Effort Audit Analytics System Using Power BI & DAX Niyaz Ahmed Shayan

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Abstract— My project involved building a learning module system using Power Bi and DAX. Our team was responsible for developing the Effort Audit Data Analytics, which manages and makes it possible, at your fingertips, to gain the competitive advantage of being on track for the field staffs of Pharma, Animal Health and Baby Care .Effort Audit **data allows you to gain a deep understanding of how users in your organization are using Power BI. In turn, your ability to educate and support users can improve dramatically The Effort Audit Analytics data can help organization measure whether their implementation is aligned with their goals or becoming a more data-driven organization.**

Keywords: Audit Analysis, DAX query, SQL,dashboard, visualization.

Power BI is the technical and procedural representation of data. It is an infrastructure that collects, stores and analyze the data produced by a company's activity. Power BI parses all the data generated by a business and presents easy- to-digest reports, performance measures and trends that inform management decisions. BI components and software comes in wide variety of Power query, Power map, Power pivot, Power view, Power Q&A, Power BI desktop. In the case of data, a large amount of data is

generated in the daily business process. When faced with big, random data, companies have a hard time understanding and applying them.

In addition, responding quickly to the external environment of the business requires making timely decisions in the right way. Therefore, business intelligence has evolved into a very important solution for mining data, converting data from information to information, which contributes to decision-making

We are successfully developing different kinds of bi dashboards for the different division for the chemist doctor ,maternity homes , customer, non chemist .Our Project which effectively manage the all the dashboards andother components.

Through our use of DAX , Power Bi , we were able to create arobust and efficient Effort Audit Analytics system.

II.Aim & Objective

The purpose of this project is to design a Effort Audit Analytics Dashboard for the Finance department using Power BI to makes it possible, at your fingertips, to gain the competitive advantage of being on track for the field staffs of Pharma, Animal Health and BabyCare.

The content displayed should be fully visualized and appealing. In addition, as information are no longer relevant to decision-makers, the overall construction process should be transparent within the department.

The final dashboard can be considered as a customized version. Users can still follow the design process or modify it if a new need arises. analyzing the data and generate sales performance dashboards for better decision .

III. Tools Used

Power BI is an analytical application for analyzing data and sharing knowledge in business.

Power BI includes cloud integration that provides data storage capabilities such as data optimization, data availability, and interactive dashboards.

Microsoft releases additional support features called Embedded Power BI on the Azure cloud platform. Power BI also can combine different databases, files, and web services so that it can quickly make changes or fix data and problems automatically.

Power BI also ensures the security of publishing reports generated within the company and automatically manages the most up-to-date information.

Power BI can also integrate all data into a company, whether cloud or in-house because Power BI has a gateway that allows you to connect to SQL Server data, analytics service models, and many other data sources on the dashboard.

Fields list: This list contains elements of your uploaded dataset. You can select a table or column to view in the data grid.

Navigation Pane: This panel controls the different views of Power BI (Report/Data/Model).

Visualization Pane: There are many different types of visualizations in Power-BI that help depict your report in various ways. This panel provides over 30 visualizations. More custom visualizations could be found online as well.

Microsoft SQL:

Microsoft SQL Server is relational data base management system by Microsoft this built for the basic function of storing retrieving data as required by other applications it can be either on the same computer or on another across a network .

SQL server used to create and restore data, create login and backup, assign the permissions

Microsoft SQL Server is a relational database management system (RDBMS) that supports a wide variety of transaction processing, business intelligence and analytics applications in corporate IT environments

Dax

DAX is an Data Analytical Expression

The DAX Queries are applied for the visualization. They are over 250 DAX functions used for the analytics

IV. Literature Review

Documentation:

URS:

URS is a User Requirement Specification is a document that describe the needs for software or anyother system or product

FRS:

Functional Requirement specification It is a document that contains the functional requirements of the product being developed These requirements are broken down into smaller pieces called user stories.

TRS:

TRS is known as Technical Requirement Specification where the Technical Requirement is being developed according to client requirements •
The Steps followed in TRS Document is
1. Program Details
2. Design of desired screen

Development:

The development stage is a important part of the software development life cycle (SDLC) where developers write code and build the application according to the design documents and outlined requirements .The output of the development stage is a working software product that meets the requirements defined in the planning and design

UAT:

User Acceptance Testing (UAT) is a phase of software development in which the software is tested in the "real world" by the clients or business representative

GO-Live :

Go Live refers to the stage where the software isdeployed and made available to the end-users
• The Go live is the Stage Where The software is Launched
• The Go live Stage is also known as Deployment stage where the software is deployed
• During the Go Live stage, the software is installed on the production servers, and the end-users can start using it

