



Green University of Bangladesh
Department of Computer Science and Engineering (CSE)
Faculty of Sciences and Engineering
Semester: (Spring, Year:2021), B.Sc. in CSE (Day/Eve)

Course Title: Database System Lab
Course Code: CSE 210 Section: PC- 193 D/A

Continuous Lab Performance 3

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<u>CLP Status</u>	
Marks:	Signature:
Comments:	Date:

1. Consider the database schema below:

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employee (ename, street, city)
works (ename, cname, salary, jdate)
company (cname, city)
manages (ename, mname)

A. Find the company with a payroll less than Tk. 100000.

B. Find the names of all employees who live in the same city and on the same street as do their managers.

C. Assume the companies may be located in several cities. Find all companies located in every city in which Small Bank Corporation is located.

CREATE DATABASE limitedcompany;

company

Column	Type	Null	Default	Links to	Comments	Media type
cname (<i>Primary</i>)	varchar(250)	No				
city	varchar(100)	Yes	NULL			

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	cname	3	A	No	

employee

Column	Type	Null	Default	Links to	Comments	Media type
ename (<i>Primary</i>)	varchar(250)	No				
street	varchar(250)	Yes	NULL			
city	varchar(100)	Yes	NULL			

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	ename	3	A	No	

manages

Column	Type	Null	Default	Links to	Comments	Media type
ename	varchar(250)	Yes	NULL			
mname	varchar(250)	Yes	NULL			

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
ename	BTREE	No	No	ename	3	A	Yes	

works

Column	Type	Null	Default	Links to	Comments	Media type
ename	varchar(250)	Yes	NULL			
cname	varchar(250)	Yes	NULL			
salary	int(11)	Yes	NULL			
jdate	date	Yes	NULL			

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
ename	BTREE	No	No	ename	3	A	Yes	
cname	BTREE	No	No	cname	3	A	Yes	

INSERT VAUIES:

INSERT INTO `company` (`cname`, `city`) VALUES

('Brain-23', 'Dhaka'),

('Reneta Pharmaceuticals ltd', 'Narayanganj'),

('samsung', 'Dhaka');

```
INSERT INTO `employee` (`ename`, `street`, `city`) VALUES
('Fahim', 'Airport road', 'Dhaka'),
('Md Shawon', 'Airport road', 'Dhaka'),
('Jahid Hasan', 'Narayangonj', 'N.gonj');
```

```
INSERT INTO `manages` (`ename`, `mname`) VALUES
('Fahim', 'G1'),
('Md Shawon', 'M1'),
('Jahid Hasan', 'M1');
```

```
INSERT INTO `works` (`ename`, `cname`, `salary`, `jdate`) VALUES
('Fahim', 'Brain-23', 9000, '2018-07-11'),
('Jahid Hasan', 'akij group', 8000, '2015-07-21'),
('Md Shawon', 'samsung group', 20000, '2015-08-15');
```

A. (Ans):

```
SELECT Cname FROM works WHERE salary < 100000;
```

+ Options

Cname

Brain-23

akij group

samsung group

cname	salary
Brain-23	9000
akij group	8000
samsung group	20000

B(Ans):

```
SELECT e.ename FROM employee e JOIN manages m ON m.ename = e.ename
WHERE EXISTS (
SELECT 1 FROM employee WHERE ename = m.mname AND street = e.street
AND city = e.city
);
```

C(Ans):

```
SELECT cname from company WHERE city IN (
SELECT city from company where cname = 'Small Bank Corporation'
);
```

2. Draw the schema diagram for the following database.

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book (ISBN, title, year, price)
author (author-id, name, address, url)
warehouse (code, address, phone)
written-by (author-id, ISBN)

Solution: The schema diagram for the following database is below:

