ST. XAVIER’S COLLEGE

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Database Management System

Lab Assignment #8

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# Data Definition Language

Data Definition Language (DDL) is a standard for commands that define the different structures in a database. DDL statements create, modify, and remove database objects such as tables, indexes, and users. The Data Definition Language (DDL) is used to create and destroy databases and database objects. These commands will primarily be used by database administrators during the setup and removal phases of a database project.

## Domain Type in SQL

## Schema Definition in SQL

A schema is a collection of database objects (as far as this hour is concerned—tables) associated with one particular database username. This username is called the schema owner, or the owner of the related group of objects. You may have one or multiple schemas in a database. Basically, any user who creates an object has just created his or her own schema. So, based on a user's privileges within the database, the user has control over objects that are created, manipulated, and deleted. A schema can consist of a single table and has no limits to the number of objects that it may contain, unless restricted by a specific database implementation.

# Data Manipulation Language

## The Select Clause

SQL SELECT statement is used to fetch the data from a database table which returns data in the form of result table. These result tables are called result-sets.

**Syntax:**

The basic syntax of SELECT statement is as follows:

**SELECT column1, column2, column FROM table\_name;**

**Example:**

Consider the **Info** table have following records:

|  |  |  |  |
| --- | --- | --- | --- |
| ID | Name | Address | Phone |
| 1 | Ram | Kathmandu | 553344 |
| 2 | Shyam | Pokhara | 667788 |
| 3 | Hari | Bhaktapur | 445566 |
| 4 | Bir | Chitwan | 223344 |

SQL Select query:  **SELECT id, name FROM Info**

After the query is processed following result is seen:

|  |  |
| --- | --- |
| Id | Name |
| 1 | Ram |
| 2 | Shyam |
| 3 | Hari |
| 4 | Bir |

## The Where Clause

The SQL WHERE clause is used to specify a condition while fetching the data from single table or joining with multiple tables. If the given condition is satisfied then only it returns specific value from the table. You would use WHERE clause to filter the records and fetching only necessary records. The WHERE clause is not only used in SELECT statement, but it is also used in UPDATE, DELETE statement, etc.

**Syntax**

The basic syntax of SELECT statement with WHERE clause is as follows:

**SELECT column1, column2, column N FROM table\_name**

**WHERE [condition]**

**Example**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ID | Name | Address | Phone | Salary |
| 1 | Ram | Kathmandu | 553344 | 5000 |
| 2 | Shyam | Pokhara | 667788 | 3000 |
| 3 | Hari | Bhaktapur | 445566 | 7000 |
| 4 | Bir | Chitwan | 223344 | 2000 |

SQL Select query:  **SELECT id, name FROM Info WHERE salary > 4000**

The query above is processed and following result appears:

|  |  |
| --- | --- |
| Id | Name |
| 1 | Ram |
| 3 | Hari |

## The FROM Clause

The sql FROM clause is used to select table while retrieving data from a table . The statement FROM is not only used for retrieving data but also used for any join operation.

**Syntax**

The basic syntax of SQL FROM is:

**SELECT column1,column2,…..columnN FROM table\_number**

**Example:**

SQL query: SELECT \* FROM Info

## The Rename Operation

With Rename operation, we can rename a table and give a new name.

**Syntax:**

**RENAME TABLE table\_name TO new\_table\_name**

**Example**

SQL query: RENAME TABLE info To detail\_info

## Tuple Variable