

AdventureWorks2017 Purchasing DW

Part 1

Introduction:

AdventureWorks sells bikes, bike components and bike clothing directly to customers on internet and to stores, such as bike shops, that resell their products. AdventureWorks purchases products from vendors that they either resell or use as components in their own finished goods that they build (and then sell.)

AdventureWorks2017 contains the purchasing and related data that AdventureWorks business personnel need to answer many business questions and to perform analysis. The AdventureWorksDW2017 has been created to enable reporting and BI, however, much of the data needed for purchasing related analysis are not present in that DW.

The deliverables will be to design the Purchasing DW, populate the tables and to then create Microsoft PowerBI reports and visualizations.

Business Requirements:

The following questions need to be answered by this new schema:

- What are AdventureWorks purchases (Purchase cost & quantity) by product?
- What types of products are purchased?
- What are AdventureWorks product purchases (Purchase cost & quantity) by vendor?
- What AdventureWorks' employees were involved in the above purchasing and what did they purchase
- What vendors' contacts were involved in the above purchasing and what did they purchase

See appendix for screenshots of examples of business analysis.

Objectives:

- Create schema in target database that will contain data on:
 - All product purchases made by AdventureWorks from vendors, i.e. purchase orders
 - List of products that might be purchased from Vendors, in other words, all the products that are not made by AdventureWorks
 - Need to include product attributes such as list price, standard cost, model name, subcategory name and category name. Current values is sufficient.
 - Note: if hierarchy applicable then this needs to be a star and NOT a snowflake design
 - Vendors that AdventureWorks might purchase products from
 - Products that AdventureWorks might purchase from vendors and associated with the vendors that sell them.

- Vendors' employees (contacts) who interact with AdventureWorks
 - AdventureWorks' employees who have bought products from vendors and include attributes about those people such as address, email, phone, department they currently work in
 - AdventureWorks' ship methods
 - A geography dimension that AdventureWorks could use as outrigger for dimensions above that include cities, states and countries
 - A calendar dimension that AdventureWorks could use for facts and dimensions
- The tables created and data in each is based on your design. There may need to be additional dimensional tables based on how you design the target database
 - A slowly changing dimension (SCD) for AdventureWorks employee pay (only employees listed above)
 - SCD 2 or higher

Databases:

- Source database:
 - AdventureWorks2017
 - Only allowed to use tables as data source NOT views.
- Target databases AW_Purchasing_DW (student creates)
 - Target database– Choose either Microsoft SQL Server or MySQL

Deliverables:

- Design a Data Model for the Purchasing DW
 - Screen capture & model file
- Schema - List of Tables with Columns
- SQL script to create DW on one of class databases
- Create DW on above database

