University of Engineering and Technology ,Taxila

Department of Computer Engineering

Lab Report 02

For the Course of DBMS lab

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Section: Omega

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Course Instructor: Engr.Sana Ziafat

Date: 20-01-24.

Course Title: DBMS Lab

SQL DML Commands

Examples:

- **SELECT** - extracts data from a database
- **UPDATE** - updates data in a database
- **DELETE** - deletes data from a database
- **INSERT INTO** - inserts new data into a database

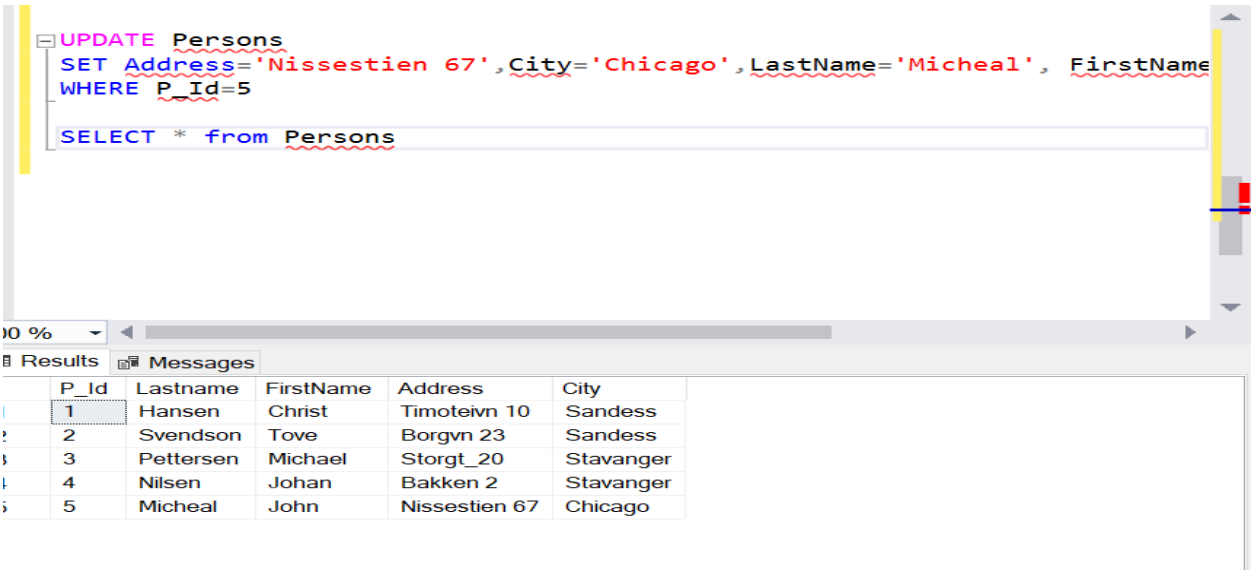
Code:

```
-- 21-cp-26 Examples Lab 2
Create database lab2
Create table Persons
( P_Id int,
Lastname varchar(255),
FirstName varchar(255),
Address varchar(255),
City varchar(255));

SELECT * from Persons

INSERT INTO Persons
VALUES(1,'Hansen','Christ','Timoteivn 10','Sandess');

INSERT INTO Persons(P_Id,Lastname,FirstName,Address,City)
VALUES(2,'Svendson','Tove','Borgvn 23','Sandess')

INSERT INTO Persons
VALUES(3,'Pettersen','Michael','Storgt_20','Stavanger');

INSERT INTO Persons
VALUES(4,'Nilsen','Johan','Bakken 2','Stavanger')
SELECT * from Persons

INSERT INTO Persons (P_Id,Lastname,Firstname)
VALUES (5,'Tjessem','Jakob')



UPDATE Persons
SET Address='Nissestien 67',City='Chicago',LastName='Micheal', FirstName='John'
WHERE P_Id=5

SELECT * from Persons

UPDATE Persons
SET Address='Nissestien 67',City='Sandness'




DELETE FROM Persons
WHERE LastName='Micheal' AND FirstName='John'
select * from Persons



SELECT LastName,FirstName From Persons
```

```
SELECT DISTINCT City,P_Id FROM PERSONS

select * from persons
where FirstName='Christ'
select * from persons
where FirstName='Tove'
AND LastName='Svendson'

select * from persons
where FirstName='Tove'
or LastName='Hansen'

SELECT * FROM Persons
ORDER BY LastName

SELECT * FROM Persons
ORDER BY LastName DESC
```

