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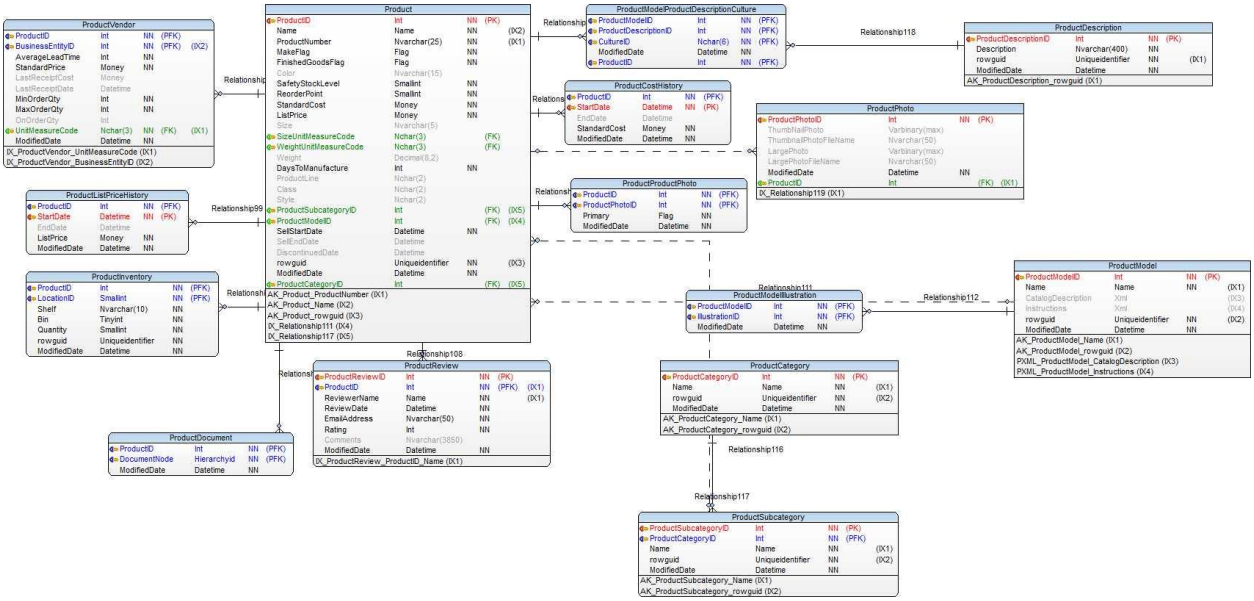
AdventureWorks Assignment

1.



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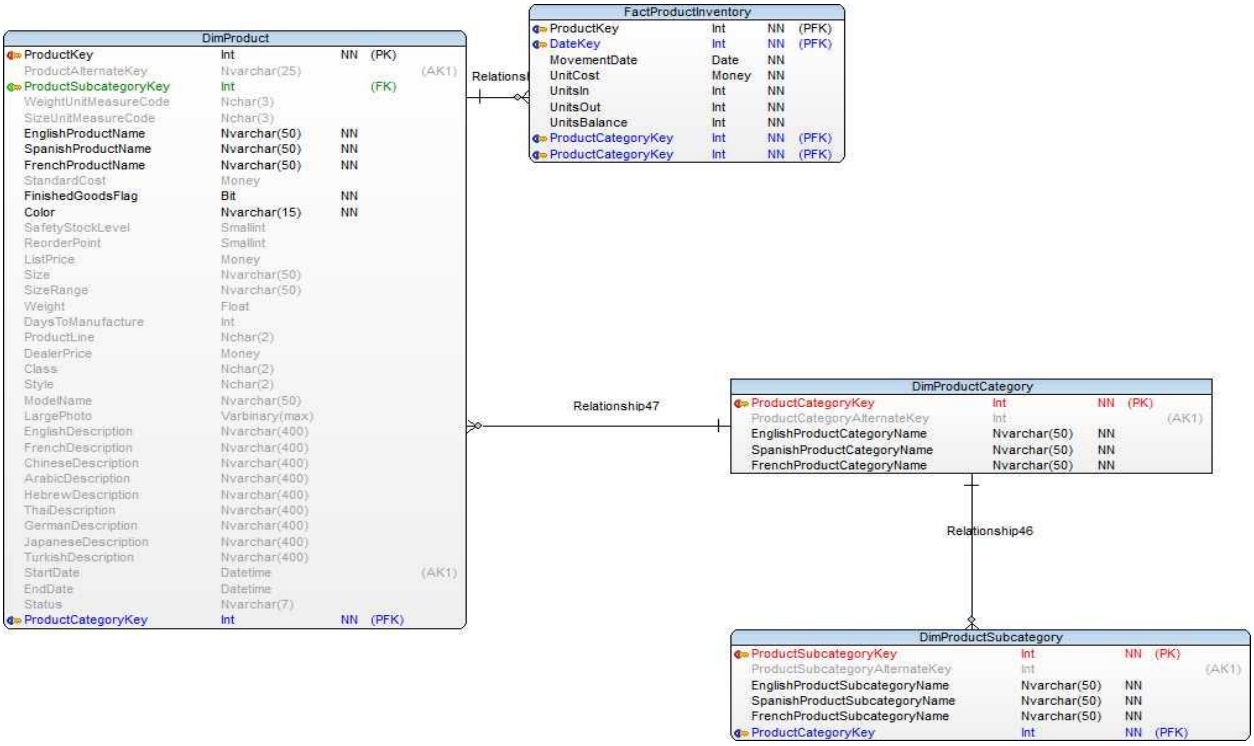

