Chapter 6 Query

* select statement – pg. 115
  + The basic statement for retrieving information
* where clause – pg. 117
  + if the Boolean expression is true, then the row is returned (information is shown)
* Boolean Operators – pg. 119
  + Return True or false.
* Null Clause – pg. 124
  + Unknown or not applicable value.
* Like Operators – pg. 126
  + use for pattern matching. Compares column values with a specified pattern. Wild card character “% \_ “
* Group by Clause – pg. 129
  + one or more columns as a group such that any values in the rows will be the same.
* Aggregate Functions – pg. 130
  + used to get summary values. The result is a constant value, which is displayed in a separate column of the result.
  + Different Groups

• Convenient aggregate functions

• Statistical aggregate functions

• User-defined aggregate functions

• Analytic aggregate functions

* Order by clause – pg. 136
  + shows a particular order of the rows in the results.
* Sub query – pg. 149
  + secondary query within the main query. Can be used on SELECT, INSERT, UPDATE, and DELETE Statements
* Temp Local vs Temp Global – pg. 152
  + Temp Local Tables is created and visible onto the session.
  + Temp Global Table are visible to any user and connection after they are created.

Chapter 7 Modify Tables

* Insert statement- pg. 177
  + inserts rows into a table
* Update statement – pg. 182
  + modifies values within a table row
* Delete statement – pg. 184
  + deletes rows from a table
* Truncate statement – pg.186
  + deletes page by page, while Delete deletes row by row. faster
* Merge statement – pg. 186
  + combines INSERT, UPDATE, DELETE into one statement, and syncs tables to a source table.

Chapter 8 Using Defined Functions

* block statement – pg. 194
  + allows building of units with one or more statements. Always starts with BEGIN and ends with END
* If statement – pg. 194
  + executes a statement if true, if false execute a different statement.
* While statement – pg. 195
  + if the Boolean is true, the statement will keep executing until the expression is false.
* Local Variable – pg. 196
  + Variables declared in a batch. Only available to that batch
* Stored procedure – pg. 205
  + Batch statements actually stored in the database as an object

Chapter 9 System Catalogue

* System catalogue – pg. 215
  + A group of tables that describes the structure of the objects in the database
* General interfaces - pg. 217
  + Catalog Views: Accessed using the sys schema
  + DMV's and DMF's: See below
  + Information Schema: see below
* Dynamic Management view/Dynamic management function – pg. 219
  + Returns server stat info that can be used to observe active processes
* What is information schema – pg. 220
  + A read-only view providing information about all tables, views, and columns
* Proprietary interfaces – pg. 221
  + System stared procedures, system functions and property functions

Chapter 10 Indices

* What is an Index? – pg. 225
  + A separate physical data structure that enables queries to access multiple data rows fast
* Clustered Indices – pg. 227
  + An index that determines the physical structure of the data in a table
* Non-Clustered Indices – pg. 228
  + Like Clustered Indices, except
    - does not determine the physical structure
    - Leaf Pages contain an index key plus bookmark (clustered leaf pages contain data pages)
* Altering Indices – pg. 234
  + ALTER INDEX: MSSQL is one of the few that supports it
* Removing/Renaming Indices – pg. 237
  + Resource intensive, all indices will be rebuilt
  + DROP INDEX

Chapter 12 Security system of database 269 272 276 277 283

* Authentication – pg. 269
  + Validation of user's identity
* Database Schemas – pg. 272
  + A collection of database objects that is owned by a single entity, whether it's a user or a group.
* Database Security – pg. 276
  + The process of needing a database account to access the database. Cab be
* What are Roles/ what they allow you to do? – pg.277
  + Allows a person or group of people access to objects in a database
* Concept of Authorization – pg. 283
  + Only authorized users are able to manipulate the database in any reasonable way
    - * Statements to manage authorization
      * GRANT
      * DENY
      * REVOKE