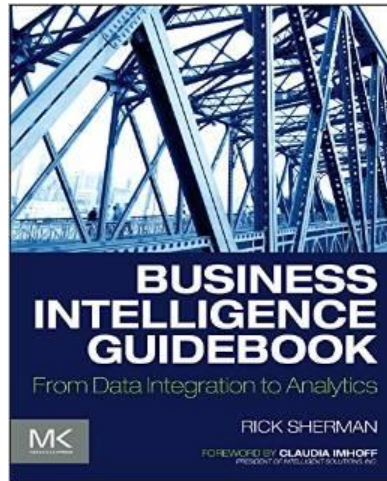


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# Business Intelligence Guidebook



## BI Dimension Model - Detailed Design Template



# Northeastern University

## BI Dimension Logical Model – Detailed Design Template

### Contoso Retail Project

Date: April 2018

Author(s): Hanan Alsalamah, Keval Shah, Pratik Parija, Sneha Shree

Sponsor(s): Prof. Richard Sherman

TA's: Arjun Upadhyay, Labdhi Shah, Palak Agrawal

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## **BI DIMENSIONAL LOGICAL MODEL DESIGN**

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### **DATA STORE: [Contoso Retail Database]**

Data Store: Contoso Retail Database

Schema Type: Relational Database Schema

Description: Retail\_DW Final Project

Status: Final Submission

Last Updated: 04/28/2018

Team Responsible for Design: Team 07

## Source To Target Mappings:

Source							Target		
	SourceTable	Columns	DataTypes				TargetTable	Columns	Data Type
			MySQL	SQLServer	PostgreSQL	Oracle			
Source	dimaccount	AccountKey	int(11)	int identity	int identity		dimaccount	AccountSK	int(11)
							dimaccount	AccountKey	int(11)
		ParentAccountKey	int(11)	int	int		dimaccount	ParentAccountSK	int(11)
Source	dimaccount	AccountLabel	varchar(100)	nvarchar(100)	nvarchar(100)		dimaccount	AccountLabel	varchar(100)
		AccountName	varchar(50)	nvarchar(50)	nvarchar(50)		dimaccount	AccountName	varchar(50)
		AccountDescription	varchar(50)	nvarchar(50)	nvarchar(50)		dimaccount	AccountDescription	varchar(50)
		AccountType	varchar(50)	nvarchar(50)	nvarchar(50)		dimaccount	AccountType	varchar(50)
		Operator	varchar(50)	nvarchar(50)	nvarchar(50)		dimaccount	Operator	varchar(50)
		ETLLoadID	int(11)	int	int		dimaccount	SOR_ID	int(11)
		LoadDate	datetime(3)	datetime	datetime		dimaccount	SOR_LoadDate	datetime
		UpdateDate	datetime(3)	datetime	datetime		dimaccount	SOR_UpdateDate	datetime
		context.getProperty("vChildPID")					dimaccount	DI_JobID	varchar(20)
		TalendDate.getCurrentDate()					dimaccount	DI_CreateDate	datetime
		TalendDate.getCurrentDate()					dimaccount	DI_ModifiedDate	datetime
	dimchannel csv						dimchannel	ChannelSK	int(11)
							dimchannel	ChannelKey	int(11)
							dimchannel	ChannelLabel	varchar(100)
							dimchannel	ChannelName	varchar(20)
							dimchannel	ChannelDescription	varchar(50)
							dimchannel	SOR_ID	int(11)
							dimchannel	SOR_LoadDate	datetime
							dimchannel	SOR_UpdateDate	datetime
		context.getProperty("vChildPID")					dimchannel	DI_JobID	varchar(20)
		TalendDate.getCurrentDate()					dimchannel	DI_CreateDate	datetime
		TalendDate.getCurrentDate()					dimchannel	DI_ModifiedDate	datetime
	dimcurrency csv						dimcurrency	CurrencySK	int(11)
							dimcurrency	CurrencyKey	int(11)
							dimcurrency	CurrencyLabel	varchar(10)
							dimcurrency	CurrencyName	varchar(20)
							dimcurrency	CurrencyDescription	varchar(50)
							dimcurrency	SOR_ID	int(11)
							dimcurrency	SOR_LoadDate	datetime
							dimcurrency	SOR_UpdateDate	datetime
		context.getProperty("vChildPID")					dimcurrency	DI_JobID	varchar(20)
		TalendDate.getCurrentDate()					dimcurrency	DI_CreateDate	datetime
		TalendDate.getCurrentDate()					dimcurrency	DI_ModifiedDate	datetime
Source	dimcustomer_company	CustomerID	int(11)	int			dimcustomer_company	CustomerSK	int(11)
		CustomerKey	int(11)	int			dimcustomer_company	CustomerID	int(11)
		CustomerLabel	char(5)	NA			dimcustomer_company	CustomerKey	int(11)
Target	dimgeography	GeographySK	int(11)				dimcustomer_company	CustomerLabel	char(5)
Source	dimcustomer_company	YearlyIncome	decimal(15,4)	numeric(15,2)			dimcustomer_company	GeographySK	int(11)
		CustomerType	varchar(15)	nvarchar(15)			dimcustomer_company	YearlyIncome	decimal(15,2)
		CompanyName	varchar(100)	nvarchar(100)			dimcustomer_company	CustomerType	varchar(15)
		GeographyKey	int(11)	int			dimcustomer_company	CompanyName	varchar(100)
		ETLLoadID	int(11)	int			dimcustomer_company	GeographyKey	int(11)
		LoadDate	datetime(3)	datetime			dimcustomer_company	SOR_ID	int(11)
		UpdateDate	datetime(3)	datetime			dimcustomer_company	SOR_LoadDate	datetime
		context.getProperty("vChildPID")					dimcustomer_company	SOR_UpdateDate	datetime
		TalendDate.getCurrentDate()					dimcustomer_company	DI_JobID	varchar(20)
		TalendDate.getCurrentDate()					dimcustomer_company	DI_CreateDate	datetime
							dimcustomer_company	DI_ModifiedDate	datetime