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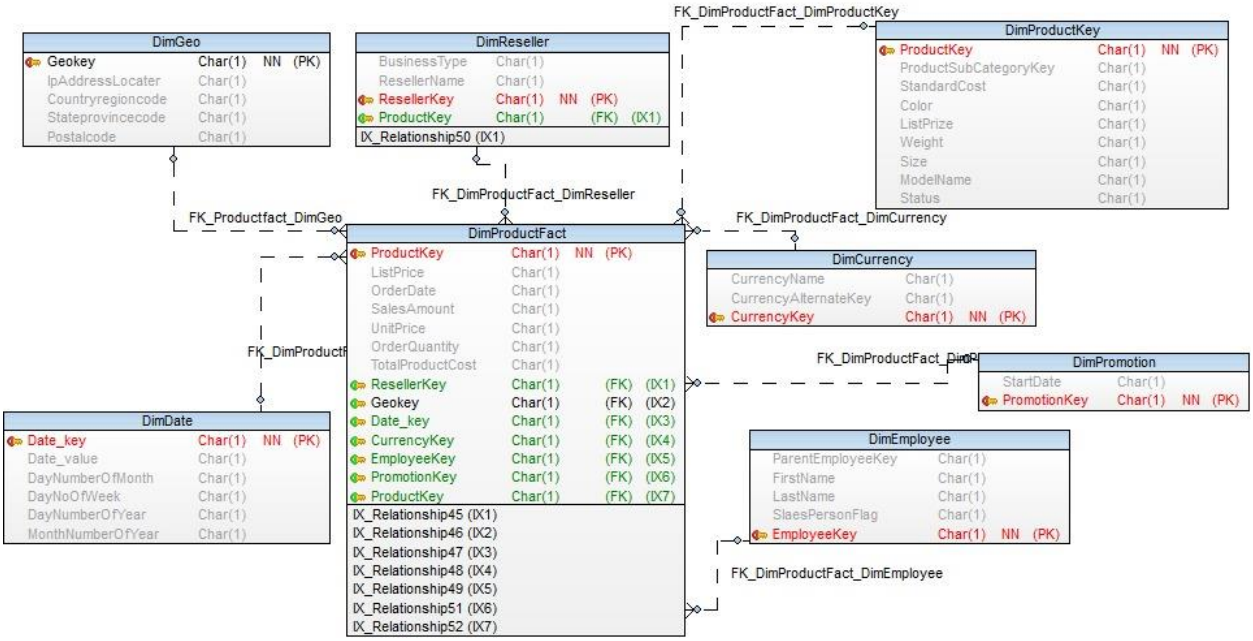
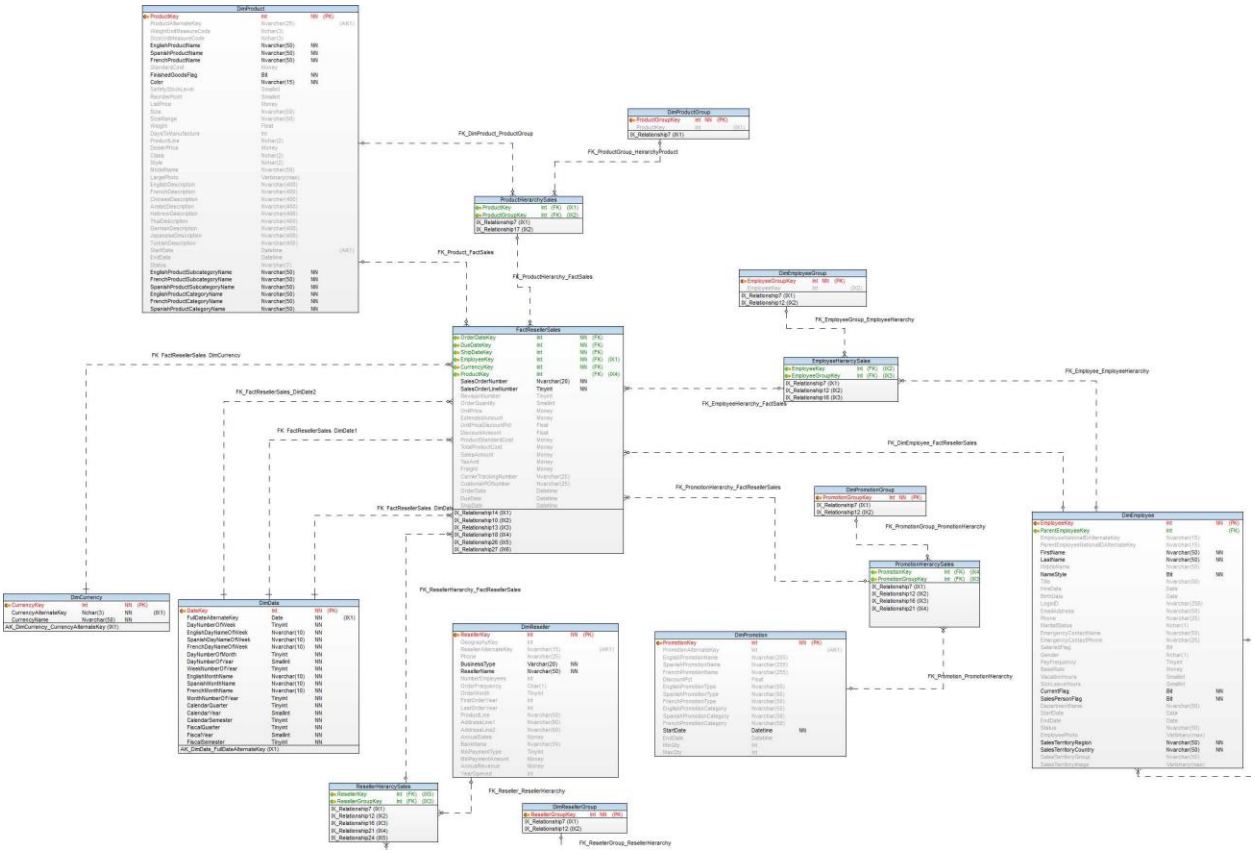


