IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 9, June 2022
Impact Factor: 6.252

A Comparative Study of Data Storage in Retail Management with Traditional Databases V/S Real Time Database

Urmi Raju Raje
Student, Masters in Computer Application
Late Bhausaheb Hiray S.S. Trust's Institute of Computer Application, Bandra (E.) Mumbai, India

Abstract: *A real-time database is a database system which uses real-time processing to handle workloads whose state is constantly changing. This differs from traditional data containing persistent data, mostly unaffected by time. The graphs of the different markets appear to be very unstable and yet a database has to keep track of current values for all of the markets of the New York Stock Exchange. Real-time processing means that a transaction is processed fast enough for the result to come back and be acted on right away. Real-time databases are useful for accounting, banking, law, medical records, multi-media, process control, reservation systems, and scientific data analysis. For example, a stock market changes very rapidly and is dynamic. Traditional data is structured, relational data organizations have been storing and processing for decades. Traditional data still accounts for the majority of the world's data.*

Keywords: Databases curricula; SQL; structured query language; Big Data

I. INTRODUCTION

1.1 Background

Retail is the link between manufacturers and end-users, as well as the lifeline of any manufacturing industry. Without retailers, getting products to the end-users is simply impossible.

However, retail can be quite a thankless gig. Building a brand as a retailer is very hard because of the simple fact that you do not own the products you sell. When you sell a product and performs well, the manufacturer gets the praise, not the retailer.Also, the retail industry is crowded. For every manufacturer, there are thousands, maybe tens of thousands of retailers, making the industry very competitive. You can't survive as a retailer by merely selling products. You need a way to get an edge over your competitor and that is where retail analytics comes in.

1.2 Aim and Objective

This paper aims to build a comparative study of different database approaches. To an provide a deeper analysis of market. The best example for a traditional database is The Structured Query language (SQL) which is the most extensively used database language. SQL is composed of a data definition language (DDL), which allows the specification of database schemas; a data manipulation language (DML), which sup- ports operations to retrieve, store, modify and delete data; and a data control language (DCL), which enables database administrators to configure security access to databases. Among the most important reasons for SQL's wide adoption are that it is primarily a declarative language, that is, it specifies the logic of a program (what needs to be done) instead of the control flow (how to do it); (2) it is relatively simple to learn and understand because it is declarative and uses English statements; software that enables developers to develop iOS, Android and Web apps. Firebase provides tools for tracking analytics, reporting and fixing app crashes, creating marketing and product experiment.

1.3 Motivation

Traditional data is structured, relational data organizations have been storing and processing for decades. Traditional data trends and consumer behavior. Traditional data analysis can be more narrow and too restricted to deliver the meaningful insights big data can provide. Provides insights faster. Organizations can learn from big data in real time. In the context of big data analytics, this can provide a competitive edge. Is more efficient. The increasingly digital nature

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 9, June 2022
Impact Factor: 6.252

of our society means people and businesses are generating vast quantities of data every day—and even every minute. Big data allows us to harness this data and interpret it in a meaningful way. Requires advanced preparation. To leverage these benefits, organizations need to prepare for big data through new security protocols, configuration steps, and increases in available processing power. The rise of big data doesn't mean that traditional data is going away.

Approach: SQL

Can be easier to secure, which may make it preferable for highly sensitive, personal, or confidential data sets. Because traditional data is smaller, it doesn't require distributed architecture and is less likely to require third-party storage. Can be processed using conventional data processing software and a normal system configuration. Processing big data generally requires a higher-configuration setup, which can increase re- source usage and costs unnecessarily when traditional data methods will suffice. Is easier to manipulate and interpret. Because traditional data is simpler and relational in nature, it can be processed using normal functions and may even be accessible to non experts. Ultimately, this isn't a question of choosing between big data and traditional data. As more and more companies generate large, unstructured datasets, they'll need the right tools in place. Understanding how to use and support both models is a necessary part of updating your strategy to be ready for a big data future.

Approach: Real-Time Database: Firebase

Term real time is little confusing but indeed Firebase (a real-time database example) is very different from normal databases. There are two main differences. First is the way it stores data and another is the way we access it. In normal database when data at back end get updated we need to refresh our browser or android app in order to get updated data, on other hand in firebase we don't even need to refresh the page. Changes done from any other client browser will reflected to all connected clients without making any server side call.

II. LITERATURESURVEY

2.1 Real-Time Analytical Processing with SQL Server

Authors: Per-ÅkeLarson, Adrian Birka, Eric N. Hanson, Weiyun Huang, Michal Nowakiewicz, Vassilis Papadimos

In this paper, they have studied about the SQL server that is about the traditional database. They have explored various functions and analyzed the outputs recieved on different levels.

