

INTRODUCTION TO SQL

Prepared By: Vipul Vekariya
M.E(Computer)
Gardi College Of Eng. & Tech.
Rajkot.

SQL

- **Structured Query Language**
- **“It is a Language which provides interface to Database system”**
- **Used to Create Database**
- **Used to Modify Database**
- **Used to Manipulate Data in the Database**

History of SQL

- Developed by DR. E.F.Codd in 1970.
- Sponsored by IBM and Known as SEQUEL.
- 1979 Relational Software Inc. released 1st Commercial Version of SQL
- ANSI and ISO developed different standard of SQL
 - SQL-92
 - SQL-99 known as SQL-3

Features of SQL

- Can be used by Range of Users
- English like language so easy to understand by users.
- Non-Procedural language
- Reduces time to Create System.

Rules of SQL

- SQL Statements are start with Verb.(example SELECT)
- Each verb followed by number of clause. Example(FROM, WHERE).
- A space separates clause like DROPTABLE EMP;
- SQL Statements are end with Semicolon(;).
- SQL Parameters are separated by Comma(,).
- Statement may be split across lines but keyword may not.
- Reserved verb can not used as Identifier.
- Identifier must start with Alphabet & should not more than 30 characters.
- Comments may be enclosed between
/* */ symbol.

SQL Delimiter

Symbol	SQL Meaning	Symbol	SQL Meaning
+	Addition	:	Host Variable
-	Subtraction	**	Exponential
*	Multiplication	:=	Assignment
/	Division	=>	Association
= < >	Relational		Concatenation
()	Expression	--	Comment (Single Line)
;	Termination of Statements	/* */	Comment (Multiple Line)
%	Attribute Indicator	<<	Label
,	Comma Separator	>>	
.	Component Selector		
@	Remote access Indicator		
“	Quote Identifier		

Components of SQL

- DDL (Data Definition Language).
- DML (Data Manipulation Language).
- DCL (Data Control Language).
- DQL (Data Query Language).

DDL(Data Defination Language)

- Set of SQL Commands used to Create, Modify & Delete Database Structure.
- It affects only Database not Data of Table.
- Commands normally used by DBA.
- Examples
 - **CREATE,ALTER,DROP,TRUNCATE,COMMENT,GRANT,REVOKE.**

DML(Data Manipulation Language)

- Used to change data in Database
- Affects Data of Database not Structure of Database.
- Example
 - **INSERT,UPDATE,DELETE,CALL,EXPLAIN PLAN, LOCK.**

DCL(Data Control Language)

- Control Access of Data in the Database.
- Group of DML Statements create DCL.
- Example
 - COMMIT
 - SAVEPOINT
 - ROLLBACK
 - GRANT/REVOKE.

DQL(Data Query Language)

- Used to Retrieve Data from Database.
- Used to Sort Data in Ascending or Descending order.
- Example:
 - SELECT