V. Methodology

Data Collection :

Data Collection is the process of gathering and measuringand analyzing accurate data

Data Storage:

Power Bi uses two primary repositories for storing and managing the data that is uploaded from users is sent to excel sheet

Data Cleaning:

Once the data is stored into power BI it is important to clean and transform data before you build any visualizations or reporting .This is essential step in building quality visualization. Cleaning and transforming data enables to build visualizations

Data Analysis:

Transforming data with the goal of discovering the useful information and supporting the decision making

Visualization: visualization is to display collected data by using various charts, graphs or other visualization type

VI .Flow Chart
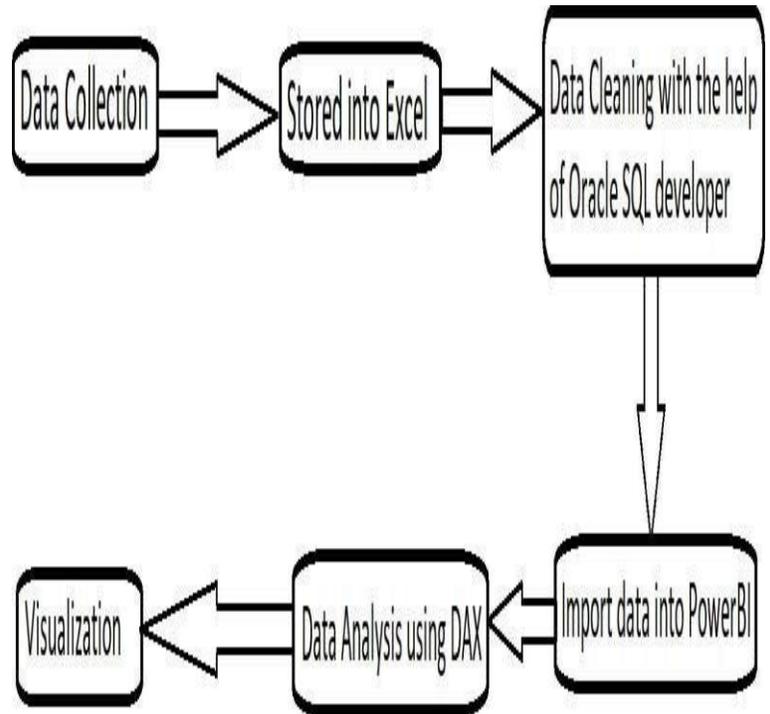
VII. Design and Implementation

Design and implementation is the important phase in software development life cycle.
Design and implementation is the fourth phase of SDLC
Implementation is the process pf adding a project plan into action to produce the service for the clients or the stakeholders

Design and implementation is divided into the several stages :

1. Requirement overview
2. Business Driver
3. Development Type
4. Dependencies and Assumptions

1.   Requirement overview : The Requirement is a initial phase of the project development and understanding the client requirements and negotiating a reasonable solution for the software requirements specifying the solution for the user requirements.

2. Business Driver : The Business Drivers are the crucial factors which leads to success for a business through a proposed initiative. A Business Driver Should be measurable to determine how the project affects them System should create new scheduling agreement by copying contract conditions and the same is shared to vendor.

3. Development Type : The data is uploaded in the form of csv file into the bi tool to perform the analytics after the cleaning and the manipulation of the data

4. Dependencies and Assumptions : The dependencies which are added in the project are:
. **Data Sources :** Understanding the dependencies on various data sources is crucial for data integration and transformation with the Power Bi .
.**Power Query & PowerPivot:** These components are essential for data transformation and modeling and their proper functioning is critical for the success of the project.
.**DAX Calculations:** Dependencies on Dax calculations and measures should be carefully managed to ensured accurate and meaningful insights.

VIII. Limitations of the Technology
1. Data Volume Limits : The limitations of the software is amount of the data that can be loaded into a report of the data set, both of terms of size and row count.

2. Performance Issues with large Data Sets : Performance can degrade when working with the large datasets, especially in bi tool

3 . Data Transformation Complexity:
While Software provides a range of data transformation and cleansing tools, handling complex data transformation and some transformations may not be straight forward.

4. Real Time Data Limitations : The software supports real time data but it might not be as real time as some users required .They can be delays refreshers, real time streaming the data may need additional considerations .

5. Limited ETL Capabilities : Although Bi provides basic Extract , Transform , Load(ETL) capabilities through Query but need to integrate power bi with other tools or platforms.

6. Limited Predictive Analytics: The project has some predictive analytics capabilities, it may not be as robust as specialized analytics tool. Users requiring advanced predictive modeling may need may need to use other tools.