Source	dimcustomer_person	CustomerID	int(11)	int identity		dimcustomer_person	CustomerSK	int(11)
		CustomerKey	int(11)	int		dimcustomer_person	CustomerID	int(11)
		CustomerLabel	char(5)	NA		dimcustomer_person	CustomerKey	int(11)
		GeographyKey	int(11)	int		dimcustomer_person	CustomerLabel	char(5)
		Title	varchar(8)	nvarchar(8)		dimcustomer_person	GeographySK	int(11)
		FirstName	varchar(50)	nvarchar		dimcustomer_person	Title	varchar(8)
		MiddleName	varchar(50)	nvarchar		dimcustomer_person	FirstName	varchar(50)
		LastName	varchar(50)	nvarchar		dimcustomer_person	MiddleName	varchar(50)
		NameStyle	tinyint(4)	NA		dimcustomer_person	LastName	varchar(50)
		BirthDate	date	date		dimcustomer_person	NameStyle	tinyint(4)
		MaritalStatus	char(1)	nchar		dimcustomer_person	BirthDate	date
		Suffix	varchar(10)	nvarchar		dimcustomer_person	MaritalStatus	char(1)
		Gender	varchar(1)	nvarchar		dimcustomer_person	Suffix	varchar(10)
		EmailAddress	varchar(50)	nvarchar		dimcustomer_person	Gender	varchar(1)
		YearlyIncome	decimal(15,4)	numeric		dimcustomer_person	EmailAddress	varchar(50)
		TotalChildren	int(11)	int		dimcustomer_person	YearlyIncome	decimal(15,2)
		NumberChildrenAtHome	int(11)	int		dimcustomer_person	TotalChildren	int(11)
		Education	varchar(40)	nvarchar(40)		dimcustomer_person	NumberChildrenAtHome	int(11)
		Occupation	varchar(100)	nvarchar(100)		dimcustomer_person	Education	varchar(40)
		HouseOwnerFlag	char(1)	nchar		dimcustomer_person	Occupation	varchar(100)
		NumberCarsOwned	int(11)	int		dimcustomer_person	HouseOwnerFlag	char(1)
		AddressLine1	varchar(120)	nvarchar		dimcustomer_person	NumberCarsOwned	int(11)
		AddressLine2	varchar(120)	nvarchar		dimcustomer_person	AddressLine1	varchar(120)
		Phone	varchar(20)	nvarchar		dimcustomer_person	AddressLine2	varchar(120)
		DateFirstPurchase	date	date		dimcustomer_person	Phone	varchar(20)
		ETLLoadID	int(11)	int		dimcustomer_person	DateFirstPurchase	date
		LoadDate	datetime(3)	datetime		dimcustomer_person	SOR_ID	int(11)
		UpdateDate	datetime(3)	datetime		dimcustomer_person	SOR_LoadDate	datetime
		context.getProperty("vChildPID")				dimcustomer_person	SOR_UpdateDate	datetime
		TalendDate.getCurrentDate()				dimcustomer_person	DI_JobID	varchar(20)
		TalendDate.getCurrentDate()				dimcustomer_person	DI_CreateDate	datetime
						dimcustomer_person	DI_ModifiedDate	datetime

Source	dimdate	DateSK	int(11)	int		dimdate	DateSK	int(11)
		FullDateAK	date	date		dimdate	FullDateAK	date
		FullDateTimeAK	datetime(3)	datetime		dimdate	FullDateTimeAK	datetime
		YearID	int(11)	int		dimdate	YearID	int(11)
		MonthID	int(11)	int		dimdate	MonthID	int(11)
		DayID	int(11)	int		dimdate	DayID	int(11)
		YearQtr	int(11)	int		dimdate	YearQtr	int(11)
		YearMonth	int(11)	int		dimdate	YearMonth	int(11)
		DayOfYear	int(11)	int		dimdate	DayOfYear	int(11)
		WeekOfYear	int(11)	int		dimdate	WeekOfYear	int(11)
		DayofWeek	int(11)	int		dimdate	DayofWeek	int(11)
		MonthAbr	char(3)	char		dimdate	MonthAbr	char(3)
		DayAbr	char(3)	char		dimdate	DayAbr	char(3)
		MonthFull	varchar(12)	varchar		dimdate	MonthFull	varchar(12)
		DayFull	varchar(12)	varchar		dimdate	DayFull	varchar(12)
		FullDateUSA	char(10)	char		dimdate	FullDateUSA	char(10)
		DayOfMonth	varchar(2)	varchar		dimdate	DayOfMonth	varchar(2)
		DaySuffix	varchar(4)	varchar		dimdate	DaySuffix	varchar(4)
		DayName	varchar(9)	varchar		dimdate	DayName	varchar(9)
		DayOfWeekUSA	char(1)	char		dimdate	DayOfWeekUSA	char(1)
		DayOfWeekInMonth	varchar(2)	varchar		dimdate	DayOfWeekInMonth	varchar(2)
		DayOfWeekInYear	varchar(2)	varchar		dimdate	DayOfWeekInYear	varchar(2)
		DayOfQuarter	varchar(3)	varchar		dimdate	DayOfQuarter	varchar(3)
		DayOfYearChar	varchar(3)	varchar		dimdate	DayOfYearChar	varchar(3)
		WeekOfQuarter	varchar(1)	varchar		dimdate	WeekOfQuarter	varchar(1)
		WeekOfQuarter	varchar(2)	varchar		dimdate	WeekOfQuarter	varchar(2)
		WeekOfYearChar	varchar(2)	varchar		dimdate	WeekOfYearChar	varchar(2)
		MonthChar	varchar(2)	varchar		dimdate	MonthChar	varchar(2)
		MonthName	varchar(9)	varchar		dimdate	MonthName	varchar(9)
		MonthOfQuarter	varchar(2)	varchar		dimdate	MonthOfQuarter	varchar(2)
		Quarter	char(1)	char		dimdate	Quarter	char(1)
		QuarterName	varchar(9)	varchar		dimdate	QuarterName	varchar(9)
		YearChar	char(4)	char		dimdate	YearChar	char(4)
		YearName	char(7)	char		dimdate	YearName	char(7)
		MonthYear	char(10)	char		dimdate	MonthYear	char(10)
		MMYYYY	char(6)	char		dimdate	MMYYYY	char(6)
		FirstDayOfMonth	date	date		dimdate	FirstDayOfMonth	date
		LastDayOfMonth	date	date		dimdate	LastDayOfMonth	date
		FirstDayOfQuarter	date	date		dimdate	FirstDayOfQuarter	date
		LastDayOfQuarter	date	date		dimdate	LastDayOfQuarter	date
		FirstDayOfYear	date	date		dimdate	FirstDayOfYear	date
		LastDayOfYear	date	date		dimdate	LastDayOfYear	date
		IsWeekday	tinyint(4)	bit		dimdate	IsWeekday	int(11)
						dimdate	IsHolidayUSA	int(11)
						dimdate	HolidayUSA	varchar(50)
Source	dimdate	EuropeSeason	varchar(50)	varchar(50)		dimdate	EuropeSeason	varchar(50)
						dimdate	NorthAmericaSeason	varchar(50)
						dimdate	AsiaSeason	varchar(50)
Source	dimdate	ETLLoadID	int(11)	int		dimdate	SOR_ID	int(11)
	dimdate	LoadDate	datetime(3)	datetime		dimdate	SOR_LoadDate	datetime
	dimdate	UpdateDate	datetime(3)	datetime		dimdate	SOR_UpdateDate	datetime
		context.getProperty("vChildPID")				dimdate	DI_JobID	varchar(20)
		TalendDate.getCurrentDate()				dimdate	DI_CreateDate	datetime
		TalendDate.getCurrentDate()				dimdate	DI_ModifiedDate	datetime