Output:

Some of the outputs



```
UPDATE Persons
SET Address='Nissestien 67',City='Chicago',LastName='Micheal', FirstName
WHERE P_Id=5

SELECT * from Persons
```

Results | Messages

P_Id	Lastname	FirstName	Address	City
1	Hansen	Christ	Timoteivn 10	Sandess
2	Svendson	Tove	Borgvn 23	Sandess
3	Pettersen	Michael	Storgt_20	Stavanger
4	Nilsen	Johan	Bakken 2	Stavanger
5	Micheal	John	Nissestien 67	Chicago

```sql
UPDATE Persons
SET Address='Nissestien 67',City='Sandness'

select * from Persons
```

100 %

Results | Messages

	P_Id	Lastname	FirstName	Address	City
1	1	Hansen	Christ	Nissestien 67	Sandness
2	2	Svendson	Tove	Nissestien 67	Sandness
3	3	Pettersen	Michael	Nissestien 67	Sandness
4	4	Nilsen	Johan	Nissestien 67	Sandness
5	5	Micheal	John	Nissestien 67	Sandness

```sql
--WHERE P_Id=5

--SELECT * from Persons

--UPDATE Persons
--SET Address='Nissestien 67',City='Sandness'



DELETE FROM Persons
WHERE LastName='Micheal' AND FirstName='John'
select * from Persons
```

5 %

Results | Messages

	P_Id	Lastname	FirstName	Address	City
1	1	Hansen	Christ	Nissestien 67	Sandness
2	2	Svendson	Tove	Nissestien 67	Sandness
3	3	Pettersen	Michael	Nissestien 67	Sandness
4	4	Nilsen	Johan	Nissestien 67	Sandness

Tasks

Task 1:

Create the following table using SQL and using the INSERT INTO command, insert the following values in the table created.

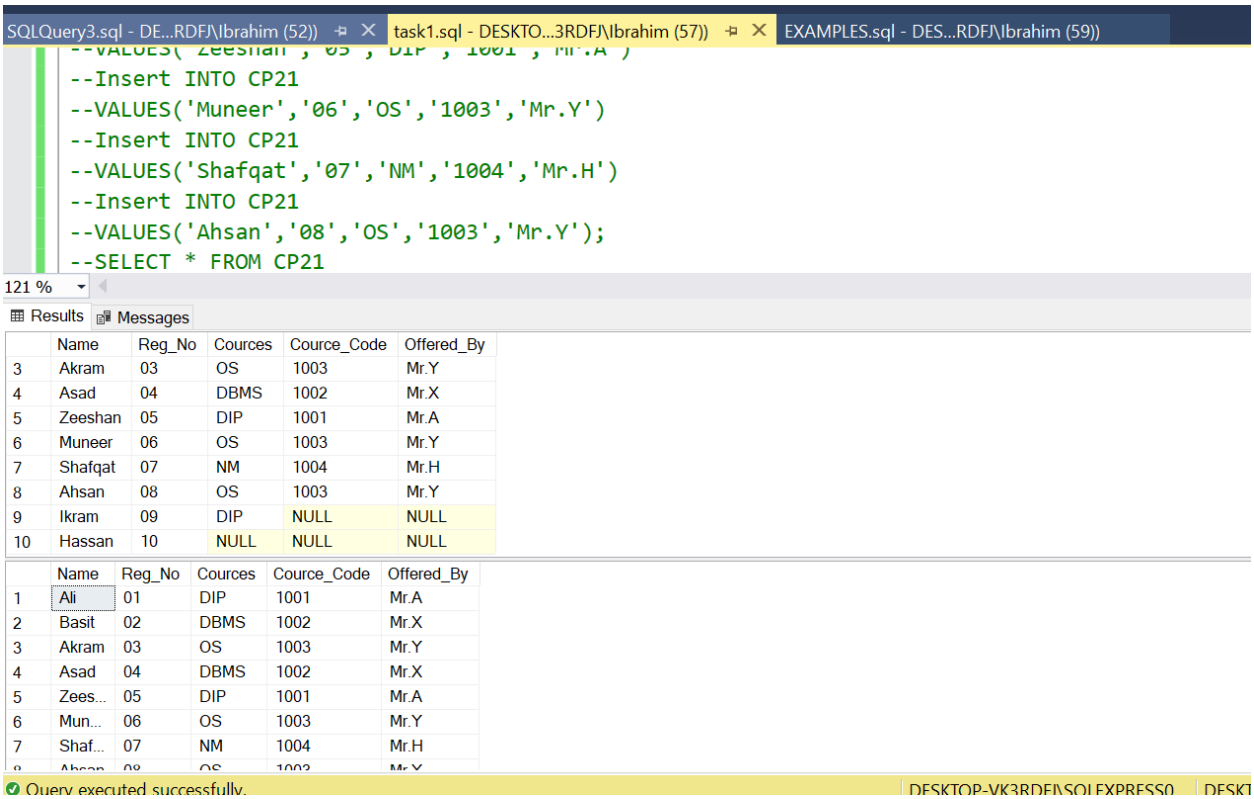
Name	Reg_No	Courses	Course_Code	Offered_By
Ali	01	DIP	1001	Mr. A
Basit	02	DBMS	1002	Mr. X

