**Topic Challenge - Module 6D - Understanding Database Options**

Instructions

Your boss calls you into a meeting. She tells you about a new project that is about to begin. It needs a database back-end, and she would like you to do some research to figure out which database is the best solution. She says that the first phase of the project is just to test feasibility, so they need a very simple, fast solution that doesn’t need a lot of setup or special hardware/software to get going. It needs to be cross platform but doesn’t require any special network access. She says for the feasibility phase, only one user will be accessing the database from their computer. She says it needs to be easy to backup to a usb stick so it can be copied from one computer to another. Cost is of utmost importance during this first phase of this project. It’s ok if the database backend is replaced with something else in later phases, once all the requirements have been worked out. Oh, and one last thing, it needs to be compatible with Python, since that’s what will be used throughout this project.

Given the above information, make a list of features (criteria) that are important to your boss for this phase of the project. Rank how important each criteria is, where 1 is not very important, and 5 is very important. Show your criteria and the rank you assigned each one.

Evaluate the following databases against your criteria:

* *MSSQL*
* *Oracle*
* *SQLite*
* *MySQL (or MariaDB)*
* *PostgreSQL*
* *Microsoft Access*
* *LibreOffice Base*

Rate each database against the criteria, where 0 means it doesn’t meet the criteria at all, and 5 meets the criteria extremely well. Show your rating for each database, against each criteria.

Multiply your numbers and add them up, just like the class example. Find which database should work the best for this phase of the project and state your findings.

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| **Criteria** | **Importance (1-5)** | **MSSQL** | **Oracle** | **SQLite** | **MySQL** | **PostgreSQL** | **Microsoft Access** | **LibreOffice Base** |
| **Easy of Setup** | 4 | 3 | 2 | 5 | 4 | 4 | 4 | 4 |
| **Speed** | 5 | 3 | 3 | 5 | 4 | 4 | 2 | 2 |
| **Cross-platform** | 5 | 3 | 2 | 5 | 4 | 5 | 2 | 2 |
| **No Special hardware/ software** | 5 | 3 | 3 | 5 | 5 | 5 | 5 | 5 |
| **Single User Access** | 5 | 4 | 4 | 5 | 5 | 5 | 3 | 3 |
| **Easy backup and Transfer** | 4 | 3 | 3 | 5 | 4 | 4 | 2 | 2 |
| **Cost** | 5 | 2 | 1 | 5 | 4 | 5 | 4 | 4 |
| **Python compatibility** | 5 | 4 | 4 | 5 | 5 | 5 | 3 | 3 |
| **Total** |  | 119 | 105 | 190 | 167 | 177 | 119 | 119 |

Based on the table’s score, SQLite has the highest total score of 190, so it seems to be the most suitable choice for my boss's needs. I will recommend using SQLite for the project’s first phase.