DATABASE TECHNOLOGIES

EMERGING TECHNOLOGIES

(TECH8020)
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ASSIGNMENT - 2

SUBMITTED BY:

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RELATIONAL DATABASE

INTRODUCTION:

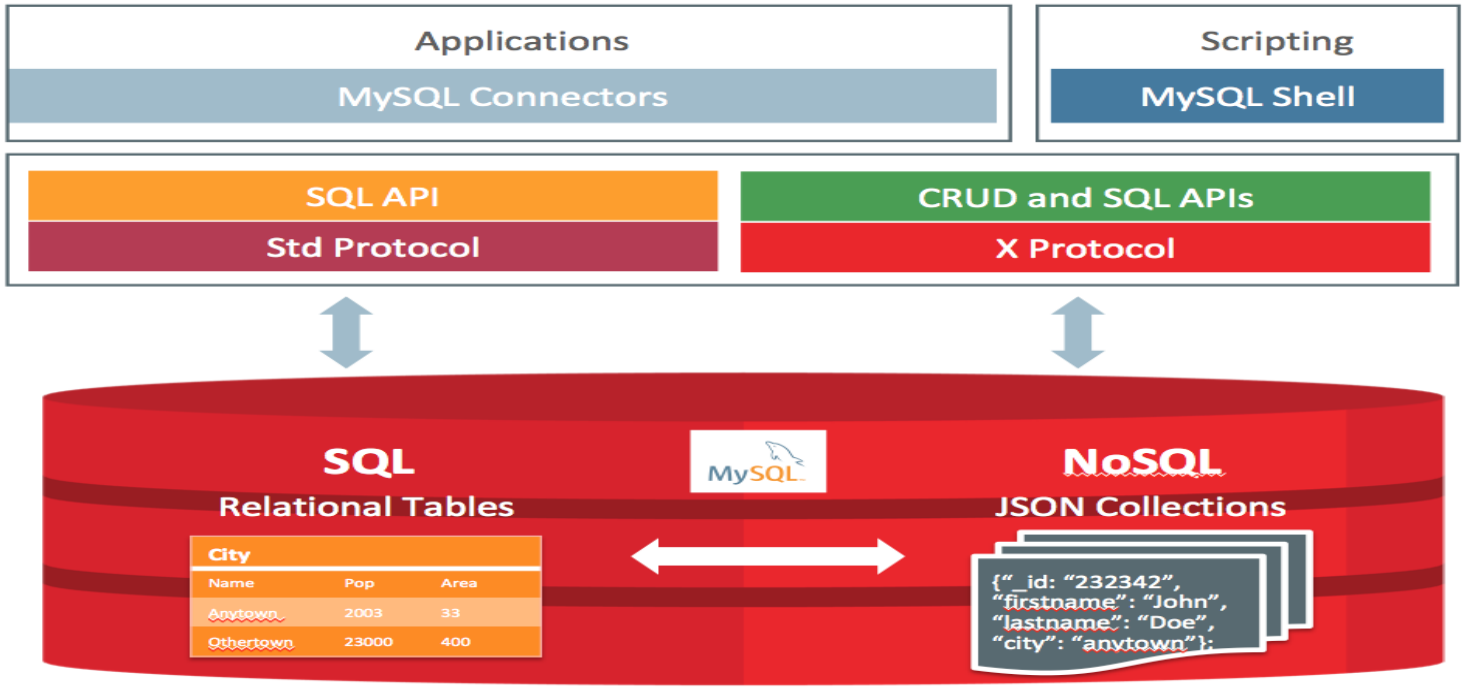
In olden days we used to store the data or information in books like records they were the only source of storing an information that time and for any kind of services for many companies or organizations or small stores etc., for instance the notes we write on the books in our classroom is a functioning like data-collection center or database. But you could ask me why we need a database technology. As the technology advanced the computers are everywhere and the data is everywhere, and its data size is huge which is human beyond capabilities of storing it so to store the data we use the DBMS also knows and **"Database Management System"** with help of this system we can simply play with data as our needs like retrieving, deleting etc.

EXAMPLE APPLICATION:

I am trying to build a website for my new business and after all the factors like its open source and should considered as the best for website and widely used for more support. So, I have chosen Relational (MySQL) DBMS for my website.

Implementing of MySQL Database:

- Firstly, we need to connect to MySQL Server, and we need to access with API key.
- Then, we need to select a database which is available on the MySQL server.
- We need to create the table as per our requirement in that database.
- Now, we can store the data in the table as required in tables, rows, and columns.
- We can retrieve or update or delete our data as per requirement.



Retrieved from Oracle. (n.d.). ***MySQL Document Store architecture*** **[Illustration]. MySQL Document Store.**

https://www.mysql.com/common/images/enterprise/mysql_document_store_architecture.png

CHOSEN DATABASE TECHNOLOGY:

I could choose a Relational SQL Database because all the data is stored all the data is stored in forms of rows, tables and my website are based on business which will have all the different types of information. So, it will be perfect combination and it will give a clear view of storing my data with neat layout and presentation and more importantly with clear differentiation of information which I personally like it and it helps to store data more efficiently and quickly for my business website purpose. When we compare with non-relational Database it has better data accuracy and simplicity and importantly its ACID Compliance. But there few net pickings here like performance is completely depending upon the type of tables and their complexity and scalability.

"MySQL server configuration topics:

- Startup options that the server supports. You can specify these options on the command line, through configuration files, or both.

- Server system variables. These variables reflect the current state and values of the start-up options, some of which can be modified while the server is running.
- Server status variables. These variables contain counters and statistics about runtime operation.

How to set the server SQL mode. This setting modifies certain aspects of SQL syntax and semantics, for example for compatibility with code from other database systems, or to control the error handling for situations." – [N, N. (n.d.). *MySQL 8.0 Reference Manual: 5.1 the mysql server*. MySQL. Retrieved October 28, 2021, fromhttps://dev.mysql.com/doc/refman/8.0/en/mysqld-server.html]

CHOSEN DATABASE SOFTWARE:

I could choose MySQL service among the available resources in the market because of its low price, ACID Compliances and importantly its simplicity by considering all the points makes me sense to use it because it is ticking all the boxes of my requirements and I could choose an open source because you get more control the product and you make the as you required to the database and MySQL is a database its almost in the market its everywhere its very often used by most of the companies or developers.

CONCLUSION:

We learned that it can be used anywhere where there is data and we have go through the implementation steps but, there are many types of database technologies in the market we cannot say which is the best one out of all the options we have because it's completely depends on what we want use it for and where we want to use it of database and every database has its own set of advantages and disadvantages and this technology just keeps evolving in the future and it will be much better, less complicated and great speed and accuracy.

REFERENCE:

Content inspired from: - [N, N. (2021). Relational vs. non-relational databases. MongoDB. Retrieved October 28, 2021, from https://www.mongodb.com/compare/relational-vs-non-relational-databases]

Content inspired from: - [N, N. (n.d.). MySQL 8.0 Reference Manual: 5.1 the mysql server. MySQL. Retrieved October 28, 2021, fromhttps://dev.mysql.com/doc/refman/8.0/en/mysqld-server.html]