The listed features will be considered a priority to my boss for this phase of the project.

Evaluating the following databases against the criteria where 1 is not very important, and 5 is very important.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Database  Back-end | Ease to configure | Performance | Cross-Platform Compatibility | Ease of Backup to USB | Python Compatibility |
| Importance | 5 | 5 | 4 | 5 | 5 |
| MSSQL | 2 | 4 | 2 | 2 | 3 |
| Oracle | 2 | 4 | 2 | 2 | 3 |
| SQLite | 5 | 5 | 5 | 5 | 5 |
| MySQL (or MariaDB) | 4 | 4 | 4 | 4 | 5 |
| PostgreSQL | 3 | 3 | 5 | 3 | 5 |
| Microsoft Access | 4 | 2 | 3 | 4 | 5 |
| LibreOffice Base | 5 | 2 | 5 | 5 | 2 |

The rating of the database in the example is calculated based on the scores given for each criterion:

Rating for Each Database:

MSSQL: 13

Oracle: 13

SQLite: 25

MySQL (or MariaDB): 21

PostgreSQL: 19

Microsoft Access: 18

LibreOffice Base: 19

Calculation:

MSSQL: 2 \* 5 + 4 \* 5 + 2 \* 4 + 2 \* 5 + 3 \* 5 = 10 + 20 + 8 + 10 + 15 = 63

Oracle: 2 \* 5 + 4 \* 5 + 2 \* 4 + 2 \* 5 + 3 \* 5 = 10 + 20 + 8 + 10 + 15 = 63

SQLite: 5 \* 5 + 5 \* 5+ 4 \* 5 + 5 \* 5 + 5 \* 5 = 25 + 25 + 20 + 25 + 25 = 120

MySQL (or MariaDB): 4 \* 5 + 4 \* 5 + 4 \* 4 + 4 \* 5 + 5 \* 5 = 20 + 20 + 16 + 20 + 25 = 101

PostgreSQL: 3 \* 5 + 3 \* 5 + 5 \* 4 + 3 \* 5 + 5 \* 5 = 15 + 15 + 20 + 15 + 25 = 90

Microsoft Access: 4 \* 5 + 2 \* 5+ 3 \* 4+ 4 \* 5 + 5\* 5 = 20 + 10 + 12 + 20 + 25 = 87

LibreOffice Base: 5 \* 5 + 2 \* 5 + 5 \* 4 + 5 \* 5 + 2 \* 5 = 25 + 10 + 20 + 25 + 10 = 90

Based on the calculated scores, SQLite is the most suitable database for the feasibility phase of the project, meeting the criteria most effectively. It offers a good balance between ease of setup, performance, cross-platform compatibility, ease of backup, and compatibility with Python, all while keeping the cost in mind.