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Source	dimproductcategory	ProductCategoryLabel ProductCategoryName ProductCategoryDescription context.getProperty("vChildPID") TalendDate.getCurrentDate() TalendDate.getCurrentDate()	varchar(100) varchar(30) varchar(50)	nvarchar(100) nvarchar(30) nvarchar(50)			dimproductcategory dimproductcategory dimproductcategory dimproductcategory dimproductcategory dimproductcategory	ProductCategoryKey ProductCategoryLabel ProductCategoryName ProductCategoryDescription DI_JobID DI_CreateDate DI_ModifiedDate	int(11) varchar(100) varchar(30) varchar(50) varchar(20) datetime datetime
CSV		context.getProperty("vChildPID") TalendDate.getCurrentDate() TalendDate.getCurrentDate()					dimproductcost dimproductcost dimproductcost dimproductcost dimproductcost dimproductcost dimproductcost dimproductcost dimproductcost dimproductcost dimproductcost dimproductcost	SCD_ProductCostSK ProductSK CurrencyKey UnitCost SCD_EffectiveDate SCD_IneffectiveDate SCD_Current_Flag SOR_ID SOR_LoadDate SOR_UpdateDate DI_JobID DI_CreateDate DI_ModifiedDate	int(11) int(11) int(11) decimal(15,2) date date int(11) int(11) datetime datetime varchar(20) datetime datetime
CSV		context.getProperty("vChildPID") TalendDate.getCurrentDate() TalendDate.getCurrentDate()					dimproductprice dimproductprice dimproductprice dimproductprice dimproductprice dimproductprice dimproductprice dimproductprice dimproductprice dimproductprice dimproductprice dimproductprice	SCD_ProductPriceSK ProductSK CurrencyKey UnitPrice SCD_EffectiveDate SCD_IneffectiveDate SCD_Current_Flag SOR_ID SOR_LoadDate SOR_UpdateDate DI_JobID DI_CreateDate DI_ModifiedDate	int(11) int(11) int(11) decimal(15,2) date date int(11) int(11) datetime datetime varchar(20) datetime datetime
source	dimpromotion	PromotionID PromotionKey PromotionLabel PromotionName PromotionDescription DiscountPercent PromotionType PromotionCategory StartDate EndDate MinQuantity MaxQuantity ETLLoadID LoadDate UpdateDate context.getProperty("vChildPID") TalendDate.getCurrentDate() TalendDate.getCurrentDate()	int(11) int(11) varchar(12) varchar(100) varchar(255) double varchar(50) varchar(50) date date int(11) int(11) int(11) datetime(3) datetime(3)	int NA nvarchar(12) nvarchar(100) nvarchar(255) float nvarchar(50) nvarchar(50) date date int int int date date			dimpromotion dimpromotion dimpromotion dimpromotion dimpromotion dimpromotion dimpromotion dimpromotion dimpromotion dimpromotion dimpromotion dimpromotion dimpromotion dimpromotion dimpromotion dimpromotion dimpromotion dimpromotion dimpromotion dimpromotion	PromotionSK PromotionID PromotionKey PromotionLabel PromotionName PromotionDescription DiscountPercent PromotionType PromotionCategory StartDate EndDate MinQuantity MaxQuantity SOR_ID SOR_LoadDate SOR_UpdateDate DI_JobID DI_CreateDate DI_ModifiedDate	int(11) int(11) int(11) varchar(12) varchar(100) varchar(255) double varchar(50) varchar(50) date date int(11) int(11) int(11) datetime datetime datetime varchar(20) datetime datetime
source	dimsaleterritory	SalesTerritoryKey GeographyKey SalesTerritoryLabel SalesTerritoryName SalesTerritoryRegion SalesTerritoryCountry SalesTerritoryGroup SalesTerritoryLevel SalesTerritoryManager StartDate EndDate Status ETLLoadID LoadDate UpdateDate context.getProperty("vChildPID") TalendDate.getCurrentDate() TalendDate.getCurrentDate()	int(11) int(11) varchar(100) varchar(50) varchar(50) varchar(50) varchar(50) varchar(10) int(11) datetime(3) datetime(3) varchar(50) int(11) datetime(3) datetime(3)	int int nvarchar(100) nvarchar(50) nvarchar(50) nvarchar(50) nvarchar(50) nvarchar(10) int date date nvarchar(50) int date date			dimsaleterritory dimsaleterritory dimsaleterritory dimsaleterritory dimsaleterritory dimsaleterritory dimsaleterritory dimsaleterritory dimsaleterritory dimsaleterritory dimsaleterritory dimsaleterritory dimsaleterritory dimsaleterritory dimsaleterritory dimsaleterritory dimsaleterritory dimsaleterritory dimsaleterritory	SalesTerritorySK SalesTerritoryKey GeographySK SalesTerritoryLabel SalesTerritoryName SalesTerritoryRegion SalesTerritoryCountry SalesTerritoryGroup SalesTerritoryLevel SalesTerritoryManager StartDate EndDate Status SOR_ID SOR_LoadDate SOR_UpdateDate DI_JobID DI_CreateDate DI_ModifiedDate	int(11) int(11) int(11) varchar(100) varchar(50) varchar(50) varchar(50) varchar(50) varchar(10) int(11) date date varchar(50) int(11) datetime datetime datetime varchar(20) datetime datetime
CSV		context.getProperty("vChildPID") TalendDate.getCurrentDate() TalendDate.getCurrentDate()					dimscenario dimscenario dimscenario dimscenario dimscenario dimscenario dimscenario dimscenario dimscenario dimscenario	ScenarioSK ScenarioKey ScenarioLabel ScenarioName ScenarioDescription SOR_ID SOR_LoadDate SOR_UpdateDate DI_JobID DI_CreateDate DI_ModifiedDate	int(11) int(11) varchar(100) varchar(20) varchar(50) int(11) datetime datetime datetime varchar(20) datetime datetime



[illegible]

Source	dimdate					factinventory	InventorySK	int(11)
Source	factinventory	InventoryDate	date	datetime		factinventory	InventoryDateSK	int(11)
Target	dimstore	StoreSk	int(11)	int(11)		factinventory	InventoryDate	date
Target	dimproduct	ProductSK				factinventory	StoreSK	int(11)
Target	dimgeography	GeographySK				factinventory	ProductSK	int(11)
		OnHandQuantity	int(11)	int(11)		factinventory	GeographySK	int(11)
		OnOrderQuantity	int(11)	int(11)		factinventory	OnHandQuantity	int(11)
		SafetyStockQuantity	int(11)	int(11)		factinventory	OnOrderQuantity	int(11)
		DaysInStock	int(11)	int(11)		factinventory	SafetyStockQuantity	int(11)
Source	factinventory	MinDayInStock	int(11)	int(11)		factinventory	DaysInStock	int(11)
		MaxDayInStock	int(11)	int(11)		factinventory	MinDayInStock	int(11)
		Aging	int(11)	int(11)		factinventory	MaxDayInStock	int(11)
		ETLLoadID	int(11)	int(11)		factinventory	Aging	int(11)
		LoadDate	datetime(3)	date		factinventory	SOR_ID	int(11)
		UpdateDate	datetime(3)	date		factinventory	SOR_LoadDate	datetime
		context.getProperty("vChildPID")				factinventory	SOR_UpdateDate	datetime
		TalendDate.getCurrentDate()				factinventory	DI_JobID	varchar(20)
		TalendDate.getCurrentDate()				factinventory	DI_CreateDate	datetime
						factinventory	DI_ModifiedDate	datetime
Source	dimDate					factinventory_rejects	InventorySK	int(11)
Source	factinventory	InventoryDate	date	datetime		factinventory_rejects	InventoryDateSK	int(11)
Target	dimstore	StoreSk	int(11)	int		factinventory_rejects	InventoryDate	date
Target	dimproduct	ProductSK	int(11)	int		factinventory_rejects	StoreSK	int(11)
Target	dimgeography	GeographySK	int(11)	int		factinventory_rejects	ProductSK	int(11)
		OnHandQuantity	int(11)	int		factinventory_rejects	GeographySK	int(11)
		OnOrderQuantity	int(11)	int		factinventory_rejects	OnHandQuantity	int(11)
		SafetyStockQuantity	int(11)	int		factinventory_rejects	OnOrderQuantity	int(11)
		DaysInStock	int(11)	int		factinventory_rejects	SafetyStockQuantity	int(11)
		MinDayInStock	int(11)	int		factinventory_rejects	DaysInStock	int(11)
		MaxDayInStock	int(11)	int		factinventory_rejects	MinDayInStock	int(11)
		Aging	int(11)	int		factinventory_rejects	MaxDayInStock	int(11)
	dim_reject_codes	DI_Reject_Code	int(11)	int		factinventory_rejects	Aging	int(11)
Source	factinventory	InventoryID	int(11)	int		factinventory_rejects	DI_Reject_Code	int(11)
Source	dimstore	StoreID	int(11)	int		factinventory_rejects	InventoryID	int(11)
		ProductLabel	nvarchar(24)	nvarchar(24)		factinventory_rejects	StoreID	int(11)
Target	dim_product	Brand_ID	nvarchar(24)	nvarchar(24)		factinventory_rejects	ProductLabel	nvarchar(24)
		Product_ID	nvarchar(24)	nvarchar(24)		factinventory_rejects	Brand_ID	nvarchar(24)
		ETLLoadID	int(11)	int		factinventory_rejects	Product_ID	nvarchar(24)
Source	factinventory	LoadDate	datetime(3)	date		factinventory_rejects	GeographyID	int(11)
		UpdateDate	datetime(3)	date		factinventory_rejects	SOR_ID	int(11)
		context.getProperty("vChildPID")				factinventory_rejects	SOR_LoadDate	datetime
		TalendDate.getCurrentDate()				factinventory_rejects	SOR_UpdateDate	datetime
		TalendDate.getCurrentDate()				factinventory_rejects	DI_JobID	varchar(20)
						factinventory_rejects	DI_CreateDate	datetime
						factinventory_rejects	DI_ModifiedDate	datetime

