Assignment 3

→ **Aim :**

Study the SQLite database and its uses & installation

→ **Problem Statement :**

1. Study the SQLite database & its uses
2. Elaborate on building and installing SQLite.

→ **Objective :**

1. To study SQLite database and its uses.
2. To study installation & configuration of SQLite database.

→ **Theory :**

A] **SQLite :**

a. SQLite is a self-contained, high-reliability, embedded, full-featured, public-domain, SQL-database engine. SQLite is the most used database in the world.

b. SQLite is a relational database management system contained in

a C programming library. In contrast to many other database management systems, SQLite is not a client-server database engine. Rather, it is embedded into the end program.

c. SQLite is ACID-compliant and implements most of SQL standards, using a dynamically & weakly typed SQL syntax that does not guarantee domain integrity

d. SQLite is a popular choice as an embedded database software for client/local storage in application software such as web browsers. It is arguably the most widely deployed database engine, as it is used today by several widespread browsers, operating systems, and embedded systems (such as mobile phones), among others.

B] Installing SQLite:

1. Type the following command:

```
$ sudo apt-get install sqlite3
                       libsqlite3-dev
```

2. After installation check installation, sqlite terminal will give you a

prompt and version info.

$ sqlite3

SQLite version 3.8.2 2013-12-06 14:54:20
Enter ".help" for instructions
sqlite>

3. To quit

sqlite> .quit.

4. Go to desired folder & create database

$ sqlite3 database_name.db

* It will create database_name.db in the folder you have given the command.

5. To check whether the database has been created give the following command in sqlite3.

$ sqlite> .databases.

c] Uses of SQLite :

a. Client/Server SQL databases strive to implement a shared repository of enterprise data. They emphasize on scalability, concurrency centralization & control. SQLite strives to provide efficiency, reliability, independence and simplicity.

b. SQLite does not compete with client/server databases.

- Embedded devices & IOT
- Application file format
- Websites.
- Data Analysis
- Cache for enterprise data
- server-side database
- file archives
- Replacement for ad-havoc disk files
- Internal or temporary databases.
- Stand-in for enterprise database during demos or testing
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- Education & Training
- Experimental SQL language extensions.

→ Conclusion :

1. Study of installation steps of SQLite database.
2. Study of configuration of SQLite database.
3. To understand various uses of SQLite database.