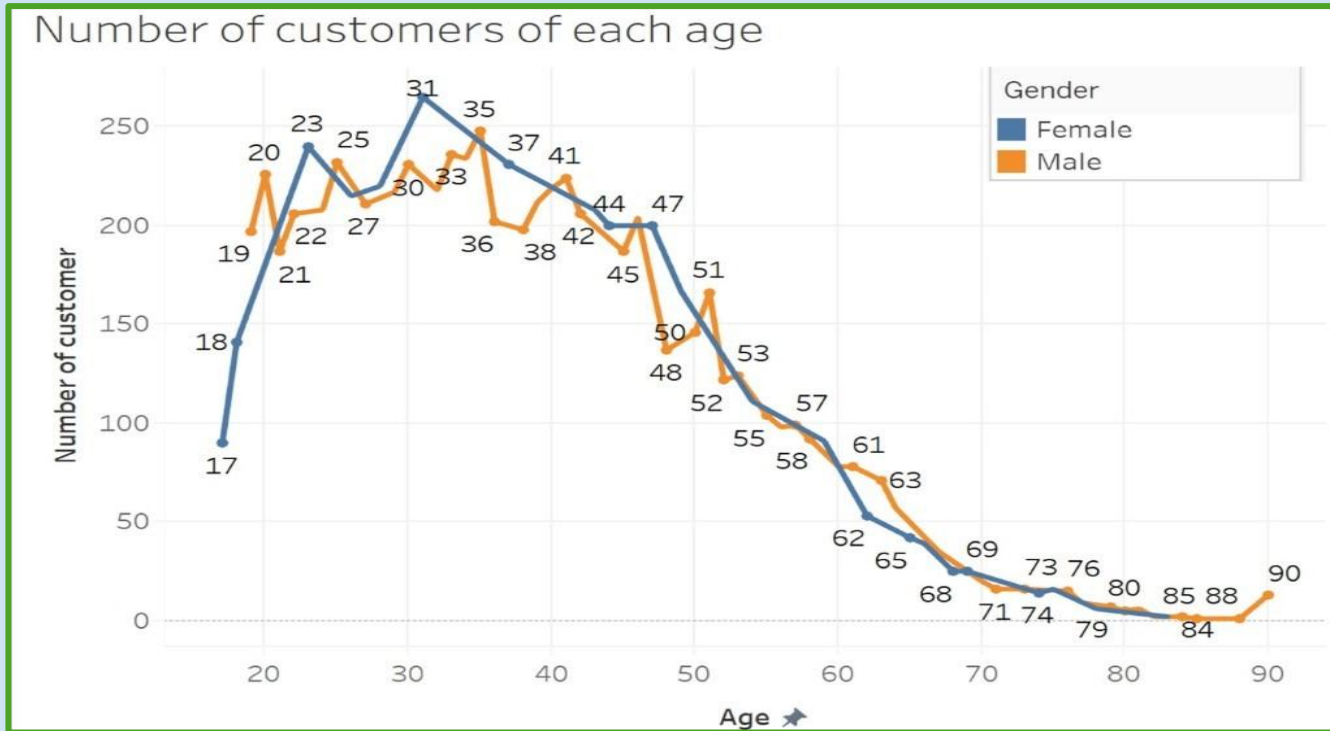
```
CREATE TABLE aisle(  
  aisle_ID int,  
  aisle varchar(100),  
  PRIMARY KEY  
  (aisle_ID)  
);
```

```
CREATE TABLE order_product(  
  order_ID int,  
  product_ID int,  
  add_to_cart_order int,  
  reordered int,  
  PRIMARY KEY (order_ID,product_ID)  
);
```

