SEPTEMBER 15, 2024

LAB HOMEWORK 2 A CS 457 LAB B

UMAIR DADA 20281 - SFBU

- 1. Create and insert the data for Teachers Table.
 - a. Create the `teachers` Table.

```
1 create table teachers (
2  first_name varchar(25),
3  last_name varchar(50),
4  school VARCHAR(50),
5  hire_date VARCHAR(10),
6  salary numeric
7 );
```

b. Insert data into the table

```
insert into teachers (first_name, last_name, school, hire_date, salary) VALUES
('Janet', 'Smith', 'F.D. Roosevelt HS', '2011-10-30', 36200),
('Lee', 'Reynolds', 'F.D. Roosevelt HS', '1993-05-22', 65000),
('Samuel', 'Cole', 'Myers Middle School', '2005-08-01', 43500),
('Bethy', 'Diaz', 'Myers Middle School', '2005-08-30', 43500),
('Kathleen', 'Diaz', 'F.D. Roosevelt HS', '2010-10-22', 38500);
```

c. QUERY - SELECT * FROM teachers;

first_name varchar(25)	last_name varchar(50)	school varchar(50) ♣	hire_date varchar(10)	salary decimal(10,0)
Janet	Smith	F.D. Roosevelt HS	2011-10-30	36200
Lee	Reynolds	F.D. Roosevelt HS	1993-05-22	65000
Samuel	Cole	Myers Middle School	2005-08-01	43500
Bethy	Diaz	Myers Middle School	2005-08-30	43500
Kathleen	Diaz	F.D. Roosevelt HS	2010-10-22	38500

2. SELECT Commands.

a. QUERY - select last_name, first_name, salary from teachers;

last_name varchar(50) ◆	first_name varchar(25) ♣	salary decimal(10,0)
Smith	Janet	36200
Reynolds	Lee	65000
Cole	Samuel	43500
Diaz	Bethy	43500
Diaz	Kathleen	38500

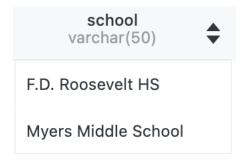
b. QUERY - select last_name, hire_date, salary from teachers;

last_name varchar(50) ◆	hire_date varchar(10)	salary decimal(10,0) ◆
Smith	2011-10-30	36200
Reynolds	1993-05-22	65000
Cole	2005-08-01	43500
Diaz	2005-08-30	43500
Diaz	2010-10-22	38500

c. QUERY - select hire_date, salary from teachers;

hire_date varchar(10) ◆	salary decimal(10,0)
2011-10-30	36200
1993-05-22	65000
2005-08-01	43500
2005-08-30	43500
2010-10-22	38500

- 3. SELECT Commands with DISTINCT.
 - a. QUERY select distinct school from teachers;



b. QUERY – select distinct school, salary from teachers

school varchar(50)	salary decimal(10,0)
F.D. Roosevelt HS	36200
F.D. Roosevelt HS	65000
Myers Middle School	43500
F.D. Roosevelt HS	38500

- 4. SELECT Command with Order By Statement.
 - a. QUERY select first_name, last_name, salary from teachers order by salary desc;

first_name varchar(25)	last_name varchar(50) ◆	salary decimal(10,0) ◆
Lee	Reynolds	65000
Samuel	Cole	43500
Bethy	Diaz	43500
Kathleen	Diaz	38500
Janet	Smith	36200

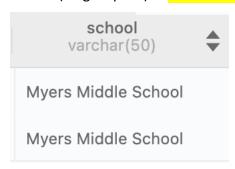
b. QUERY – select last_name, school, hire_date from teachers order by school asc,hire_date desc;

last_name varchar(50)	school varchar(50)	hire_date varchar(10)
Smith	F.D. Roosevelt HS	2011-10-30
Diaz	F.D. Roosevelt HS	2010-10-22
Reynolds	F.D. Roosevelt HS	1993-05-22
Diaz	Myers Middle School	2005-08-30
Cole	Myers Middle School	2005-08-01

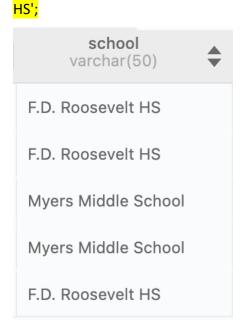
- 5. SELECT Command with WHERE Statement.
 - a. QUERY select first name, last name, school from teachers where first name = 'Janet';



b. QUERY (Single Space) – select school from teachers where school != 'F.D. Roosevelt HS';



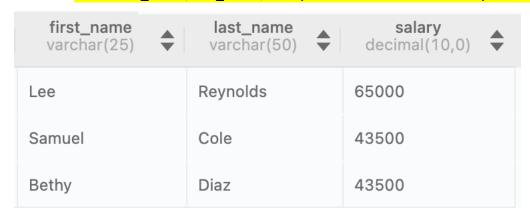
c. QUERY (Double Space) – select school from teachers where school != 'F.D. Roosevelt



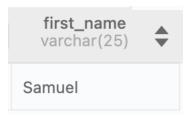
d. QUERY – select first_name, last_name, hire_date from teachers where hire_date '2000-01-01';

first_name varchar(25)	last_name varchar(50)	hire_date varchar(10)
Lee	Reynolds	1993-05-22

