Definition of RDBMS:

Though not strictly based on relational theory, RDBMS is a product that showcases data arranged as a collection of rows and columns. And these RDBMS products follow some of the Codd's 12 rules.
With an RDBMS, it is possible to embed a collection of programs or capabilities, enabling IT and other related teams to create, edit, update, manage and interrelate with a relational database.
Structured query language (SQL) is implemented by most commercial RDBMS systems for accessing the database. Some experts are of the opinion that RDBMS can run by itself without the intervention of SQL as it was developed after the introduction of the relational model.

MySQL:

- **Popularity and ease of use**: As one of the world's most popular database systems, there's no shortage of database administrators who have experience working with MySQL. Likewise, there's an abundance of documentation in print and online on how to install and manage a MySQL database, as well as a number of third-party tools — such as phpMyAdmin — that aim to simplify the process of getting started with the database.
- **Security**: MySQL comes installed with a script that helps you to improve the security of your database by setting the installation's password security level, defining a password for the **root** user, removing anonymous accounts, and removing test databases that are, by default, accessible to all users. Also, unlike SQLite, MySQL does support user management and allows you to grant access privileges on a user-by-user basis.
- **Speed**: By choosing not to implement certain features of SQL, the MySQL developers were able to prioritize speed. While more recent benchmark tests show that other RDBMSs like PostgreSQL can match or at least come close to MySQL in terms of speed, MySQL still holds a reputation as an exceedingly fast database solution.
- **Replication**: MySQL supports a number of different types of *replication*, which is the practice of sharing information across two or more hosts to help improve reliability, availability, and fault-tolerance. This is helpful for setting up a database backup solution or *horizontally scaling* one's database.

PostgreSQL:

- **SQL compliance**: More so than SQLite or MySQL, PostgreSQL aims to closely adhere to SQL standards. According to the official PostgreSQL documentation, PostgreSQL supports 160 out of the 179 features required for full core SQL:2011 compliance, in addition to a long list of optional features.
- **Open-source and community-driven**: A fully open-source project, PostgreSQL's source code is developed by a large and devoted community. Similarly, the Postgres community maintains and contributes to numerous online resources that describe how to work with the DBMS, including the official documentation, the PostgreSQL wiki, and various online forums.
- **Extensible**: Users can extend PostgreSQL programmatically and on the fly through its catalog-driven operation and its use of dynamic loading. One can designate an object code file, such as a shared library, and PostgreSQL will load it as necessary.

SQLite:

- **Small footprint**: As its name implies, the SQLite library is very lightweight. Although the space it uses varies depending on the system where it's installed, it can take up less than 600KiB of space. Additionally, it's fully self-contained, meaning there aren't any external dependencies you have to install on your system for SQLite to work.
- **User-friendly**: SQLite is sometimes described as a "zero-configuration" database that's ready for use out of the box. SQLite doesn't run as a server process, which means that it never needs to be stopped, started, or restarted and doesn't come with any configuration files that need to be managed. These features help to streamline the path from installing SQLite to integrating it with an application.
- **Portable**: Unlike other database management systems, which typically store data as a large batch of separate files, an entire SQLite database is stored in a single file. This file can be located anywhere in a directory hierarchy, and can be shared via removable media or file transfer protocol.