Akram	03	OS	1003	Mr. Y
Asad	04	DBMS	1002	Mr. X
Zeeshan	05	DIP	1001	Mr. A
Muneer	06	OS	1003	Mr. Y
Shafqat	07	NM	1004	Mr. H
Ahsan	08	OS	1003	Mr. Y
Ikram	09	DIP		
Hassan	10			

Code:

```
--21-cp-26 lab 1 task 1 create table
CREATE TABLE CP21
(
Name varchar(255),
Reg_No varchar(255),
Cources varchar(255),
Cource_Code varchar(255),
Offered_By varchar(255));
Insert INTO CP21(Name,Reg_No,Cources,Cource_Code,Offered_By)
VALUES('Ali','01','DIP','1001','Mr.A');
VALUES('Basit','02','DBMS','1002','Mr.X')
Insert INTO CP21
VALUES('Akram','03','OS','1003','Mr.Y')
Insert INTO CP21
VALUES('Asad','04','DBMS','1002','Mr.X')
Insert INTO CP21
VALUES('Zeeshan','05','DIP','1001','Mr.A')
Insert INTO CP21
VALUES('Muneer','06','OS','1003','Mr.Y')
Insert INTO CP21
VALUES('Shafqat','07','NM','1004','Mr.H')
Insert INTO CP21
VALUES('Ahsan','08','OS','1003','Mr.Y');
SELECT * FROM CP21
Insert INTO CP21(Name,Reg_No,Cources)
VALUES('Ikram','09','DIP');
SELECT * FROM CP21

Insert INTO CP21(Name,Reg_No)
VALUES('Hassan','10');
SELECT * FROM CP21
```

Output:



	Name	Reg_No	Cources	Cource_Code	Offered_By
3	Akram	03	OS	1003	Mr.Y
4	Asad	04	DBMS	1002	Mr.X
5	Zeeshan	05	DIP	1001	Mr.A
6	Muneer	06	OS	1003	Mr.Y
7	Shafqat	07	NM	1004	Mr.H
8	Ahsan	08	OS	1003	Mr.Y
9	Ikram	09	DIP	NULL	NULL
10	Hassan	10	NULL	NULL	NULL

	Name	Reg_No	Cources	Cource_Code	Offered_By
1	Ali	01	DIP	1001	Mr.A
2	Basit	02	DBMS	1002	Mr.X
3	Akram	03	OS	1003	Mr.Y
4	Asad	04	DBMS	1002	Mr.X
5	Zees...	05	DIP	1001	Mr.A
6	Mun...	06	OS	1003	Mr.Y
7	Shaf...	07	NM	1004	Mr.H

Task 2:

Using the UPDATE statement, update the above table for the following values:

Name	Reg_No	Courses	Course_Code	Offered_By
Ali	01	DIP	1001	Mr. A
Basit	02	DBMS	1002	Mr. X
Akram	03	OS	1003	Mr. Y
Asad	04	DBMS	1002	Mr. X
Zeeshan	05	DIP	1001	Mr. A
Muneer	06	OS	1003	Mr. Y
Shafqat	07	NM	1004	Mr. H
Ahsan	08	OS	1003	Mr. Y
Ikram	09	DIP	1001	Mr. A
Hassan	10	DSP	1005	Mr. Z