IX . Results

- The Results for the Effort Audit Data Analytics Dashboard which had made more easier to access tall the Dashboards .

- Effort audit analysis makes it possible, at your fingertips, to gain the competitive advantage of being on track for the field staffs of Pharma, Animal Health and BayCare.

- They are total 11 outputs in the project.

Chemist Visit

In Detail Chemist Visit
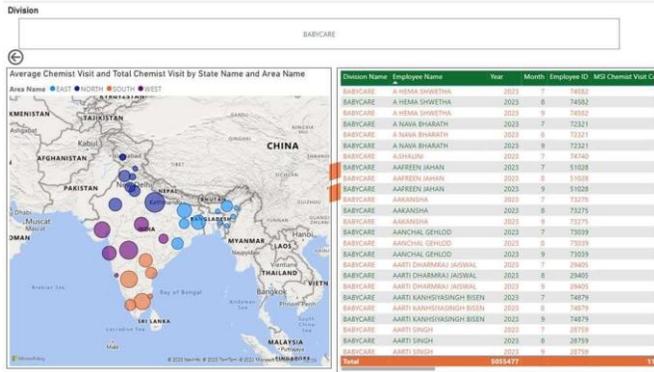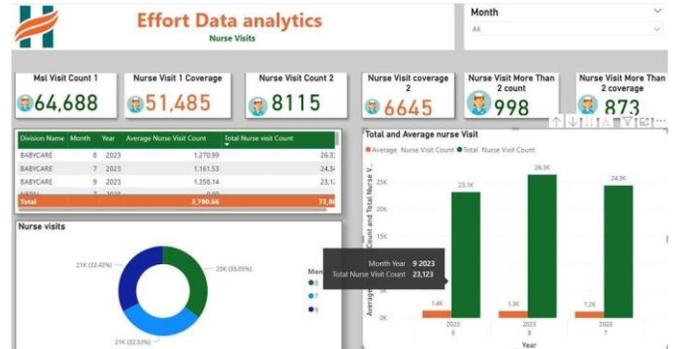
Doctor Visit
In Detail Doctor Visit

Maternity
Home Visits

Nurse Visits
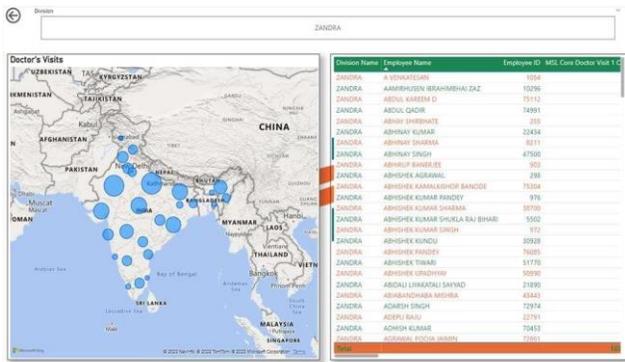
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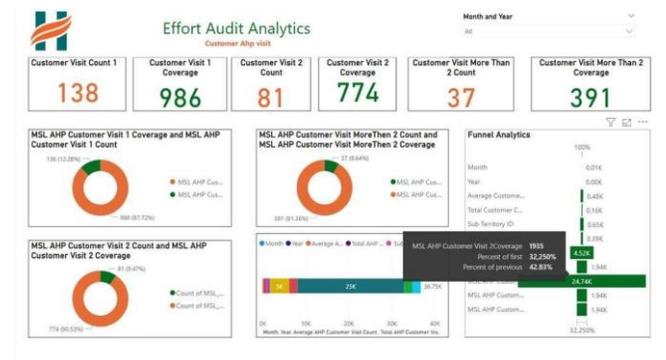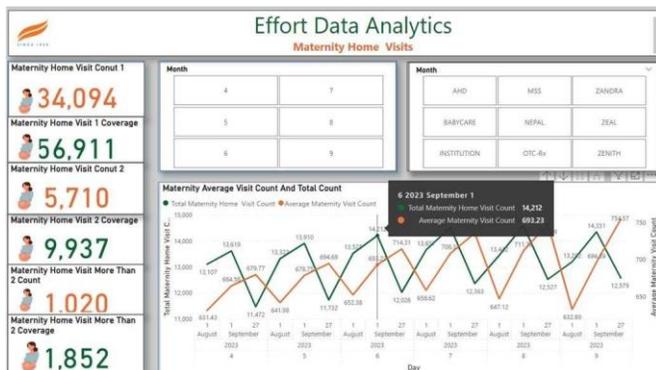
X Conclusion

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