Date Warehouse Development of Car Repair Shop System

Group 3

Irina Becknell, Joe Chan, Thomas Jensen, Brandon Russell

University of Maryland University College

Author Note

This project was prepared for DBST665, taught by Professor Kuchibhotla

Data Warehouse Development of Car Repair Shop System

Abstract

In this project a data warehouse is developed for a car repair shop. The project begins with development of a project plan and a business case for the data warehouse. This will be followed by a design of a data warehouse schema, which consists of one FACT table and four DIMENSION tables. Farther, the requirements are gathered and analyzed. Then, the database is designed and built. The research concludes with summary of findings and lessons learned. This research is meant to investigate the data warehouse technology.

**Project Plan**

Table 1 presents the work breakdown structure (WBS) of the project.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Phase** | **Steps** | **Week** | **Task** | **Group member** |
| 1 | 1 | 1 | Group formed | All |
| 2 | 1 | Select the topic | All |
| 3 | 1 | Roles assignment | All |
| 4 | 2 | Develop project plan (WBS) for the data warehouse project | Irina Becknell |
| 5 | 2 | Inform professor of the project topic and submit group work schedule to professor | Irina Becknell |
| 6 | 3 to 12 | Inform professor of the project progress and clarify any questions with professor | Irina Becknell |
| 7 | 4 | Writing of the Abstract of the project report | Irina Becknell |
| 8 | 4 | Writing of the Introduction of the project report | Irina Becknell |
| 2 | 9 | 4 | Data Model/DDL design (DB schema consisting of one FACT table and four DIMENSION tables). Record and include DDL script design for Appendix | Brandon Russell |
| 10 | 4 | Requirements analysis (develops description of the data sources, analyze the requirements documented in the introduction.) | Thomas Jensen |
| 11 | 4 | ETLs/DMLs (identification of the data sources, data map, and the methodology used to load the data. Identify, describe and record the DML or SQL\*Loader scripts for Appendix ) | Chan, Joe |
| 12 | 6 | Data Model/DDL development and implementation. Record steps for the body of the report | Brandon Russell |
| 13 | 7 | Writing SQL queries. Record the scripts for the Appendix | Brandon Russell |
| 14 | 8 | Report analysis (development of all the report scenarios (at least 4) that demonstrate how the requirements identified in the introduction were met. Identify and record the SQL scripts in the Appendix). | Thomas Jensen |
| 3 | 15 | 10 | Writing of Lesson learned section (record any problems and issues) | Irina Becknell |
| 16 | 10 | Writing of Conclusion of the project report (one page discussion of the project, explain how has this report solved the business needs identified in the Introduction.) | Irina Becknell |
| 17 | 11 | Review of the project report, make necessary changes. Submission of the project | All |

Table 1. Project plan (WBS)

The following roles were assigned to the team members (Table 2):

|  |  |
| --- | --- |
| **Team Member** | **Role** |
| Becknell, Irina | Project Lead |
| Chan, Joe | Business Analyst |
| Jensen, Thomas | Database Administrator (DBA) |
| Russell, Brandon | Database Developer |

Table 2. Team members and roles

**Introduction**

**Data Model/DDL Development**

**Requirements Analysis**

**ETL/DML development**

**SQL Queries**

**Report Analysis**

**Lessons Learned**

**Conclusion**

**Appendix**

Reference