HIGH LEVEL DESING

PROJECT TITTLE

E-COMMERCE DASHBOARD

PREPARED BY

ANURAG KUMAR

TABLE OF CONTENT

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1. Introduction

1. Introduction1.1 Why this High-Level Design Document?

This High-Level Design (HLD) document's goal is to provide the current project description with the extra depth it needs to reflect an appropriate coding model. This paper can be used as a reference guide to understand how the modules work at a high level and to help find conflicts before coding.

THE HLD WILL

- Present all of the design aspects and define them in detail
- Describe the user interface being implemented
- Describe the hardware and software interfaces
- Describe the performance requirements
- Include design features and the architecture of the project
- List and describe the non-functional attributes like:

- Security
- Reliability
- Maintainability
- Portability
- Reusability
- Application compatibility
- Resource utilization
- Serviceability

1.2 The Scope

The HLD documentation outlines the system's architecture, including the technology architecture, application architecture (layers), application flow, and database architecture. The HLD employs simple to somewhat complex concepts that system administrators should be able to understand.

2 General Description

2.1 Product Perspective & Problem Statement

E-commerce (electronic commerce) is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet. These business transactions occur either as business-to-business (B2B), business-to consumer (B2C), consumer-to-consumer or consumer-to-business.

3. TOOLS USED

Power BI

jupyter

python™

4 Design Details

4.1 Functional Architecture

step 1: data from source system is integrated and loaded.

step 2: data sets are organized into analytics data modules

step 3: bi analyst and other analytics professionals run analytical queries.

step 4: results are built into data visualizations, dashboards and reports

step 5: bossiness executives and workers use the information for decision making

HOW BI WORKS

ORGANIZATIONAL MEMORY

- Data Warehouse
- Enterprise resource planning (ERP)
- Knowledge Repository
- Content Management System (CMS)

INFORMATION INTEGRATION

- Business Analytical Tools
- Data Mining
- Real Time Decision

INSIGHT CREATION

- Text Mining Tool
- Web Mining Tool
- Environmental Scanning
- RFID

PRESENTATION

- Online Analytical Processing (OLAP) Tool
- Visualization Tool
- Digital Dashboard
- Score Card

4.2 Optimization

1. Your data strategy drives performance

Minimize the number of fields
Minimize the number of records

Optimize extracts to speed up future queries by materializing calculations, removing columns and the use of accelerated views

2. Reduce the marks (data points) in your view

Practice guided analytics.

There's no need to fit everything you plan to show in a single view. Compile related views and connect them with action filters to travel from overview to highly-granular views at the speed of thought.

Remove unneeded dimensions from the detail shelf. Explore. Try displaying your data in different types of views.

3. Limit your filters by number and type

Reduce the number of filters in use. Excessive filters on a view will create a more complex query, which takes longer to return results. Double-check your filters and remove any that aren't necessary.

Use an include filter. Exclude filters load the entire domain of a dimension while including filters do not. An include filter runs much faster than an exclude filter, especially for dimensions with many members

Use a continuous date filter. Continuous date filters (relative and range-of-date filters) can take advantage of the indexing properties in your database and are faster than discrete data filters.

Use Boolean or numeric filters. Computers process integers and Booleans (t/f) much faster than strings.

4. Optimize and materialize your calculations

Perform calculations in the database

Reduce the number of nested calculations

Reduce the granularity of LOD or table calculations in the view. The more granular the calculation, the longer it takes.

LODs - Look at the number of unique dimension members in the calculation.

Table Calculations - the more marks in the view, the longer it will take to calculate.

Where possible, use MIN or MAX instead of AVG. AVG requires more processing than MIN or MAX. Often rows will be duplicated and display the same result with MIN, MAX, or AVG

4. KPI

Dashboards will be implemented to display and indicate certain KPIs and relevant indicators for the disease.

As and when the system starts to capture the historical/periodic data for a user, the dashboards will be included to display charts over time with progress on various indicators or factors
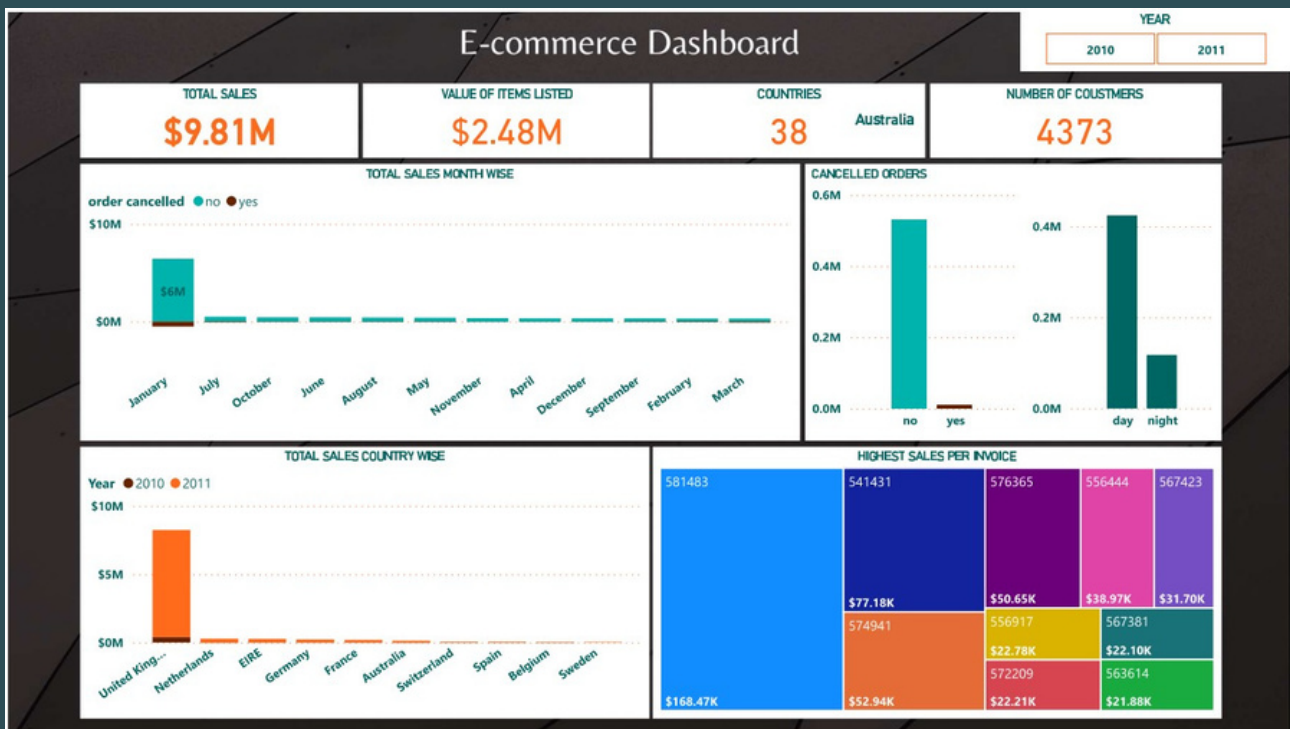
THANK YOU

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