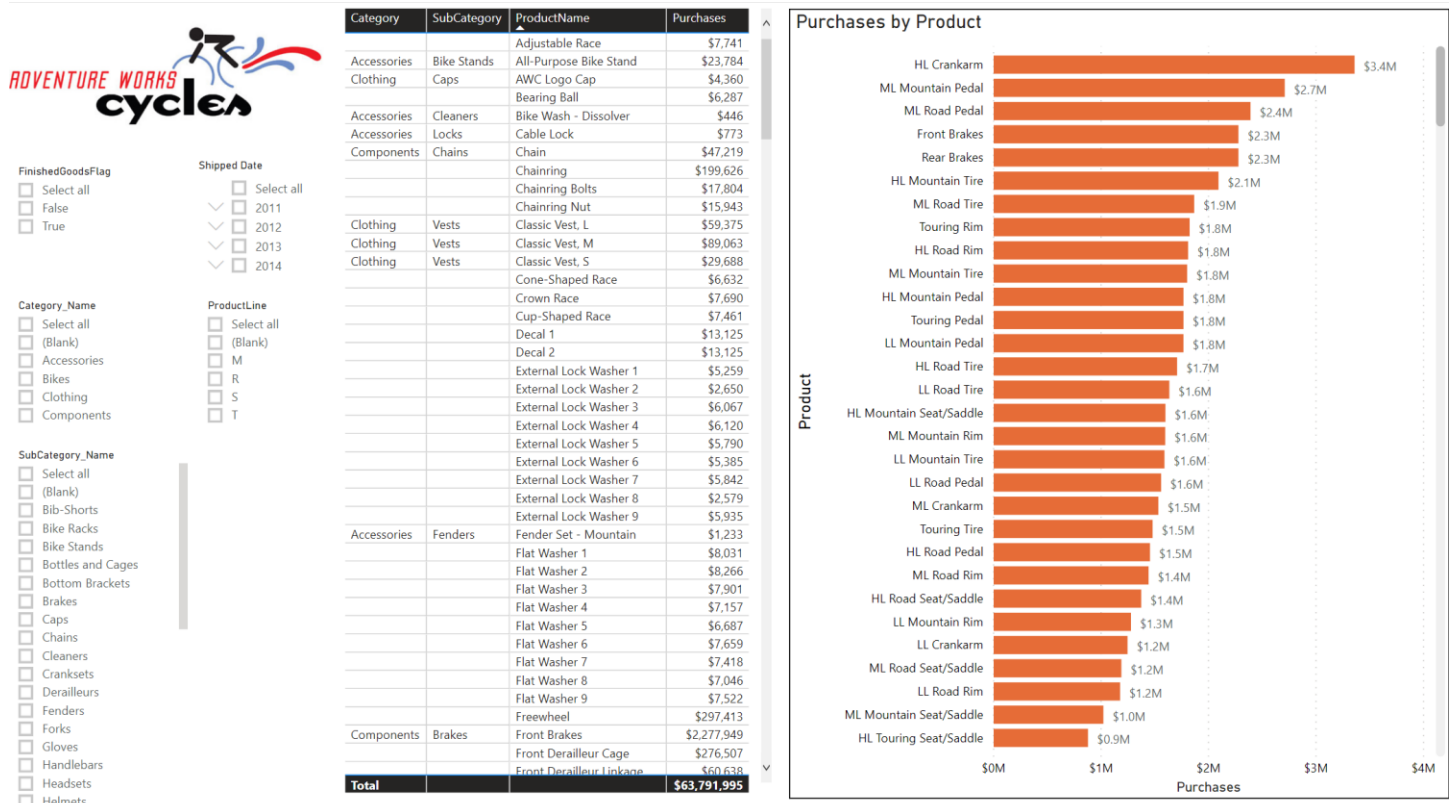
Appendix



INFO7370

Team Project

Instructor: Richard Sherman
Assigned: May 30, 2020



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Category_Name	VendorName	Product	Purchases
<input type="checkbox"/> Select all	Advanced Bicycles	Thin-Jam Hex Nut 1	\$1,944
<input type="checkbox"/> (Blank)	Advanced Bicycles	Thin-Jam Hex Nut 10	\$1,778
<input type="checkbox"/> Accessories	Advanced Bicycles	Thin-Jam Hex Nut 11	\$1,338
<input type="checkbox"/> Bikes	Advanced Bicycles	Thin-Jam Hex Nut 12	\$1,492
<input type="checkbox"/> Clothing	Advanced Bicycles	Thin-Jam Hex Nut 13	\$1,414
<input type="checkbox"/> Components	Advanced Bicycles	Thin-Jam Hex Nut 14	\$1,568
	Advanced Bicycles	Thin-Jam Hex Nut 15	\$1,696
	Advanced Bicycles	Thin-Jam Hex Nut 16	\$1,862
	Advanced Bicycles	Thin-Jam Hex Nut 2	\$1,778
	Advanced Bicycles	Thin-Jam Hex Nut 3	\$1,644
	Advanced Bicycles	Thin-Jam Hex Nut 4	\$1,490
	Advanced Bicycles	Thin-Jam Hex Nut 5	\$1,696
	Advanced Bicycles	Thin-Jam Hex Nut 6	\$1,490
	Advanced Bicycles	Thin-Jam Hex Nut 7	\$1,414
	Advanced Bicycles	Thin-Jam Hex Nut 8	\$1,338
	Advanced Bicycles	Thin-Jam Hex Nut 9	\$1,852
	Allenson Cycles	Seat Post	\$451,212
	American Bicycles and Wheels	Headset Ball Bearings	\$8,725
	American Bikes	HL Road Rim	\$1,040,262
	Anderson's Custom Bikes	Touring Rim	\$746,032
	Aurora Bike Center	External Lock Washer 1	\$1,428
	Aurora Bike Center	External Lock Washer 2	\$1,500
	Aurora Bike Center	External Lock Washer 3	\$1,709
	Aurora Bike Center	External Lock Washer 4	\$1,633
	Aurora Bike Center	External Lock Washer 5	\$1,633
	Aurora Bike Center	External Lock Washer 6	\$1,569
	Aurora Bike Center	External Lock Washer 7	\$1,558
	Aurora Bike Center	External Lock Washer 8	\$1,359
	Aurora Bike Center	External Lock Washer 9	\$1,787
	Aurora Bike Center	Internal Lock Washer 1	\$1,151
	Aurora Bike Center	Internal Lock Washer 10	\$1,220
	Aurora Bike Center	Internal Lock Washer 2	\$1,570
	Aurora Bike Center	Internal Lock Washer 3	\$1,359
	Aurora Bike Center	Internal Lock Washer 4	\$1,289
	Aurora Bike Center	Internal Lock Washer 5	\$1,289
	Aurora Bike Center	Internal Lock Washer 6	\$1,361
	Total		\$63,791,995

