



SEPTEMBER 15, 2024

LAB HOMEWORK 2 A

CS 457 LAB B

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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

```

1  insert into teachers (first_name, last_name, school, hire_date, salary) VALUES
2  ('Janet', 'Smith', 'F.D. Roosevelt HS', '2011-10-30', 36200),
3  ('Lee', 'Reynolds', 'F.D. Roosevelt HS', '1993-05-22', 65000),
4  ('Samuel', 'Cole', 'Myers Middle School', '2005-08-01', 43500),
5  ('Bethy', 'Diaz', 'Myers Middle School', '2005-08-30', 43500),
6  ('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;`

school varchar(50) ▲▼
F.D. Roosevelt HS
Myers Middle School

- 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';`

first_name varchar(25)	last_name varchar(50)	school varchar(50)
Janet	Smith	F.D. Roosevelt HS

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

school varchar(50)
Myers Middle School
Myers Middle School

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

school varchar(50)
F.D. Roosevelt HS
F.D. Roosevelt HS
Myers Middle School
Myers Middle School
F.D. Roosevelt HS

- 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;`

first_name varchar(25)	last_name varchar(50)	salary decimal(10,0)
Lee	Reynolds	65000
Samuel	Cole	43500
Bethy	Diaz	43500

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

first_name varchar(25)
Samuel

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

first_name varchar(25)
Janet

- 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';`

first_name varchar(25)
Janet

- j. QUERY – `select first_name from teachers where first_name like 'L%';` || `select first_name from teachers where first_name like 'Le_';`

first_name varchar(25)
Lee

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

last_name varchar(50)	school varchar(50)	hire_date varchar(10)
Cole	Myers Middle School	2005-08-01
Diaz	Myers Middle School	2005-08-30

- l. QUERY – `select first_name, last_name, school from teachers where first_name = 'Janet';`

first_name varchar(25)	last_name varchar(50)	school varchar(50)
Janet	Smith	F.D. Roosevelt HS

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