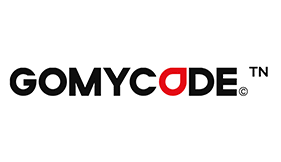
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| **GoMyCode** |
| Introduction to Database Checkpoint |
| MySQL, PostgreSQL and SQL SERVER |

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| **2020/2021** |



***Elaboré par***

*Rahma Ismail*

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14. **MySQL**
15. **What is MySQL?**

MySQL is the world's most popular open-source database used **RDBMS** (Relational DataBase Management Systems). Whether you are a fast-growing web property, technology ISV or large enterprise.

MySQL is used in high-profile, large-scale World Wide Web products, including Wikipedia, Google, Facebook and Twitter.

It is the most popular choice of database for use in web applications. It is written in C and C++ and it works on many different system platforms, including Linux, Mac OS X, Solaris, etc.

1. **Why MySQL** **?**

MYSQL has proven itself to be fast, reliable and cost effective to other competitors such as MS SQL Server and Oracle. It is free and developers can amend its code to suit their requirements, which makes MYSQL highly customizable.

1. **MySQL advantages:**

* Open source and fast development
* Scalability and flexibility
* Performance and availability
* Transaction support and security

1. **PostgreSQL**
2. **What is PostgreSQL?**

PostgreSQL is one of the main **RDBMS** on the market. It is a powerful, open-source object-relational database system with over 30 years of active development that has earned it a strong reputation for reliability, feature robustness, and performance.

1. **Why PostgreSQL?**

PostgreSQL allows you to store large and sophisticated data safely. It helps developers to build the most complex applications, run administrative tasks and create integral environments.

1. **PostgreSQL advantages:**

* Robustness
  + Features
  + Extensibility
  + Ecosystem
  + Documentation
  + Very good SQL compatibility

1. **SQL Server**
2. **What is SQL Server?**

SQL Server is a relational database management system, or **RDBMS**, developed and marketed by Microsoft. Similar to other RDBMS software, SQL Server is built on top of SQL, a standard programming language for interacting with the relational databases.

1. **Why SQL Server?**

Microsoft provides both data management and business intelligence (BI) tools and services together with SQL Server.

With built-in transparent data compression and encryption features, SQL server offers enhanced performance. To secure and encrypt the data, users need not modify programs. SQL Server provides efficient permission management tools with access controls designed to help users secure sensitive business information.

1. **SQL Server advantages:**

* Enhanced performance
* Several SQL Server editions
* Highly secure
* Excellent Data Restoration and Recovery Mechanism
* Lower cost of ownership

1. **Comparison between the three RDBMS**

A relational database is a set of tables (datasets with rows and columns) that contain information relating to other tables in the database.

PostgreSQL and MySQL use very similar syntax, with some notable differences highlighted below. Microsoft SQL Server has the greatest contrast in SQL syntax, as well as a wide variety of functions not available in other platforms. The table below highlights some examples of basic differences between SQL platforms.

|  |  |  |  |
| --- | --- | --- | --- |
|  | MySQL | PostgreSQL | SQL Server |
| SELECT ... | SELECT col1, col2 | SELECT col1, col2 | Select [col1], [col2] |
| Data from tables is case sensitive? | No WHERE name = ‘John’ Or WHERE name = ‘john’ are the same | Yes WHERE name = ‘John’ Or WHERE name = ‘john’ are not the same | Yes WHERE name = ‘John’ Or WHERE name = ‘john’ are not the same |
| Using quotation marks | name = ‘John’ or name = “john” | name = ‘John’ only | name = ‘John’ only |
| Aliases for columns and tables | SELECT AVG(col1) AS avg1 | SELECT AVG(col1) AS avg1 | SELECT AVG(col1)=avg1 |
| Working with dates | CURDATE() CURTIME() EXTRACT() | CURRENT\_DATE() CURRENT\_TIME() EXTRACT() | GETDATE() DATEPART() |
| Window functions i.e., OVER(), PARTITION BY() | Yes | Yes | Yes |