

## Data manipulation through sql Points to Remember

- ❖ A database is an organized collection of data.
- ❖ Users of database can be human users, other programs or applications
- ❖ SQLite is a simple relational database system, which saves its data in regular data files.
- ❖ Cursor is a control structure used to traverse and fetch the records of the database. All the SQL commands will be executed using cursor object only.
- ❖ As data in a table might contain single or double quotes, SQL commands in Python are denoted as triple quoted string.
- ❖ “Select” is the most commonly used statement in SQL
- ❖ The SELECT Statement in SQL is used to retrieve or fetch data from a table in a database
- ❖ The GROUP BY clause groups records into summary rows
- ❖ The ORDER BY Clause can be used along with the SELECT statement to sort the data of specific fields in an ordered way
- ❖ Having clause is used to filter data based on the group functions.
- ❖ Where clause cannot be used along with ‘Group by’
- ❖ The WHERE clause can be combined with AND, OR, and NOT operators

- ❖ The 'AND' and 'OR' operators are used to filter records based on more than one condition
- ❖ Aggregate functions are used to do operations from the values of the column and a single value is returned.
- ❖ COUNT() function returns the number of rows in a table.
- ❖ AVG() function retrieves the average of a selected column of rows in a table.
- ❖ SUM() function retrieves the sum of a selected column of rows in a table.
- ❖ MAX() function returns the largest value of the selected column.
- ❖ MIN() function returns the smallest value of the selected column
- ❖ sqlite\_master is the master table which holds the key information about your database tables.
- ❖ The path of a file can be either represented as '/' or using '\\' in Python. For example the path can be specified either as 'c:/pyprg/sql.csv', or c:\\pyprg\\sql.csv'.