Product	VendorName	Purchases
Front Brakes	Superior Bicycles	\$2,277,949
Rear Brakes	Superior Bicycles	\$2,277,949
HL Mountain Pedal	Inline Accessories	\$1,766,855
Touring Pedal	Bicycle Specialists	\$1,766,855
HL Road Pedal	Compete Enterprises, Inc	\$1,455,057
ML Mountain Pedal	Crowley Sport	\$1,354,520
ML Mountain Pedal	Greenwood Athletic Company	\$1,354,520
ML Road Pedal	Mitchell Sports	\$1,327,961
HL Crankarm	West Junction Cycles	\$1,276,564
HL Mountain Tire	Trikes, Inc.	\$1,169,149
HL Mountain Seat/Saddle	Hybrid Bicycle Center	\$1,148,353
ML Road Tire	Signature Cycles	\$1,079,059
Touring Rim	Premier Sport, Inc.	\$1,077,904
HL Crankarm	Vision Cycles, Inc.	\$1,068,837
ML Road Pedal	Jackson Authority	\$1,062,369
HL Road Rim	American Bikes	\$1,040,262
HL Crankarm	Proseware, Inc.	\$1,013,397
ML Mountain Tire	Vista Road Bikes	\$1,005,428
LL Road Tire	Signature Cycles	\$944,501
HL Mountain Tire	Sport Fan Co.	\$923,197
HL Road Seat/Saddle	First Rate Bicycles	\$923,186
LL Mountain Tire	Vista Road Bikes	\$886,751
LL Mountain Pedal	Crowley Sport	\$883,280
LL Mountain Pedal	Greenwood Athletic Company	\$883,280
LL Road Pedal	Mitchell Sports	\$865,961
HL Road Tire	Victory Bikes	\$860,498
ML Road Seat/Saddle	Hill's Bicycle Service	\$853,828
HL Road Tire	Professional Athletic Consultants	\$846,702
ML Mountain Rim	Competition Bike Training Systems	\$821,430
HL Mountain Rim	Jackson Authority	\$798,105
ML Mountain Tire	Sport Fan Co.	\$795,495
ML Crankarm	Vision Cycles, Inc.	\$794,178
ML Road Tire	Professional Athletic Consultants	\$787,317
ML Road Rim	International Bicycles	\$781,669
ML Mountain Rim	Comfort Road Bicycles	\$775,484
HL Road Rim	Electronic Bike Repair & Supplies	\$769,461
Touring Rim	Anderson's Custom Bikes	\$746,032
Total		\$63,791,995

Purchases by City