We have created new dimensions as follows:

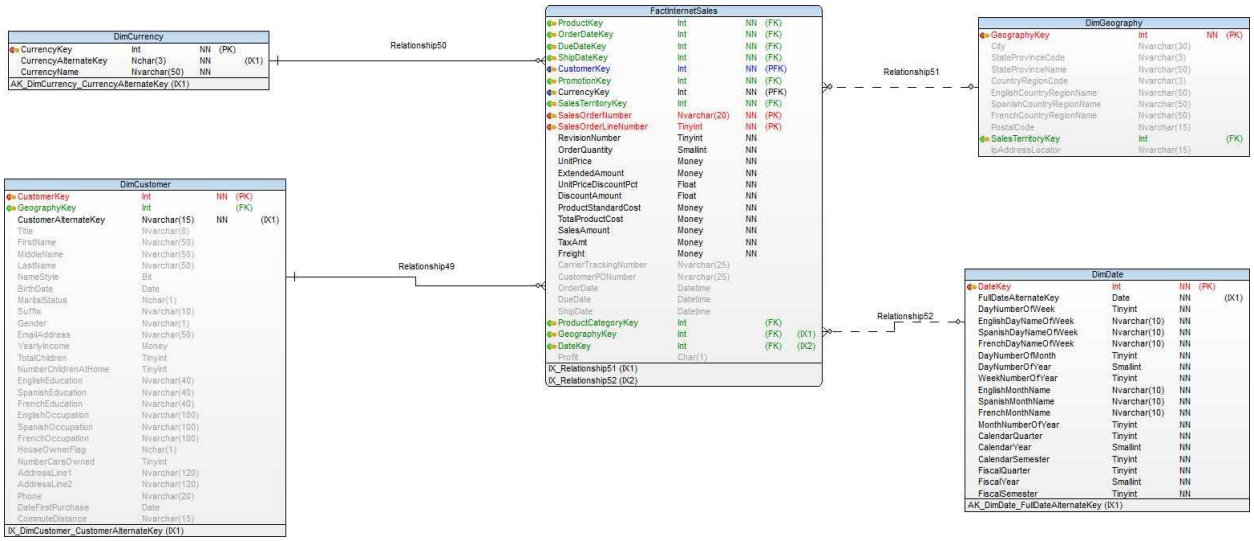
- DimGeo has a surrogate key Geokey which is its primary key. It has further attributes such as Country region code, State province code, postal etc. which can be used to get the exact location of the customer.
- DimDate has a surrogate key Date_key which is also its primary key. It has attributes that can tell the business analysts the time of the purchase made like year, month, day, etc.
- DimReseller has the details related to the resale of the product like .
- Similarly, DimCurrency shows the transaction details of the purchases of the products that were made by the customers. It has Currencykey as a surrogate key.
- DimPromotions tells about the promotions or discounts that the customer used while paying for the order.