Code:

```
UPDATE CP21
SET Cource_Code='1001',Offered_By='Mr.A'
WHERE Reg_No='09'
UPDATE CP21
SET Cource_Code='1001',Offered_By='Mr.A',Cources='DSP'
```

```
WHERE Reg_No='10'

SELECT * FROM CP21
```

Output:

```
UPDATE CP21
SET Cource_Code='1001',Offered_By='Mr.A'
WHERE Reg_No='09'
UPDATE CP21
SET Cource_Code='1001',Offered_By='Mr.A',Cources='DSP'
WHERE Reg_No='10'

SELECT * FROM CP21
```

121 %

Results | Messages

	Name	Reg_No	Cources	Cource_Code	Offered_By
1	Ali	01	DIP	1001	Mr.A
2	Basit	02	DBMS	1002	Mr.X
3	Akram	03	OS	1003	Mr.Y
4	Asad	04	DBMS	1002	Mr.X
5	Zeeshan	05	DIP	1001	Mr.A
6	Muneer	06	OS	1003	Mr.Y
7	Shafqat	07	NM	1004	Mr.H
8	Ahsan	08	OS	1003	Mr.Y
9	Ikram	09	DSP	1001	Mr.A
10	Hassan	10	DSP	1001	Mr.A

Task 3:

Using the DELETE statement, delete the record for the student having name Akram and Ahsan in the above table. Also delete the record for the course having course code=1001.

Code:

```
Delete FROM CP21
WHERE Name='Ahsan' or Name='Akram' or Cource_Code='1001'
SELECT * FROM CP21
```

Output:

SQLQuery5.sql - DE...RDFJ\Ibrahim (56))* | Task2.sql - DESKTO...3RDFJ\Ibrahim (67)) | task1.sql - DESKTO...3RDFJ\Ibrahim (57)) | SQLQuer

```
Delete FROM CP21
WHERE Name='Ahsan' or Name='Akram' or Cource_Code='1001'
SELECT * FROM CP21
```

121 %

Results | Messages

	Name	Reg_No	Cources	Cource_Code	Offered_By
1	Basit	02	DBMS	1002	Mr.X
2	Asad	04	DBMS	1002	Mr.X
3	Muneer	06	OS	1003	Mr.Y
4	Shafqat	07	NM	1004	Mr.H

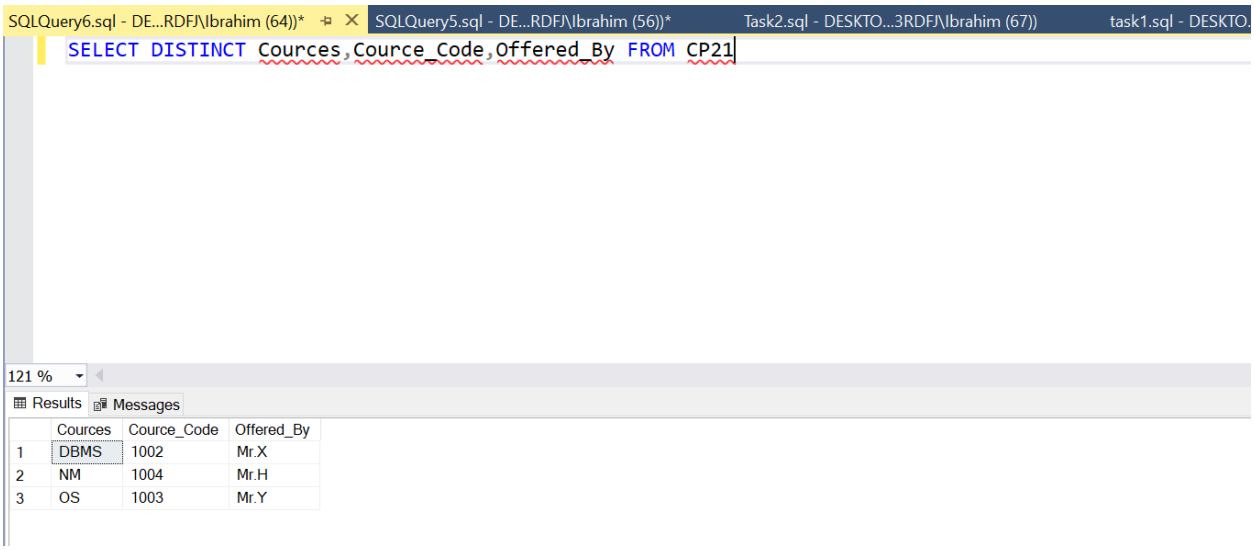
Task 4:

Select distinct values from the above table for the last three columns.