Source	dimdate	SalesDate	date	datetime			factonlinesales	SalesSK	int(11)
Source	factonlinesalesorderdetail	SalesDate	date	datetime			factonlinesales	SalesDateSK	int(11)
Target	dimcustomer_person	CustomerSK	int(11)	int			factonlinesales	CustomerSK	int(11)
Target	dimchannel	ChannelSK	int(11)	int			factonlinesales	ChannelSK	int(11)
Target	dimstore	StoreSK	int(11)	int			factonlinesales	StoreSK	int(11)
Target	dimproduct	ProductSK	int(11)	int			factonlinesales	ProductSK	int(11)
Target	dimpromotion	PromotionSK	int(11)	int			factonlinesales	PromotionSK	int(11)
Target	dimgeography	GeographySK	int(11)	int			factonlinesales	GeographySK	int(11)
Source	factonlinesalesorderdetail	SalesOrderNumber	int(11)	nvarchar(20)			factonlinesales	SalesOrderNumber	varchar(20)
		SalesOrderLineNumber	int(11)	int			factonlinesales	SalesOrderLineNumber	int(11)
		SalesQuantity	int(11)	int			factonlinesales	SalesQuantity	int(11)
		ReturnQuantity	int(11)	int			factonlinesales	ReturnQuantity	int(11)
		SalesAmount	decimal(15,4)	numeric(15,2)			factonlinesales	SalesAmount	decimal(15,2)
		ReturnAmount	decimal(15,4)	numeric(15,2)			factonlinesales	ReturnAmount	decimal(15,2)
		DiscountAmount	decimal(15,4)	numeric(15,2)			factonlinesales	DiscountAmount	decimal(15,2)
		DiscountPot	decimal(10,4)	numeric(15,4)			factonlinesales	TotalCost	decimal(15,2)
							factonlinesales	Local_CurrencySK	int(11)
							factonlinesales	SalesAmount_Local	decimal(15,2)
							factonlinesales	ReturnAmount_Local	decimal(15,2)
							factonlinesales	DiscountAmount_Local	decimal(15,2)
							factonlinesales	TotalCost_Local	decimal(15,2)
							factonlinesales	SOR_ID	int(11)
							factonlinesales	SOR_LoadDate	datetime
							factonlinesales	SOR_UpdateDate	datetime
							factonlinesales	DI_JobID	varchar(20)
							factonlinesales	DI_CreateDate	datetime
							factonlinesales	DI_ModifiedDate	datetime
		context.getProperty("vChildPID")							
		TalendDate.getCurrentDate()							
		TalendDate.getCurrentDate()							

Source	dimdate	SalesDate	date	datetime			factonlinesales_rejects	SalesSK	int(11)
Source	factonlinesalesorderdetail	SalesDate	date	datetime			factonlinesales_rejects	SalesDateSK	int(11)
Target	dimcustomer_person	CustomerSK	int(11)	int			factonlinesales_rejects	CustomerSK	int(11)
Target	dimchannel	ChannelSK	int(11)	int			factonlinesales_rejects	ChannelSK	int(11)
Target	dimstore	StoreSK	int(11)	int			factonlinesales_rejects	StoreSK	int(11)
Target	dimproduct	ProductSK	int(11)	int			factonlinesales_rejects	ProductSK	int(11)
Target	dimpromotion	PromotionSK	int(11)	int			factonlinesales_rejects	PromotionSK	int(11)
Target	dimgeography	GeographySK	int(11)	int			factonlinesales_rejects	GeographySK	int(11)
Source	factonlinesalesorderdetail	SalesOrderNumber	int(11)	nvarchar(20)			factonlinesales_rejects	SalesOrderNumber	varchar(20)
		SalesOrderLineNumber	int(11)	int			factonlinesales_rejects	SalesOrderLineNumber	int(11)
		SalesQuantity	int(11)	int			factonlinesales_rejects	SalesQuantity	int(11)
		ReturnQuantity	int(11)	int			factonlinesales_rejects	ReturnQuantity	int(11)
		SalesAmount	decimal(15,4)	numeric(15,2)			factonlinesales_rejects	SalesAmount	decimal(15,2)
		ReturnAmount	decimal(15,4)	numeric(15,2)			factonlinesales_rejects	ReturnAmount	decimal(15,2)
		DiscountAmount	decimal(15,4)	numeric(15,2)			factonlinesales_rejects	DiscountAmount	decimal(15,2)
		DiscountPot	decimal(10,4)	numeric(15,4)			factonlinesales_rejects	TotalCost	decimal(15,2)
							factonlinesales_rejects	Local_CurrencySK	int(11)
							factonlinesales_rejects	SalesAmount_Local	decimal(15,2)
							factonlinesales_rejects	ReturnAmount_Local	decimal(15,2)
							factonlinesales_rejects	DiscountAmount_Local	decimal(15,2)
							factonlinesales_rejects	TotalCost_Local	decimal(15,2)
							factonlinesales_rejects	DI_Reject_Code	int(11)
	dimrejectcodes	DI_reject_Code	int(11)	int			factonlinesales_rejects	SalesID	int(11)
Target	dimchannel	ChannelKey	int(11)	int			factonlinesales_rejects	ChannelKey	int(11)
Source	factonlinesalesorderheader	StoreID	int(11)	int			factonlinesales_rejects	StoreID	int(11)
Target	dimproduct	ProductLabel	varchar(24)	varchar(24)			factonlinesales_rejects	ProductLabel	varchar(24)
Source	factonlinesalesorderdetail	Brand_ID	varchar(24)	NA			factonlinesales_rejects	Brand_ID	varchar(24)
Target	dimproduct	Product_ID	varchar(24)	varchar(24)			factonlinesales_rejects	Product_ID	varchar(24)
Target	dimpromotion	PromotionID	int(11)	int(11)			factonlinesales_rejects	PromotionID	int(11)
Target	dimpromotion	PromotionLabel	varchar(12)	varchar(24)			factonlinesales_rejects	PromotionLabel	varchar(12)
Source	dimcustomerperson	CustomerKey	int(11)	int	NA		factonlinesales_rejects	CustomerKey	int(11)
Source	dimcustomerperson	CustomerLabel	varchar(5)	NA	character(5)	NA	factonlinesales_rejects	CustomerLabel	varchar(5)
							factonlinesales_rejects	GeographyID	int(11)
							factonlinesales_rejects	SOR_ID	int(11)
							factonlinesales_rejects	SOR_LoadDate	datetime
							factonlinesales_rejects	SOR_UpdateDate	datetime
							factonlinesales_rejects	DI_JobID	varchar(20)
							factonlinesales_rejects	DI_CreateDate	datetime
							factonlinesales_rejects	DI_ModifiedDate	datetime
		context.getProperty("vChildPID")							
		TalendDate.getCurrentDate()							
		TalendDate.getCurrentDate()							

