**­­­INFO 3300 The Ski Shop Development Plan**

Solution: The Ski Shop Solution

Owner: MHENRY

Date: 09/29/2022 – 11/22/2022

Change Log

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| --- | --- | --- |
| Who | When | What |
| MHENRY | 09/29/2022  4:19pm | Started The Ski Shop Development Plan. File named DMTheSkiShopBISolutionPlan. |
| MHENRY | 09/29/2022  5:27pm | Finished the executive summary. Includes a background for “The Ski Shop”, as well as a business problem they are looking to fix with a data mart, started business requirements |
| MHENRY | 09/29/2022  5:42pm | Finished business requirements, which include multi-dimensional questions that The Ski Shop management are looking to answer. Started information package |
| MHENRY | 09/29/2022  6:55pm | Finished information package. The subject being sales. The variables included will be used to answer the business requirements. |
| MHENRY | 10/02/2022  2:15pm | Started Solution Object Worksheet. Named DMTheSkiSHopBISolutionWorksheets. |
| MHENRY | 10/02/2022  3:05pm | Finished Object Worksheet. Included is the objects that will be included in the finished OLAP, as well as their description, where they’re sourced from, and what variable types they will have. |
| MHENRY | 10/02/2022  3:05pm | Started Star Schema. Named DMTheSkiShopStarSchema.vsdx. |
| MHENRY | 10/02/2022  3:38pm | Finished Star Schema. This diagram includes all relevant data from the object worksheet, and shows a visual on how all the dim tables will connect to the fact table. |
| MHENRY | 10/02/2022.  3:41pm | Inserted Solution plan, object worksheet, and star schema into DMSolutionDocumentation folder in visual studio |
| MHENRY | 10/02/2022  3:42pm | Emailed TheSkiShop solution from visual studio and build files to peer group, Josh Poresky & Jackson Holmbeck review |
| JHOLMBECK | 10/02/2022  6:38pm | Received peer review from Jackson Holmbeck and fixed all problems brought up |
| MHENRY | 10/03/2022  6:42pm | Started final review of all deliverables. |
| MHENRY | 10/03/2022  7:22pm | Finished final review for all deliverables and zipped files for submission |
| MHENRY | 10/11/2022  1:13pm | Began reviewing change log, business requirements, information package, object worksheet, and star schema based off of phase 1 feedback from Amy Phillips |
| MHENRY | 10/11/2022  5:13pm | Finished reviewing and made changes to change log, business requirements to included dates, information package to remove unnecessary measures and clean up style, object worksheet and star schema to reflect the IP. Renamed all files to reflect the data mart and added developer name to all documentation. Started the build for TheSkiShopDM. |
| MHENRY | 10/11/2022  6:48pm | Finished BuildTheSkiShopDM.sql file, ran in SSMS and created a database diagram to confirm creation. Added solution folder DMBuild with BuildTheSkiShopDM.sql within. Ran in Visual Studio twice,. |
| MHENRY | 10/11/2022  6:52pm | Zipped DMTheSkiShop folder including the solution, documentation, and build, and sent to peer reviewers Josh Poresky, Jackson Holmbeck, and Yarden Zinger for further review. |
| JHOLMBECK  JPORESKY | 10/11/2022  10:03pm | Received peer review from Jackson Holmbeck and Josh Poresky |
| MHENRY | 10/12/2022  6:39pm | Received peer reviews from Jackson Holmbeck and Josh Poresky. Made the necessary changes of making usre that all naming in the BuildTheSkiShopDM was consistent, and added peer reviewer names. |
| MHENRY | 10/18/2022  8:03pm | Updated TheSkiShop OLTP to include correct data types, variables, as well as updated data to include 1000 rows within the fact table. |
| MHENRY | 10/20/2022  2:13pm | Started TheSkiShopDM ETL process in SSIS. Created new SSIS project named DMTheSkiShop ETL, with a folder within named ETL. |
| MHENRY | 10/20/2022  7:42pm | Finished TheSkiShopDM ETL. Included 3 containers, 1 for Build DM, 1 to load the Dim Tables, and 1 to load the Fact Table. ETL process ran multiple times, and confirmed data load in SSIS by selecting the top 1000 rows for each dim and the fact tables. Updated DMTheSkiShopBISolutionWorksheets as well as DMTheSkiShopStarSchema to reflect needed changes from phase 1 and phase 2.All updated documentation included in TheSkiShopDMSolution within DMSolutionDocumentation folder. BuildTheSkiShopDM.sql included in DMBuild Folder. |
| MHENRY | 10/22/2022  1:09pm | Sent peer review to YZINGER, JHOLMBECK, and JPORESKY for further review. |
| JHOLMBECK | 10/23/2022  12:53pm | Peer review completed by Jackson Holmbeck |
| MHENRY | 10/24/2022  7:00pm | Looked at Jackson Holmbeck’s feedback. Made needed change of adding OLTP folder for backup for OLTP. Looked back into solution documentation to make edits from phase 1 that still needed to be changed. |
| MHENRY | 10/24/2022  10:22pm | Finished making edits from phase 1 and phase 2 critique. This included editing the IP, making sure that the object worksheet, star schema, and overall build all matched. This also included more description within the change log and making sure that the SK’s and AK’s within the star schema and object worksheet were named correctly. |
| MHENRY | 10/24/2022  10:27pm | Zipped phase 3 project, named DMTheSkiShop, and submitted on canvas for review. |
| MHENRY | 11/08/2022  6:00pm | Changed business requirements to be more susceptible for analysis. Started analysis of business requirement 1 |
| MHENRY | 11/09/2022  3:03pm | Finished multidimensional analysis of business requirement 1. Placed in folder DMMultidimensionalAnalysis within VS solution. Zipped and sent phase 4 project to peer reviewers Josh Poresky, Jackson Holmbeck, and Yarden Zinger for further review |
| MHENRY | 11/20/2022  4:01pm | Started reports and dashboards phase in powerBI. Created a file named TheSkiShopReportsAndDashboards, and placed within a DMReportsAndDashboards folder within the solution folder. |
| MHENRY | 11/20/2022  8:15pm | Finished reports and dashboards within powerBI. Zipped DMTheSkiShopSolution folder and sent to Josh Poresky, Jackson Holmbeck, and Yarden Zinger for further review. |
| JPORESKY | 11/21/2022  5:10pm | Received peer review from Josh Poresky. Started making changes to project based off of peer review. |
| MHENRY | 11/21/2022  6:44pm | Finished changes to Power BI file. Placed peer review documentation in root directory with .sln file, included peer reviewers name in Change Log. Zipped DMTheSkiShopFolder, and submitted on Canvas. |

