Assignment 6D

A close-up of a document

Description automatically generated

**The criteria and their importance are:**

Ease to setup / low requirement: 4

Networkable: 0 (It doesn’t require any special network access)

Ease of backup: 3

Cost-effectiveness: 5

Python compatibility: 4

Then we rate each database on these criteria:

**MSSQL:**

Ease to setup / low requirement: 3 (moderate requirements and setup complexity)

Networkable: 0

Ease of backup: 3 (back-up can be a little complex for beginners)

Cost-effectiveness: 2 (can be costly)

Python compatibility: 3

Overall score: (3 \*4) + 0 + (3 \* 3) + (2 \* 5) + (3 \* 4) = 43

**Oracle:**

Ease to setup / low requirement: 2 (Hard to set up, and with extra requirement)

Networkable: 0

Ease of backup: 2 (More complex than SQL Lite and others)

Cost-effectiveness: 1 (High license costs)

Python compatibility: 3 (Probably configuration needed)

Overall score: (2 \* 4) + 0 + (2 \* 3) + (1 \* 5) + (3 \* 4) = 31

**SQLite:**

Ease to setup / low requirement: 5

Networkable: 0

Ease of backup: 5

Cost-effectiveness: 5

Python compatibility: 5

Overall score: (5 \* 4) + 0 + (5 \* 3) + (5 \* 5) + (5 \* 4) = 80

**MySQL (or MariaDB):**

Ease to setup / low requirement: 4

Networkable: 0

Ease of backup: 4 (They offer backup and restore functionality)

Cost-effectiveness: 4 (Open source)

Python compatibility: 4

Overall score: (4 \* 4) + 0 + (4 \* 3) + (4 \* 5) + (4 \* 4) = 64

**PostgreSQL:**

Ease to setup / low requirement: 4

Networkable: 0

Ease of backup: 4 (provides robust backup and restore features, though it might require slightly more effort compared to SQLite.)

Cost-effectiveness: 4 (open source and free to use)

Python compatibility: 5

Overall score: (4 \* 4) + 0 + (4 \* 3) + (4 \* 5) + (5 \* 4) = 68

**Microsoft Access:**

Ease to setup / low requirement: 4

Networkable: 0

Ease of backup: 4

Cost-effectiveness: 3 (Windows license or Microsoft license needed)

Python compatibility: 1 (Does not have native support for python)

Overall score: (4 \* 4) + (0 \* 0) + (4 \* 3) + (3 \* 5) + (1 \* 4) = 47

**LibreOffice Base:**

Ease to setup / low requirement: 5

Networkable: 0

Ease of backup: 4 (It has function to copy the database)

Cost-effectiveness: 5

Python compatibility: 3 (LibreOffice Base itself doesn't have direct Python support)

Overall score: (5 \* 4) + (0 \* 0) + (4 \* 3) + (5 \* 5) + (3 \* 4) = 69

| **Criteria** | **MSSQL** | **Oracle** | **SQLite** | **MySQL/MariaDB** | **PostgreSQL** | **Microsoft Access** | **LibreOffice Base** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Ease of Setup / Low Requirement | 12 | 8 | 20 | 16 | 16 | 16 | 20 |
| Networkable | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ease of Backup | 9 | 6 | 15 | 12 | 12 | 12 | 12 |
| Cost-effectiveness | 10 | 5 | 25 | 20 | 20 | 15 | 25 |
| Python Compatibility | 12 | 12 | 20 | 16 | 20 | 4 | 12 |
| **Sums** | 43 | 31 | 80 | 64 | 68 | 47 | 69 |

In conclusion, **SQLite is the best option.**