Theory Exercise

ANS - 1 :

In Flutter, there are different ways to store data on a user's device, and each option is suited for different types of data.

- **`shared_preferences`** is used to store small and simple data like user settings, login status, or app theme (dark/light mode). It works like a key-value store where you save and retrieve values like strings, booleans, or integers.

- **`SQLite`** is a database used when you need to store structured data in tables, like a list of users, tasks, or products. It uses SQL queries to manage data and is useful when you need relationships between different sets of data.

- **`Hive`** is a lightweight and fast NoSQL database. It's great for storing large amounts of unstructured or object-like data such as messages, notes, or offline data. Hive is especially good for Flutter apps because it’s very fast and doesn't require writing SQL.

ANS - 2 :

CRUD stands for Create, Read, Update, and Delete — these are the basic operations you can perform on data.

In **SQLite**, you use SQL commands. For example, you can insert data into a table to create a new record, select data from a table to read it, update data in a table to change it, and delete data when it's no longer needed.

In **Hive**, you use boxes, which act like key-value maps. You can add a new entry using a key (create), get a value using its key (read), update the value by putting a new one with the same key (update), and remove it by calling the delete method (delete).

So, both systems let you do CRUD, but SQLite uses SQL language and tables, while Hive works more like saving and loading objects in a simple way.

ANS - 3 :

`shared_preferences` is very useful when you just want to store small, simple bits of information — like whether the user is logged in, which theme they selected, or the last screen they visited. It's not meant for storing large or complex data, but it's perfect for basic settings and flags.

The advantage of `shared_preferences` is that it's easy to use and doesn't require setting up a full database. It's fast, straightforward, and works well for saving things that don't change often and don't need complex structure.