Source	dimdate						factsales	SalesSK	int(11)
Source	factstoresales	SalesDate	date	datetime			factsales	SalesDateSK	int(11)
Target	dimchannel	ChannelSK	int(11)	int			factsales	SalesDate	date
Source	factinventory	StoreID	int(11)	int			factsales	ChannelSK	int(11)
Target	dimproduct	ProductSK	int(11)	int			factsales	StoreSK	int(11)
Target	dimpromotion	PromotionSK	int(11)	int			factsales	ProductSK	int(11)
Target	dimgeography	GeographySK	int(11)	int			factsales	PromotionSK	int(11)
		SalesQuantity	int(11)	int			factsales	GeographySK	int(11)
		ReturnQuantity	int(11)	int			factsales	SalesQuantity	int(11)
Source	factstoresales	SalesAmount	decimal(15,4)	numeric(15,2)			factsales	ReturnQuantity	int(11)
		ReturnAmount	decimal(15,4)	numeric(15,2)			factsales	SalesAmount	decimal(15,2)
		DiscountAmount	decimal(15,4)	numeric(15,2)			factsales	ReturnAmount	decimal(15,2)
		TotalCost	decimal(15,4)	numeric(15,2)			factsales	DiscountAmount	decimal(15,2)
							factsales	TotalCost	decimal(15,2)
							factsales	Local_CurrencySK	int(11)
							factsales	SalesAmount_Local	decimal(15,2)
							factsales	ReturnAmount_Local	decimal(15,2)
							factsales	DiscountAmount_Local	decimal(15,2)
							factsales	TotalCost_Local	decimal(15,2)
							factsales	SOR_ID	int(11)
							factsales	SOR_LoadDate	datetime
							factsales	SOR_UpdateDate	datetime
							factsales	DI_JobID	varchar(20)
							factsales	DI_CreateDate	datetime
							factsales	DI_ModifiedDate	datetime
		context.getProperty("vChildPID")							
		TalendDate.getCurrentDate()							
		TalendDate.getCurrentDate()							

Source	dimdate						factsales_rejects	SalesSK	int(11)
Source	factstoresales	SalesDate	date	datetime			factsales_rejects	SalesDateSK	int(11)
Target	dimchannel	ChannelSK	int(11)	int			factsales_rejects	SalesDate	date
Target	dimstore	StoreSK	int(11)	int			factsales_rejects	ChannelSK	int(11)
Target	dimproduct	ProductSK	int(11)	int			factsales_rejects	StoreSK	int(11)
Target	dimpromotion	PromotionSK	int(11)	int			factsales_rejects	ProductSK	int(11)
Target	dimgeography	GeographySK	int(11)	int			factsales_rejects	PromotionSK	int(11)
		SalesQuantity	int(11)	int			factsales_rejects	GeographySK	int(11)
		ReturnQuantity	int(11)	int			factsales_rejects	SalesQuantity	int(11)
Source	factstoresales	SalesAmount	decimal(15,4)	numeric(15,2)			factsales_rejects	ReturnQuantity	int(11)
		ReturnAmount	decimal(15,4)	numeric(15,2)			factsales_rejects	SalesAmount	decimal(15,2)
		DiscountAmount	decimal(15,4)	numeric(15,2)			factsales_rejects	ReturnAmount	decimal(15,2)
		TotalCost	decimal(15,4)	numeric(15,2)			factsales_rejects	DiscountAmount	decimal(15,2)
							factsales_rejects	TotalCost	decimal(15,2)
							factsales_rejects	Local_CurrencySK	int(11)
							factsales_rejects	SalesAmount_Local	decimal(15,2)
							factsales_rejects	ReturnAmount_Local	decimal(15,2)
							factsales_rejects	DiscountAmount_Local	decimal(15,2)
							factsales_rejects	TotalCost_Local	decimal(15,2)
							factsales_rejects	DI_Reject_Code	int(11)
Source	dimrejectcodes	DI_reject_Code	int(11)	int			factsales_rejects	SalesID	int(11)
Source	factstoresales	SalesID	int(11)	int			factsales_rejects	ChannelKey	int(11)
Target	dimchannel	ChannelKey	int(11)	int			factsales_rejects	StoreID	int(11)
Source	factstoresales	StoreID	int(11)	int			factsales_rejects	ProductLabel	varchar(24)
Target	dimproduct	ProductLabel					factsales_rejects	Brand_ID	varchar(24)
Source	factstoresales	BrandID	varchar(24)	NA	character(24)	NA	factsales_rejects	Product_ID	varchar(24)
Target	dimproduct	ProductID	NA	NA	int(11)	int(11)	factsales_rejects	PromotionID	int(11)
Target	dimpromotion	PromotionID	int(11)	int(11)	varchar(24)	varchar(24)	factsales_rejects	PromotionLabel	varchar(12)
Target	dimpromotion	PromotionLabel	varchar(24)	varchar(24)			factsales_rejects	GeographyID	int(11)
							factsales_rejects	SOR_ID	int(11)
							factsales_rejects	SOR_LoadDate	datetime
							factsales_rejects	SOR_UpdateDate	datetime
							factsales_rejects	DI_JobID	varchar(20)
							factsales_rejects	DI_CreateDate	datetime
							factsales_rejects	DI_ModifiedDate	datetime
		context.getProperty("vChildPID")							
		TalendDate.getCurrentDate()							
		TalendDate.getCurrentDate()							