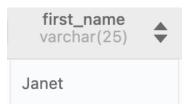
e. QUERY – select first name, last name, salary from teachers where salary >= 43500;



f. QUERY – select first_name from teachers where first_name like 'sam%'; || select first_name from teachers where first_name like 'Sam%';

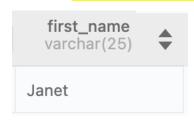


g. QUERY - select first_name from teachers where first_name like '%et';



h. QUERY (NO OUTPUT – No data available for this query) – select first_name from teachers where first_name like '%ia%';

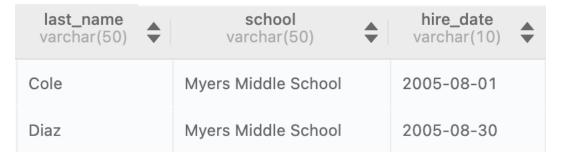
i. QUERY – select first name from teachers where first name like 'J t';



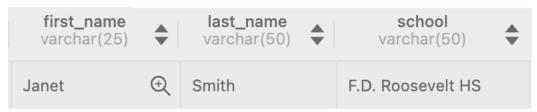
j. QUERY – select first_name from teachers where first_name like 'L%'; || select first_name from teachers where first_name like 'Le';



k. QUERY – select last_name, school, hire_date from teachers where school = 'Myers Middle School';



I. QUERY – select first_name, last_name, school from teachers where first_name = 'Janet';



- 6. SELECT Command with AND/OR/NOT Statements.
 - a. QUERY select * from teachers where last_name = 'Cole' or last_name = 'Bush';

first_name varchar(25)	•	last_name varchar(50)	\$	school varchar(50)	\$	hire_date varchar(10)	salary decimal(10,0)	\$
Samuel		Cole		Myers Middle School		2005-08-01	43500	

b. QUERY – select * from teachers where school = 'F.D. Roosevelt HS' and (salary < 38000)

or salary > 40000);

first_name varchar(25)	last_name varchar(50)	school varchar(50)	hire_date varchar(10)	salary decimal(10,0)
Janet	Smith	F.D. Roosevelt HS	2011-10-30	36200
Lee	Reynolds	F.D. Roosevelt HS	1993-05-22	65000

c. QUERY – select first_name, last_name, school, hire_date, salary from teachers where school like '%Roos%' order by hire_date desc;

first_name varchar(25)	last_name varchar(50)	school varchar(50)	hire_date varchar(10)	salary decimal(10,0)
Janet	Smith	F.D. Roosevelt HS	2011-10-30	36200
Kathleen	Diaz	F.D. Roosevelt HS	2010-10-22	38500
Lee	Reynolds	F.D. Roosevelt HS	1993-05-22	65000

- 7. SELECT Command with AND/OR/NOT Joined Statements.
 - a. QUERY (AND, OR, AND) SELECT * FROM teachers WHERE school = 'F.D. Roosevelt HS'

 AND salary > 40000 OR hire date < '2000-01-01' AND last name = 'Smith';

first_name varchar(25)	last_name varchar(50)	school varchar(50)	hire_date varchar(10)	salary decimal(10,0)
Lee	Reynolds	F.D. Roosevelt HS	1993-05-22	65000

b. QUERY (OR, AND, OR) – SELECT * FROM teachers WHERE last_name = 'Cole' OR salary
 40000 AND school = 'Myers Middle School' OR hire_date > '2010-01-01';

first_name varchar(25)	last_name varchar(50)	school varchar(50)	hire_date varchar(10)	salary decimal(10,0) →
Janet	Smith	F.D. Roosevelt HS	2011-10-30	36200
Samuel	Cole	Myers Middle School	2005-08-01	43500
Kathleen	Diaz	F.D. Roosevelt HS	2010-10-22	38500

c. QUERY (OR, AND, AND) – SELECT * FROM teachers WHERE hire_date = '2010-10-22' OR salary > 35000 AND school = 'F.D. Roosevelt HS' AND last_name LIKE 'D%';

first_name varchar(25)	last_name varchar(50)	school varchar(50) ◆	hire_date varchar(10)	salary decimal(10,0)
Kathleen	Diaz	F.D. Roosevelt HS	2010-10-22	38500

d. QUERY (AND, OR, OR) – SELECT * FROM teachers WHERE school = 'Myers Middle School'

AND salary >= 40000 OR hire_date < '2000-01-01' OR last_name = 'Smith';

first_name varchar(25)	last_name varchar(50)	school varchar(50)	hire_date varchar(10)	salary decimal(10,0)
Janet	Smith	F.D. Roosevelt HS	2011-10-30	36200
Lee	Reynolds	F.D. Roosevelt HS	1993-05-22	65000
Samuel	Cole	Myers Middle School	2005-08-01	43500
Bethy	Diaz	Myers Middle School	2005-08-30	43500

e. QUERY (NOT) – SELECT * FROM teachers WHERE NOT (school = 'F.D. Roosevelt HS' AND salary > 36000);

first_name varchar(25)	last_name varchar(50)	school varchar(50)	hire_date varchar(10)	salary decimal(10,0)
Samuel	Cole	Myers Middle School	2005-08-01	43500
Bethy	Diaz	Myers Middle School	2005-08-30	43500