

## **Problem Documentation**

This database is designed for users who want to analyze data collected from Sephora customers, stores, products, brands, and transactions to better optimize how to distribute resources more efficiently between different store, what kind of product stores should stock more, the amount of monthly revenues and who contributes to them etc.

For example, a customer will go to the closest Sephora store to buy some products such as eyeliner. She will check different eyeliners from multiple brands based on her using experiences and go to the cashier. The cashier will ask her whether she is a member of Sephora, what kind of payment method she wants to use and give her an invoice with records about her purchase. Also, she can purchase online on Sephora website with the similar process but needs more information such as her email, phone number and address.

Business rule:

- (1) One product must be produced by at least one brand and a brand can produce multiple products.
- (2) Customers can choose not to buy anything after looking through all products if she does not see anything she wants.
- (3) A customer can have multiple invoices if she/he make different transactions. However, an invoice can only be issued to one customer.
- (4) The invoice is issued by stores and if a store does not sell anything, it does not need to issue invoices at all.

Nouns:

- (1) Product
- (2) Store
- (3) Customer
- (4) Brand
- (5) Invoice