2.2 SQL in Big Data Analysis

Authors: Isadora Almeida Arizona State University isil- vaal@asu.edu Michell Queiroz

In this paper, they have studied about the SQL nature in big data that is about the real time database. They have explored various functions and analyzed the outputs received on different levels.

III. DESIGN

3.1 Architecture of MySQL

MYSQL is a relational database with a layered kind of architecture. The layers of the architecture include a server resource end at the middle, the storage engine at the bottom, and the client-end or query execution end at the top. It's a three-layered architecture database system. The architecture of the database explains the relation- ship and interaction between the client-end, serv end, and storage-end of the system. Below are the various layers of the database system. The client-end of the MYSQL architecture is the part being interacted with by end-users of the database system. The user makes use of the graphic user interface screen or the command prompt for submission of various MYSQL commands to the server end. The server-end of the architecture comprises the logic of the database system. It is the brain of the MYSQL architecture. It receives every request sent by the client-side and also returns feedback upon processing every request.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 9, June 2022
Impact Factor: 6.252

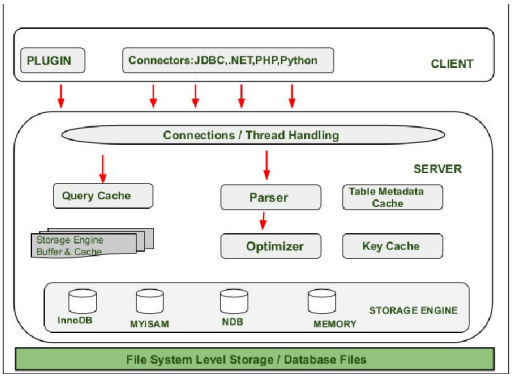

Fig. 1: MySql

3.2 Architecture Firebase

Firebase provides easy-to-use workflows common to many apps. Examples include onboarding flow, customizing the ”welcome back” screen, progressively rolling out new features, following the user journey across devices, adding chat to your app, optimizing ads based on user behaviour, enabling users to share and resize photos, processing third-party payments, and more. These typically involve significant development on the server side. Instead, Firebase offers out-of-the-box and easily deployable solutions to dothese. As developers, you don’t have to worry about server-side software. Mobile and web SDKs enable this. The main offering is real-time sync of data between client apps and Firebase via Realtime Database and Cloud Firestore. Using Authentication, user authentication feature is easy to build, even if it involves third-party providers such as Facebook or Twitter. Messaging and notifications are efficiently done using Firebase Cloud Messaging (FCM). Unlike native apps updated via app stores, Remote Config can update Firebase apps without asking users to update their installation. Using Crashlytics and Performance Monitoring app stability and performance can be improved. There’s good integration with Adwords and Admob. Even UI testing across multiple devices is simplified via TestLab.

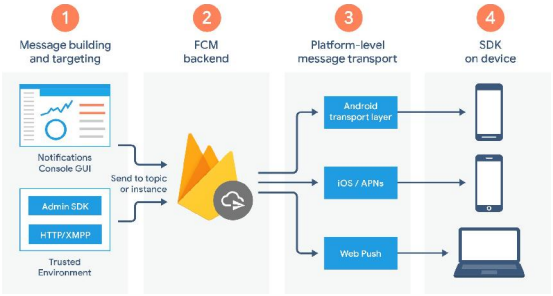

Fig. 2: Firebase- Database

IV. CONCLUSION

In this paper, we have analysed various issues and solutions for the real time data base systems and traditional databases. Though, every system has its drawback, none of the can be completely replaced by another. While real time databases provides insights immediately reaction time and reduces risk, It democratizes your data, 360-degree view of your customers, and encourages you to make business processes more efficient. Traditional databases help Data Accuracy, Easy Access to Data, Data Integrity, Flexibility, Normalization, High Security, Feasible for Future Modifications

REFERENCES

[1]. R. Dhiman, A. Basral, and Jaswanti, “A new android application(breeze) for college management system,” in2019 3rd International Conference on Computing Methodologies and Communication (IC-CMC), pp. 1–3, 2019.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 9, June 2022
Impact Factor: 6.252

[2]. R. M. Sharma, "Online) research review international journal of multi- disciplinary march-2019 www.rrjournals.com," p. 4, 03 2019

[3]. Nivedita V.R, Thuraiyur Vanathan Ananthan, Dahlia Sam Detect and Classify Zero Day Malware Efficiently In Big Data Platform