Source	factsalesquota	SalesQuotaSK	int(11)	int			factsalesquota	SalesQuotaSK	int(11)
Target	dimchannel	SalesQuotaKey	int(11)	int			factsalesquota	SalesQuotaKey	int(11)
Target	dimstore	ChannelSK	int(11)	int			factsalesquota	ChannelSK	int(11)
Target	dimproduct	StoreSK	int(11)	int			factsalesquota	StoreSK	int(11)
		ProductSK	int(11)	int			factsalesquota	ProductSK	int(11)
		QuotaDate	date	date			factsalesquota	QuotaDateSK	int(11)
		CurrencyKey	int(11)	int			factsalesquota	QuotaDateKey	date
Source	factsalesquota	ScenarioKey	int(11)	int			factsalesquota	CurrencySK	int(11)
		SalesQuantityQuota	int(11)	int			factsalesquota	ScenarioSK	int(11)
		GrossMarginPctQuota	decimal(10,4)	numeric(10,4)			factsalesquota	SalesQuantityQuota	int(11)
							factsalesquota	GrossMarginPct	decimal(15,4)
							factsalesquota	Local_CurrencySK	int(11)
Source	factsalesquota	SalesAmountQuota	decimal(15,2)	numeric(15,2)			factsalesquota	SalesAmountQuota_Local	decimal(15,2)
		ETLLoadID	int(11)	int			factsalesquota	SOR_ID	int(11)
		LoadDate	datetime(3)	date			factsalesquota	SOR_LoadDate	datetime
		UpdateDate	datetime(3)	date			factsalesquota	SOR_UpdateDate	datetime
		context.getProperty("vChildPID")					factsalesquota	DI_JobID	varchar(20)
		TalendDate.getCurrentDate()					factsalesquota	DI_CreateDate	datetime
		TalendDate.getCurrentDate()					factsalesquota	DI_ModifiedDate	datetime
Source	factsalesquota	SalesQuotaSK	int(11)	int			factsalesquota_rejects	SalesQuotaSK	int(11)
Target	dimchannel	SalesQuotaKey	int(11)	int			factsalesquota_rejects	SalesQuotaKey	int(11)
Target	dimstore	ChannelSK	int(11)	int			factsalesquota_rejects	ChannelSK	int(11)
Target	dimproduct	StoreSK	int(11)	int			factsalesquota_rejects	StoreSK	int(11)
		ProductSK	int(11)	int			factsalesquota_rejects	ProductSK	int(11)
		QuotaDate	date	date			factsalesquota_rejects	QuotaDateSK	int(11)
		CurrencyKey	int(11)	int			factsalesquota_rejects	QuotaDateKey	date
		ScenarioKey	int(11)	int			factsalesquota_rejects	CurrencySK	int(11)
		SalesQuantityQuota	int(11)	int			factsalesquota_rejects	ScenarioSK	int(11)
		GrossMarginPctQuota	decimal(10,4)	numeric(10,4)			factsalesquota_rejects	SalesQuantityQuota	int(11)
							factsalesquota_rejects	GrossMarginPct	decimal(15,4)
							factsalesquota_rejects	Local_CurrencySK	int(11)
Source	factsalesquota	SalesAmountQuota	decimal(15,2)	numeric(15,2)			factsalesquota_rejects	SalesAmountQuota_Local	decimal(15,2)
Target	DimRejectCodes	DI_Reject_Code	int(11)	int			factsalesquota_rejects	DI_Reject_Code	int(11)
Source	factsalesquota	ChannelKey	int(11)	int			factsalesquota_rejects	ChannelKey	int(11)
Source	factsalesquota	StoreID	int	int			factsalesquota_rejects	StoreID	int(11)
Target	dimproduct	ProductLabel					factsalesquota_rejects	ProductLabel	varchar(24)
Source	factsalesquota	Brand_ID		NA			factsalesquota_rejects	Brand_ID	varchar(24)
Target	dimproduct	Product_ID					factsalesquota_rejects	Product_ID	varchar(24)
							factsalesquota_rejects	SOR_ID	int(11)
							factsalesquota_rejects	SOR_LoadDate	datetime
							factsalesquota_rejects	SOR_UpdateDate	datetime
		context.getProperty("vChildPID")					factsalesquota_rejects	DI_JobID	varchar(20)
		TalendDate.getCurrentDate()					factsalesquota_rejects	DI_CreateDate	datetime
		TalendDate.getCurrentDate()					factsalesquota_rejects	DI_ModifiedDate	datetime
Source	factstrategyplan	StrategyPlanSK	int(11)	int			factstrategyplan_rejects	StrategyPlanSK	int(11)
		StrategyPlanKey	int(11)	int			factstrategyplan_rejects	PlanDateSK	int(11)
		PlanDate	date	date			factstrategyplan_rejects	PlanDateKey	date
Target	dimscenario	EntityKey	int(11)	int			factstrategyplan_rejects	EntityDK	int(11)
		ScenarioSK	int(11)	int			factstrategyplan_rejects	ScenarioSK	int(11)
		AccountKey	int(11)	int			factstrategyplan_rejects	AccountSK	int(11)
Source	factstrategyplan	ProductCategoryKey	int(11)	int			factstrategyplan_rejects	ProductCategoryKey	int(11)
		PlanAmount	decimal(15,2)	numeric(15,2)			factstrategyplan_rejects	PlanAmount	decimal(15,2)
		CurrencyKey	int(11)	int			factstrategyplan_rejects	Local_CurrencySK	int(11)
							factstrategyplan_rejects	PlanAmount_Local	decimal(15,2)
Target	DimRejectCodes	DI_Reject_Code	int(11)	int			factstrategyplan_rejects	DI_Reject_Code	int(11)
Source	FactStrategicPlan	EntityKey	int(11)	int			factstrategyplan_rejects	EntityKey	int(11)
Source	FactStrategicPlan	ScenarioKey	int(11)	int			factstrategyplan_rejects	ScenarioKey	int(11)
Source	dimaccount	AccountKey	int(11)	int			factstrategyplan_rejects	AccountKey	int(11)
							factstrategyplan_rejects	SOR_ID	int(11)
							factstrategyplan_rejects	SOR_LoadDate	datetime
							factstrategyplan_rejects	SOR_UpdateDate	datetime
		context.getProperty("vChildPID")					factstrategyplan_rejects	DI_JobID	varchar(20)
		TalendDate.getCurrentDate()					factstrategyplan_rejects	DI_CreateDate	datetime
		TalendDate.getCurrentDate()					factstrategyplan_rejects	DI_ModifiedDate	datetime