Executive Summary

The Ski Shop is a customer’s one stop to get all the gear they need for ski and snowboard season. They sell all types of skis and boards as well as apparel to keep customers comfortable and looking good on the mountain. Currently, The Ski Shop is still small and is looking to grow their customer base while also promoting customer loyalty through a rewards program. The Ski Shop is looking to keep track of customer information to create better marketing and promotional strategies to obtain and bring customers back. Employees work closely with customers at The Ski Shop to make sure that they get everything they need to hit the slopes. Managers are looking to gauge employee performance and to see which products and brands do the best within the shop throughout the year. The Ski Shop management wants a data mart to better understand their customers, their buying habits, as well as to better gauge employee performance. They will use the data mart to optimize reporting on sales, archive historical data from their OLTP, and consolidate data from multiple sources to keep their purchasing system running smoothly.

Expectations

1. The solution will store and present verified data.
2. The solution will allow for simple ad hoc queries.
3. The solution must include a data mart that is easy to use.
4. The solution should include an OLAP cube.
5. The solution should be simple to keep development and maintenance costs at a minimum.
6. A working prototype should be available in a short period of time.

***Business Requirement***

1. What season had the most products sold, which customer demographic in terms on income was the most popular, what was the average sale, and what was the average commission earned per employee?
   1. This question is important because it will allow management to see which season is best for selling, what type of customer is buying, and how much employees are earning during peak season.
2. What were the total sales month over month, what was the top ten products sold, which categories performed the best, which customer levels did the best, and how does income affect purchasing?
   1. This question will allow management to see sales over time, as well as the top performing categories and products, the top performing customers, and which customer demographic by income level is doing the best.

Hierarchy/ Categories

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| --- | --- | --- | --- | --- | --- | --- |
| The Ski Shop Sales  Information Subject: Sales | | | | | | |
| **Dimensions** |  | | |  |  | |
| **Date** | | **Product** | **Customer Demographics** | | | **Employee** |
| Year | | Product Name | Customer Level | | | Employee Type |
| Quarter | | Product Description | Birth Date | | | First Name |
| Month | | Brand Name | Gender | | | Last Name |
| Date | | Price | Income (Bin) | | |  |
| Day of Week | |  | Marital Status | | |  |
| Day of Month | |  | Household Size | | |  |
| Holiday Flag | |  |  | | |  |
| **Facts**: Purchase Date, Purchase Cost, Category, Purchase Quantity\*, Category Quantity\*\*, Total Commission\*\*\*, Commission Rate | | | | | | |

\*Purchase quantity: total of products sold in one sale to a particular customer

\*\*Product category qty: total of products sold in one category (skis, snowboards, etc.)

\*\*\*Total commission: employee commission rate \* total purchase cost (per individual customer purchase)