Video-6

Topics to cover:

- ALTER Command
- SELECT Command

ALTER Command

The ALTER command in SQL is used to modify the structure of an existing table—such as adding, deleting, or changing columns and constraints.

What ALTER TABLE Can Do:

The ALTER TABLE statement belongs to the Data Definition Language (DDL) and allows you to:

- Add new columns
- Delete existing columns
- Modify column data types
- Rename columns or the table
- Add or drop constraints (e.g., primary key, foreign key, unique)

ALTER Commands

```
CREATE DATABASE class_db;

USE class_db;

CREATE TABLE employee (
        Id int,
        name varchar(50),
        age int
);

INSERT INTO employee
Values (1, "Mohit", 31);

SELECT * FROM employee;
```

 # Add new column named DOB in the table

```
ALTER TABLE employee
ADD COLUMN dob date;
```

Note: Column keyword is optional we can omit that also

```
DESC employee;
select * from employee;
```

 # Modify existing column in a TABLE or change datatype of a column or increase length of a column

```
ALTER TABLE employee
MODIFY name varchar(100);
```

 # Delete existing column from given TABLE or remove city column from employee table

```
ALTER TABLE employee
DROP COLUMN dob;
```

Note: Column keyword is optional we can omit that also

 # Rename the column name to full_name

```
ALTER TABLE employee
RENAME COLUMN name to full_name;

select * from employee;
```

 # Difference between Drop & Truncate Command

```
INSERT INTO employee values(2,"Rahul", 25);
INSERT INTO employee values(3,"Sunny", 22);
```

 # Truncate : TRUNCATE deletes only the data inside the table but keeps the structure intact.

```
TRUNCATE TABLE employee;
```

 # DROP: DROP removes the entire table including its structure.

```
DROP TABLE employee;
```

 # Alter command on integrity constraint

```
Create table employee1 (
        Id int,
        Name varchar(50),
        Age int,
        Hiring_date date,
        Salary int
);

insert into employee1 values(1,"Ankit", 24, "2021-08-10", 10000);
insert into employee1 values(2,"Rahul", 25, "2021-08-10", 20000);
insert into employee1 values(3,"Sunny", 22, "2021-08-11", 11000);
insert into employee1 values(4,"Amit", 25, "2021-08-11", 12000);
insert into employee1 values(5,"Mohit", 26, "2021-08-12", 50000);

select * from employee1;

desc employee1;
```

 # Add unique integrity constraint on id COLUMN

```
alter table employee1
add constraint id_unique unique(id);

desc employee1;
```

 # It will not allow us to insert this record bcz of unique integrity constraint

```
insert into employee1
Values
(1,"Dheeraj", 24, "2021-08-10", 10000);
```

 # Drop constraint from existing Table

```
alter table employee1
drop constraint id_unique;
```

SELECT Command

The SELECT command in SQL is used to retrieve data from one or more tables in a database. It’s the most commonly used SQL statement for querying data.

Syntax:

Select All Columns:

SELECT *

FROM table_name;

Select Specific columns:

SELECT column1, column2, ...

FROM table_name;

SELECT Commands

 # display all columns in the final result

```
select * from employee1;
```

 # display specific columns in the final result

```
select name, age
from employee1;
```

 # Count total records

```
select count(*)
from employee1;
```

 # Alias declaration

```
select count(*) as total_row_count
from employee1;
```

 # Aliases for multiple columns

```
select name as employee_name, age as employee_age
from employee1;
```

 # Print unique hiring_dates from the employee table when employees joined it.

```
select Distinct(hiring_date) as distinct_hiring_dates
from employee1;
```

 # How many unique age values are in the table?

```
select  count(distinct(age)) as total_unique_ages
from employee1;
```

 # Increment salary of each employee by 20% and display final result with new salary

```
select *, (salary*1.2) as new_salary
from employee1;
```