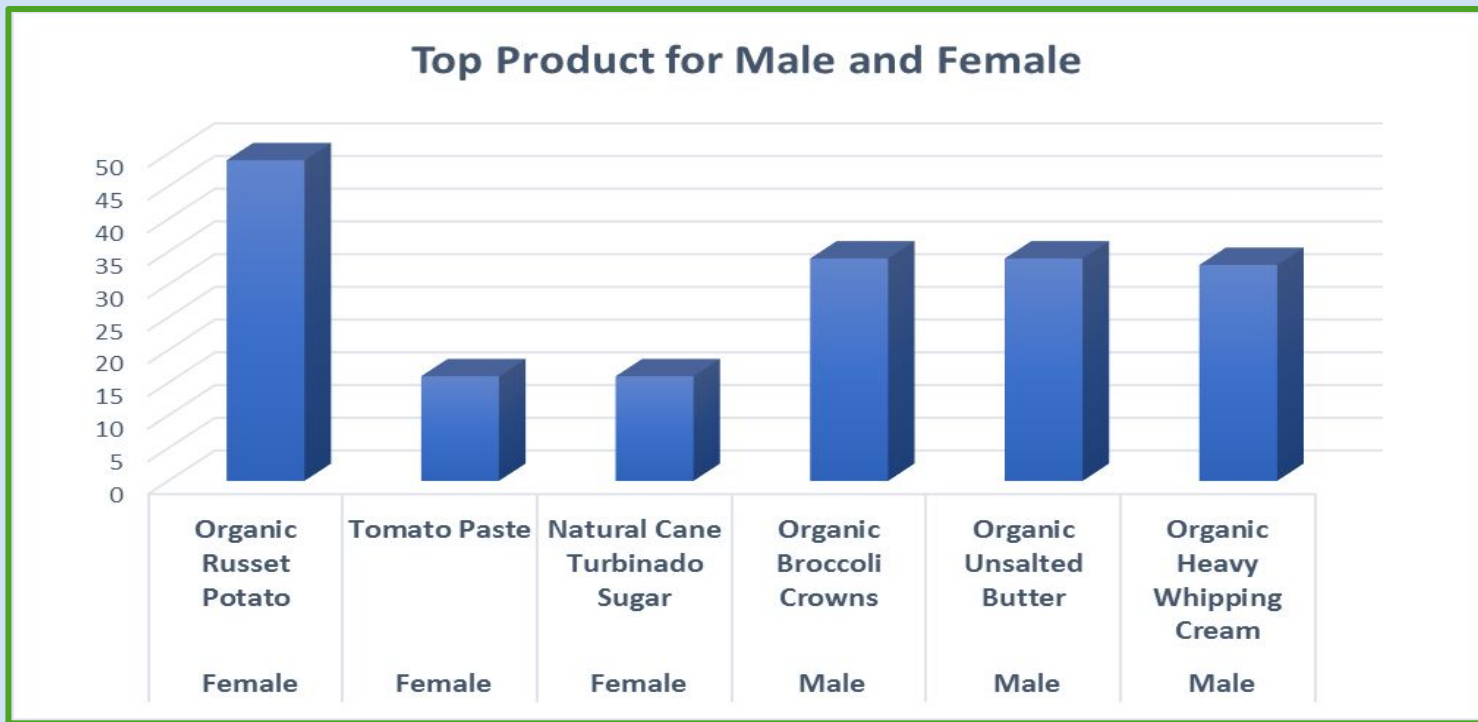
```
CREATE TABLE department(  
  department_ID int,  
  department_name varchar(100),  
  PRIMARY KEY (department_ID)  
);
```

```
CREATE TABLE product(  
  product_ID int,  
  product_name varchar(10000),  
  aisle_ID int,  
  department_ID int,  
  PRIMARY KEY (product_ID)  
);
```