## • DATA STORE LOGICAL MODEL

### Fact Inventory

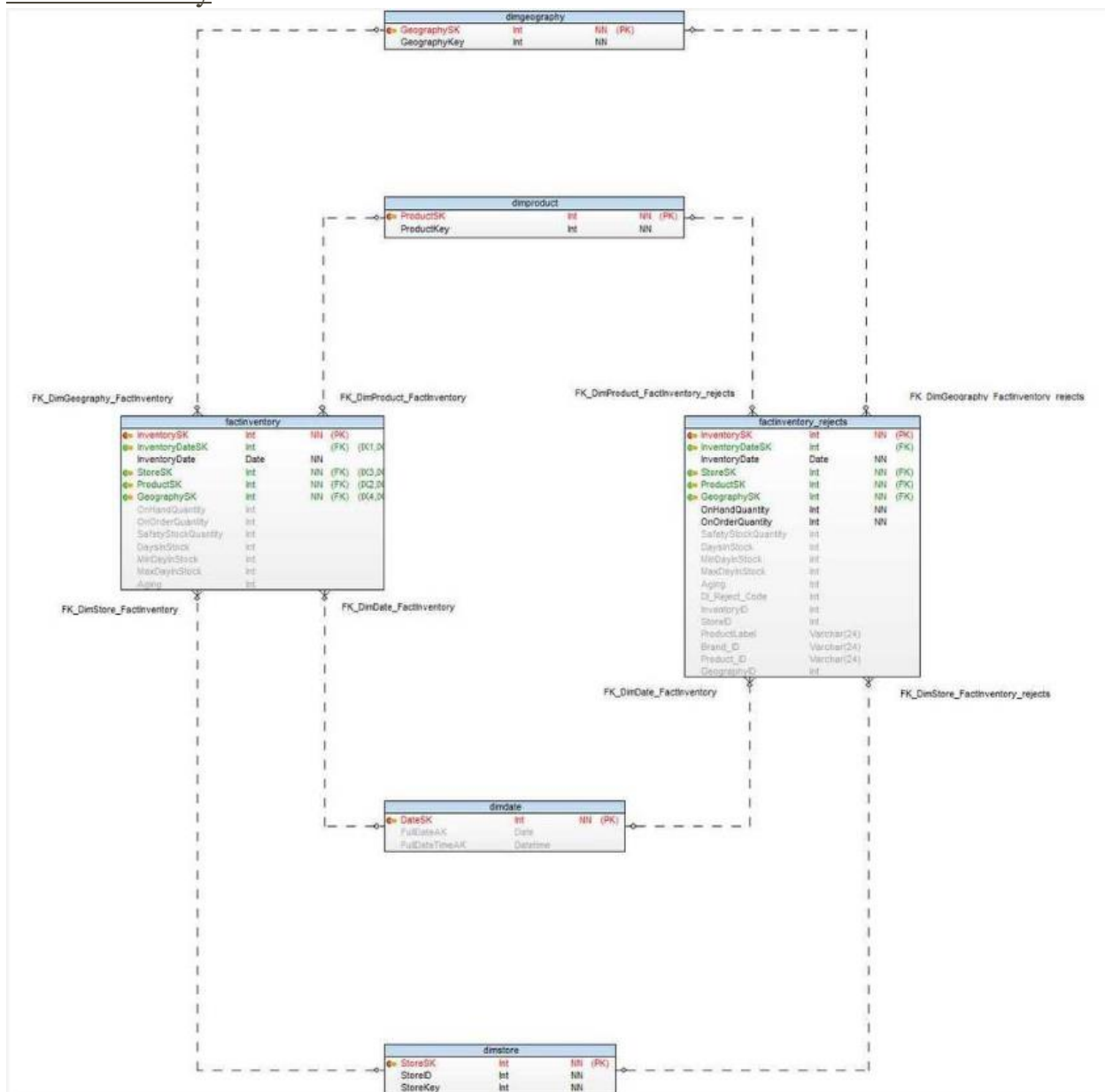
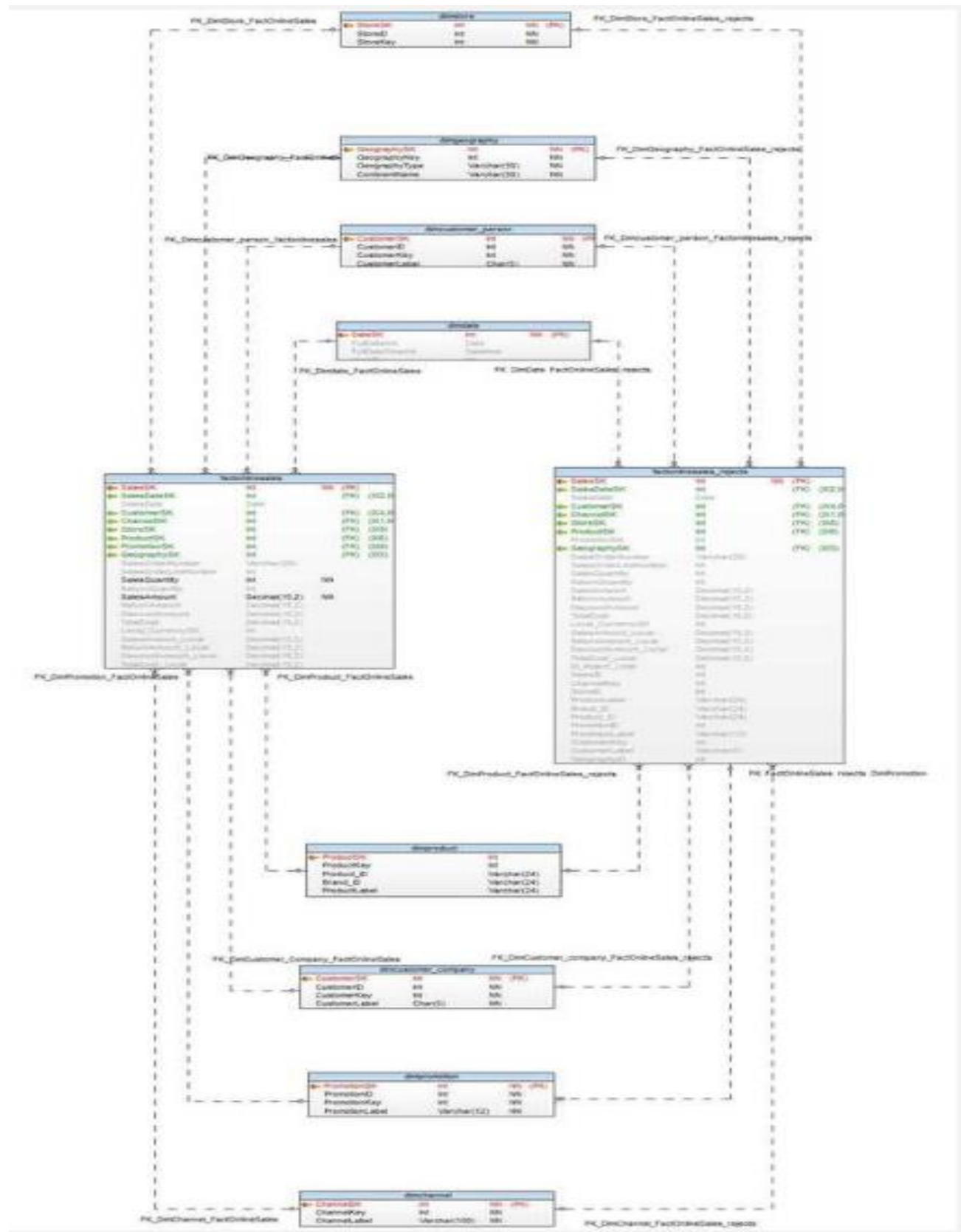