Code:

```
SELECT DISTINCT Cources,Cource_Code,Offered_By FROM CP21
```

Output:



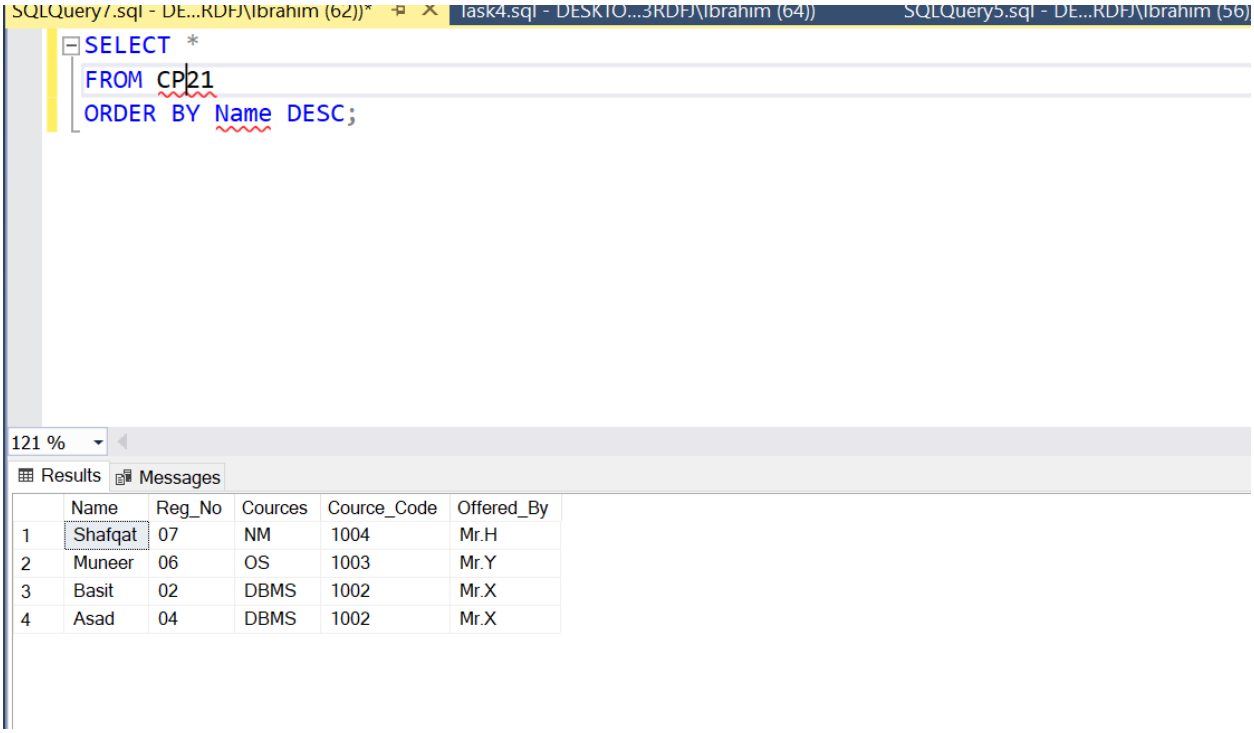
Task 5:

Sort the above table in descending order by their name.

Code:

```
SELECT *
FROM CP21
ORDER BY Name DESC;
```

Output:



	Name	Reg_No	Cources	Cource_Code	Offered_By
1	Shafqat	07	NM	1004	Mr.H
2	Muneer	06	OS	1003	Mr.Y
3	Basit	02	DBMS	1002	Mr.X
4	Asad	04	DBMS	1002	Mr.X