4.



Above is a hybrid dimensional model. It is a mixture of dimensional data model and snow flake. We made a FactResellerSales table in the centre which is then connected to various dimension tables around it. Some of those tables are further connected to sub-tables in a snow flake style. The fact table in the center consists all the sale related attributes like ordernumber, quantity, unitprice, discountamount, totalproductcost,salesamount, date, etc. the table product hierarchy sales consists of a hierarchy and is connected to Dimproductgroup.

5.

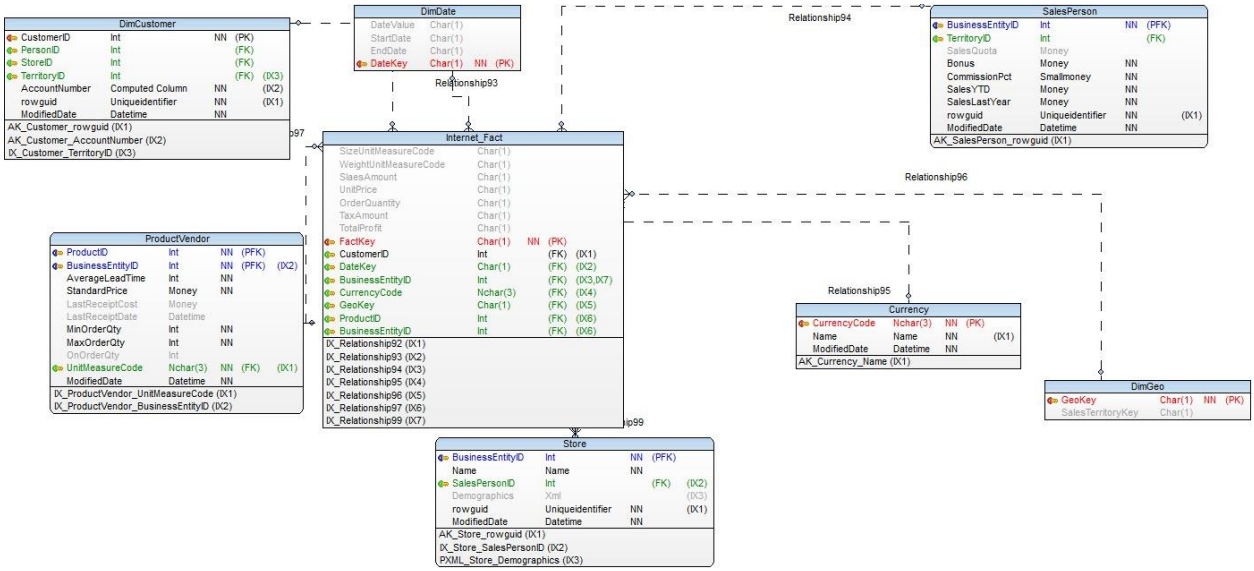


Above is the model for the answers provided for buisness people which covers the facts like product sales, geography and the price.

The model consists of a fact table of internet sales with a surrogate key as a primary key

Dimension tables consist of Customer details, geography providing the sales in a particular area, Sales representative, a product category providing details of the product which can be directly used by business people to determine sale statistics of a particular product.

6.



Above is the dimensional model for DWAdventure works which gives us the answers of all the questions related to sales of a particular product and who are the customers who bought it.

It consists of a fact table which as all the numeric attributes providing details of a product such as unit price, sales amount, profit etc.

Dimensional part of the model consists of categories like details of the sales prson, date, store, product vendor, customer, geography and currency which are related to the fact table in one to many relation and are normalized.

7.

- The data model of AdventureworksDW is simplified as compared to the data modal of AdventureWorks
- It directly focuses on the questions asked my a business person providing less complexity in the model.
- The second model allows effective handling of complex queries
- There is simplified relationship among tables
- The second model minimizes the cost of operations
- Analytics can be directly focused on all the simplified tables from a modeled data

8. We would like to add an attribute called Profit in the Fact table which can directly calculate the profit over each transaction by subtracting totalproductcost from salesamount.