Figure 1: Example of a Data Store's Logical Data Model

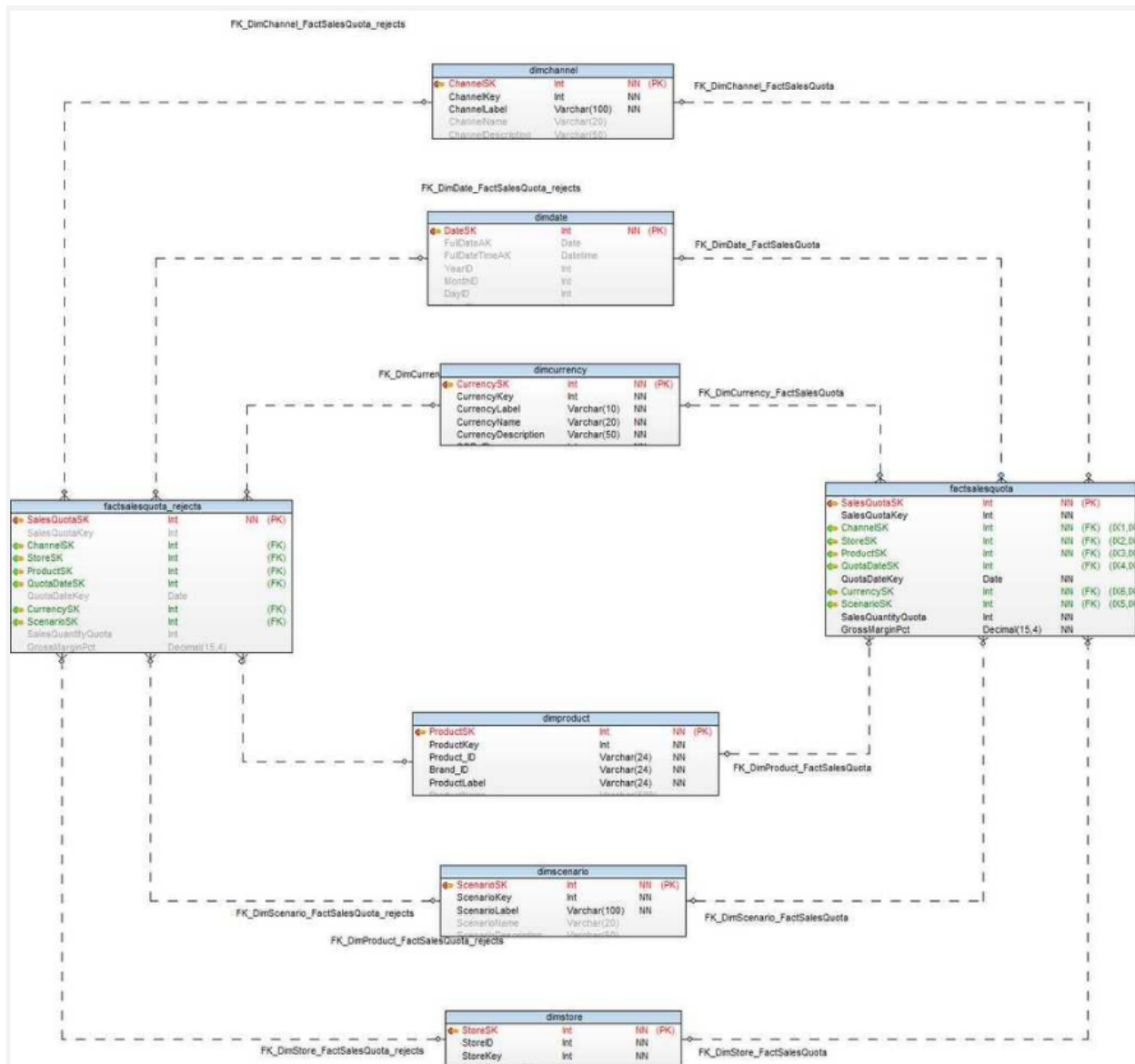
### FactOnlineSales:





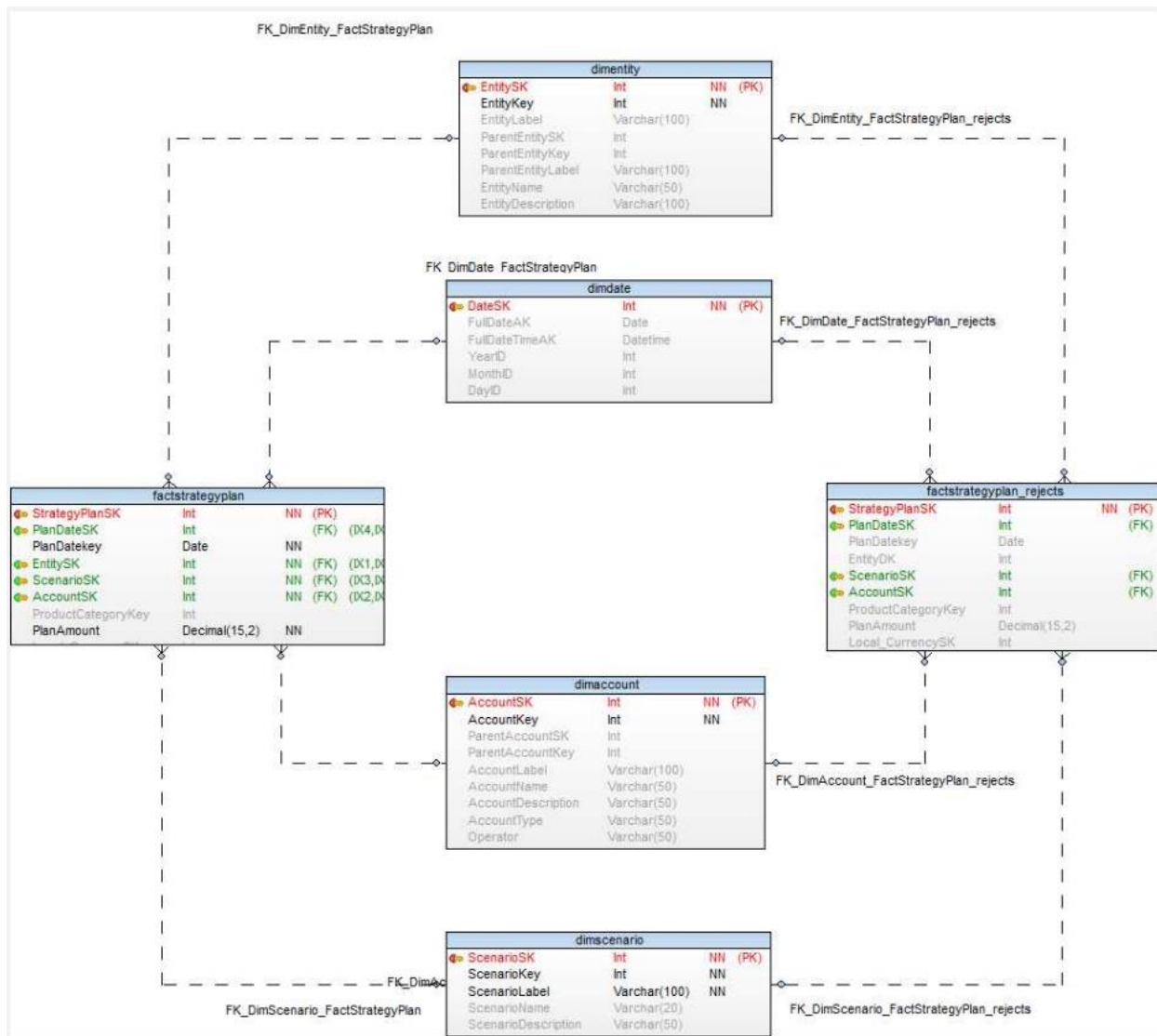


## FactSalesQuota:





## FactStrategyPlan



**Challenges Faced:**

- To perform error handling, we first performed **Data Profiling** which included Source to Target Mappings. This is a very important and primary step in Data Integration.
- In this Contosa Retail Project we have used **Data Ingestion Services** inorder to handle effective & ineffective dates, new row for updating current records.
- **Data Ingestion Services used in our project include:**
  1. Change Data Capture in the form of Audit columns
  2. Slowly changing dimensions (Type 2 in DimProductCost, DimProductPrice)
  3. Referential Lookups
- In order to perform String to Integer data conversion's we used `String.valueOf()`
- Also to parse from `BigDecimal` to `Int` we used `intValueExact()`
- For implementing conformed date dimension, we used `Integer.parseInt(TalendDate.getCurrentDate())`
- We have used `NumberSequence` inorder to implement the functionality of `AutoIncrement`

## **APPENDIX: BACKGROUND MATERIALS**

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### **Special Thanks for guiding us through the project:**

Arjun Upadhyay

Labdhi Shah

Palak Agrawal