WORKSHEET 6 SQL

1. A. Commit ,B. Select, C. Rollback, D. Savepoint\

2. A. Create, C. Drop, D. Alter

3. D. SELECT # FROM SALES;

4. D. None of the above

5. C. String

6. B. COMMIT

7. A. Parenthesis - (...).

8. C. TABLE

9. D. All of the mentioned

10.A. ASC

11.Denormalization is the process of intentionally adding redundant data to a database to improve performance by reducing the number of joins required to retrieve data. It involves breaking the rules of normalization by storing duplicate data in one or more tables to avoid complex queries and improve query performance.

In a normalized database, data is organized into tables that have a clear relationship to one another. The goal of normalization is to minimize redundancy and eliminate data anomalies by breaking down tables into smaller, more specific tables that store related data.

However, normalization can sometimes lead to a large number of tables with many foreign key relationships, which can slow down queries that require multiple joins. Denormalization can help to reduce the complexity of these queries by storing redundant data in a table that is used frequently, so that the joins are not needed.

While denormalization can improve query performance, it can also lead to data inconsistencies and increased storage requirements. It is therefore important to carefully consider the trade-offs between normalization and denormalization when designing a database, and to use denormalization judiciously to achieve the desired performance gains without sacrificing data integrity.

12.A database cursor is a mechanism that allows traversal over the rows of a result set from a database query. It is a database object that is used to control the position of a pointer that selects a single row of data from a result set at a time.

The cursor is typically used in programming languages that interact with databases, such as SQL, to perform database operations that require processing one row at a time. Cursors provide a way to read or modify data sequentially, one row at a time, and can be used to iterate over a result set, update or delete specific rows, or perform other types of operations.

There are two types of cursors: static and dynamic. Static cursors are created when a query is executed and hold the result set in memory, while dynamic cursors fetch data from the database as needed. Cursors can also be sensitive or insensitive to changes made to the underlying data, and can have different modes for locking rows during updates or deletes.

Cursors can be useful in situations where processing each row of a result set is a complex task, or where the data being processed is too large to fit into memory all at once. However, cursors can also have performance implications and should be used judiciously to avoid unnecessary overhead.

13.In SQL, there are four main types of queries:

SELECT queries: SELECT queries are used to retrieve data from one or more tables in a database. They allow you to specify which columns to retrieve, which tables to query, and any filtering or sorting criteria to apply.

INSERT queries: INSERT queries are used to add new rows of data to a table in a database. They allow you to specify the values for each column in the new row.

UPDATE queries: UPDATE queries are used to modify existing data in a table in a database. They allow you to specify which rows to update and which values to set for each column.

DELETE queries: DELETE queries are used to remove existing rows of data from a table in a database. They allow you to specify which rows to delete based on certain conditions.

14.In the context of databases, a constraint is a rule or restriction that is applied to data in a table to maintain the integrity, accuracy, and consistency of the data. Constraints are used to ensure that the data in a table conforms to certain rules or conditions, and to prevent invalid or inconsistent data from being stored.

15.Auto increment is a feature in a database management system that allows a unique, numeric value to be automatically generated and assigned to a column in a table each time a new row is inserted into the table. This feature is typically used with primary key columns to ensure that each row in the table has a unique identifier.

When a column is set to auto increment, the database management system automatically generates a new value for the column each time a new row is inserted into the table. The values are generated in sequential order, starting from a specified initial value (often 1), and incrementing by a specified amount (often 1) for each new row.

Auto increment is a useful feature in database design because it ensures that each row in a table has a unique identifier, which can be used to reference that row from other tables or in queries. It also simplifies the process of inserting new rows into the table, as the database management system takes care of generating the unique identifier automatically.