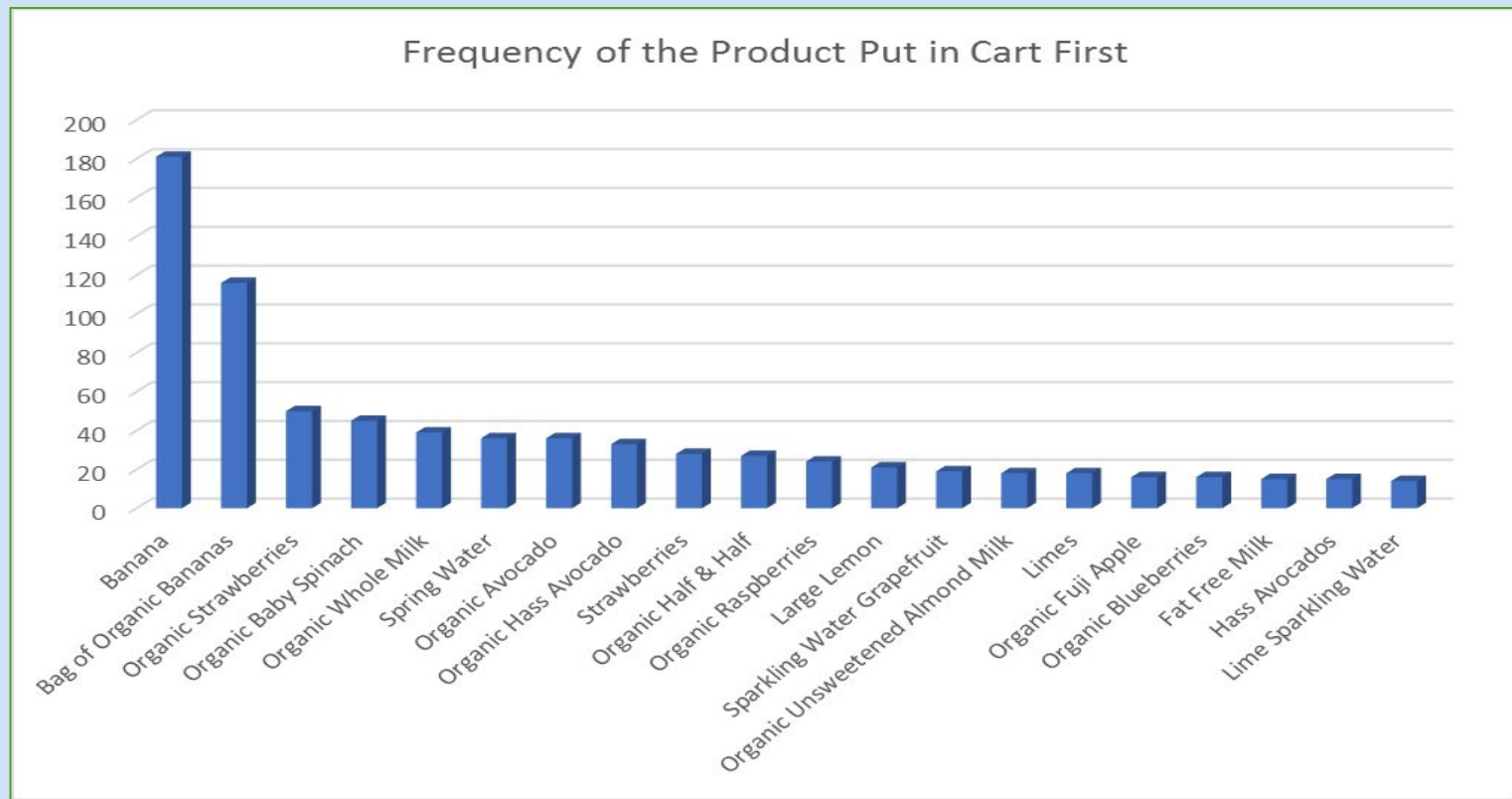
Sample Queries - Customer



Sample Queries - Customer



Sample Queries - Product



Sample Queries - Product

Most popular Product of each Department



Sample Queries - Order



Database Advantages

- Eliminate data redundancy
- Relationship between table
- More organized database
- Provide data that allow you to identify and analyze trends in orders, customer segments, and products
- Recommendations to improve service and enhance customers' experience
 - Better service for customers
- Discover company's competitive advantage
- Increase profitability
- Opportunity for partnership

Future Suggestions

- Keep database organized and updated
- Investigate the relationship between number of orders, the products and the time to place order and the probability to reorder
 - Better shopping experience
 - Increase in sales
- Do a transaction analysis for research purposes
 - Food science
 - Food industry

Any Questions?
