



CSE 311L(Database Management System)

LAB-Week 07 (Part A)

Instructor: Nazmul Alam Diptu

Manipulating Data

Topics:

- Copying Rows from Another Table
- Updating Rows in a Table
- Updating Rows Based on Another Table
- Example of Merging Rows

Copying Rows from Another Table

```
create table sales_reps(  
    id int primary key auto_increment,  
    name varchar(30) not null,  
    salary decimal(10,2) not null,  
    commission_pct decimal(4,2)  
);  
  
INSERT INTO sales_reps(id, name, salary, commission_pct)  
    SELECT employee_id, last_name, salary, commission_pct  
    FROM employees  
    WHERE job_id LIKE '%REP%';
```

Updating Rows in a Table

```
UPDATE employees  
SET department_id = 70  
WHERE employee_id = 113;
```

Updating Rows Based on Another Table

```
UPDATE copy_emp  
SET department_id = (SELECT department_id  
    FROM employees  
    WHERE employee_id = 100)  
WHERE job_id = (SELECT job_id  
    FROM employees  
    WHERE employee_id = 200);
```

Example of Merging Rows

```
INSERT INTO progs_reps (id, name,salary,commission_pct)

SELECT * FROM
    (SELECT id as reps_id, name, salary,commission_pct FROM sales_reps
     UNION
     SELECT id, name, salary,commission_pct FROM it_progs) AS dt

ON DUPLICATE KEY UPDATE id = reps_id + id;
```

Activity 01:

Create a table that has some fields similar to the employees table. Then insert 5 rows to the new table. Afterwards, merge the new table and the employees table to a new table.



Managing Tables

Topics:

- The ALTER TABLE Statement
- Adding a Column
- Modifying a Column
- Dropping a Column
- Changing the Name of an Object
- Truncating a Table
- Add PRIMARY KEY/ FOREIGN KEY constraints
- CREATE VIEW

The ALTER TABLE Statement

Use the ALTER TABLE statement to:

- Add a new column
- Modify an existing column
- Define a default value for the new column
- Drop a column

Adding a Column

```
ALTER TABLE users  
ADD COLUMN FULL_NAME VARCHAR (30) AFTER id
```

Modifying a Column

```
ALTER TABLE users  
MODIFY phone VARCHAR (11) NOT NULL;
```

Dropping a Column

```
ALTER TABLE users  
DROP COLUMN FULL_NAME;
```

Dropping a Table

```
DROP TABLE IF EXISTS users;
```

Changing the Column Name

```
ALTER TABLE users  
CHANGE COLUMN phone contact VARCHAR (100) NOT NULL;
```

Changing the Table/Object Name

```
RENAME TABLE users TO people;
```

Truncating a Table

```
TRUNCATE TABLE people;
```

Add PRIMARY KEY/ FOREIGN KEY constraints

```
ALTER TABLE employees
ADD CONSTRAINT emp_manager_fk
FOREIGN KEY(manager_id)
REFERENCES employees(id);
```

Creating a View

```
CREATE VIEW low_salary AS
SELECT
    *
FROM
    employees
WHERE
    salary < 10000;
```

Dropping a View

```
DROP VIEW IF EXISTS low_salary;
```

Activity 01:

Create the EMP table based on the following table instance chart..

Name	Null?	Type
ID		NUMBER(7)
LAST_NAME		VARCHAR2(25)
FIRST_NAME		VARCHAR2(25)
DEPT_ID		NUMBER(7)

- Modify the EMP table to allow for longer employee last names. Confirm your modification.
- Create the EMPLOYEES2 table based on the structure of the EMPLOYEES table. Include only the EMPLOYEE_ID, FIRST_NAME, LAST_NAME, SALARY, and DEPARTMENT_ID columns. Name the columns in your new table ID, FIRST_NAME, LAST_NAME, SALARY, and DEPT_ID, respectively.
- Drop the EMP table.
- Rename the EMPLOYEES2 table as EMP.
- Drop the FIRST_NAME column from the EMP table. Confirm your modification by checking the description of the table.