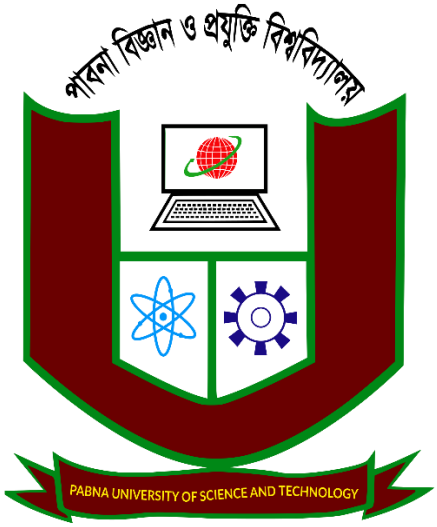
PABNA UNIVERSITY OF SCIENCE AND TECHNOLOGY



Faculty of Engineering and Technology

Department of Information and Communication Engineering

Lab Report

Course Title: Database Management Systems Sessional

Course Code: ICE-3106

Submitted by

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Session:2019-2020
3rd year 1st semester
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Submitted to

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Submission Date: 05-11-2023

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Signature

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Code:

```
create database university
use university create
table department(
                                dept_name varchar(20),
                        building varchar (15),
                budget numeric(8,2),
 primary key(dept_name)
);
insert into department values('ICE','Engineering',100000)
insert into department values('CSE','Engineering',90000)
insert into department values('EEE','Science',95000)
 insert into department values('EECE','Science',80000)
 insert into department values('BANGLA','BANGLA',70000)
insert into department values('ENGLISH','ENGLISH',55000)

select * from department
--deleting
delete from department where dept_name ='CSE' select
* from department
 --update  update department set budget = budget + budget*1.05 where
budget <90000  select * from department
```

Output:

After inserting the values the table is

	dept_name	building	budget
1	BANGLA	BANGLA	87500.00
2	CSE	Engineering	112500.00
3	EECE	Science	118750.00
4	EEE	Science	67000.00
5	ENGLISH	ENGLISH	68750.00
6	ICE	Engineering	125000.00

After deleting value the table is

	dept_name	building	budget
1	BANGLA	BANGLA	87500.00
2	EECE	Science	112500.00
3	EEE	Science	118750.00
4	ENGLISH	ENGLISH	67000.00
5	ICE	Engineeri…	125000.00

After updating the table is

	dept_name	building	budget
1	BANGLA	BANGLA	875000.00
2	EECE	Science	112500.00
3	EEE	Science	118750.00
4	ENGLISH	ENGLISH	67000.00
5	ICE	Engineeri…	125000.00

Code:

```
create database university use university create table instructor( ID varchar(20), name varchar(15) not null, dept_name varchar(15), salary numeric(8,2), primary key(ID));
insert into instructor(ID,name,dept_name,salary) values('200610','alamin','ICE','86000')
insert into instructor(ID,name,dept_name,salary) values('200611','Nirob','CSE','80000')
insert into instructor(ID,name,dept_name,salary) values('200601','Naima Islam','EEE','70000')
insert into instructor(ID,name,dept_name,salary) values('200622','Sajeeb kumur','EECE','90000')
insert into instructor(ID,name,dept_name,salary) values('200605','Uamme kulsum','CE','95000')
insert into instructor(ID,name,dept_name,salary) values('200600',’Saiful','Arct','68000')
select * from instructor
alter table instructor add course_id varchar(20)
select * from instructor drop table instructor
select * from instructor
```

Output:

Create a table

	ID	name	dept_name	salary
1	200600	Saiful	Arct	68000.00

2	200601	Naima Islam	EEE	70000.00
3	200605	Uamme kulsu…	CE	95000.00
4	200610	alamin	ICE	86000.00
5	200611	Nirob	CSE	80000.00
6	200622	Sajeeb kumur	EECE	90000.00

Alter a table

	ID	name	dept_name	salary	course_id
1	200600	Gopal bhar	Arct	68000.00	NULL
2	200601	Naima Islam	EEE	70000.00	NULL
3	200605	Uamme kulsu…	CE	95000.00	NULL
4	200610	alamin	ICE	86000.00	NULL
5	200611	Nirob	CSE	80000.00	NULL
6	200622	Sajeeb kumur	EECE	90000.00	NULL

Drop a table

Code:

```
create database university use
university
create table insertvalue(
```

```
                        dept_name varchar(15),
                    bulding varchar(15),
 budget numeric(8,2)
                        primary key(dept_name)

);
insert into insertvalue values('ICE','Engineering',87000)
insert into insertvalue values('CSE','Engineering',90000)
insert into insertvalue values('EEE','JHON',95000) insert into
insertvalue values('EECE','Watson',80000) insert into
insertvalue   values('BANGLA','BANGLA',68000)
insert into insertvalue values('ENGLISH','ENGLISH',55000)

select * from insertvalue select
dept_name from insertvalue
select dept_name from insertvalue where dept_name = 'EECE'
```

Output:

Select clause

	dept_name	bulding	budget
1	BANGLA	BANGLA	68000.00
2	CSE	Engineeri…	90000.00
3	EECE	Watson	80000.00
4	EEE	JHON	95000.00
5	ENGLISH	ENGLISH	55000.00
6	ICE	Engineeri…	87000.00

From clause

	dept_name
1	BANGLA

2	CSE
3	EECE
4	EEE
5	ENGLISH
6	ICE

Where clause

dept_name

1	EEC

Code:

```
----create alter and drop
create database uinversity
use university create
table instructor(
        ID varchar(20),
name varchar(20) not null,
dept_name varchar(20),
salary numeric(8,2),
        primary key(ID)
);
insert into instructor  values ('10101','Srinivasan','Comp.Sci',65000);
insert into instructor  values ('12121','Wu','Finance',90000); insert
into instructor values ('15151','Mozart','Music',40000); insert into
instructor  values ('22222','Einstein','Physics',95000); insert into
instructor values ('32343','EI Said','History',60000); insert into
instructor values ('33456','Gold','Physics',87000); select * from
instructor select dept_name from instructor
---group by
select name from instructor group by name;
select dept_name,avg(salary) as avg_salary from instructor group by dept_name
select dept_name,count(*) from instructor group by dept_name select * from
instructor ---having clause
select dept_name,avg(salary) as avg_salary from instructor group by dept_name having
avg(salary)>55000; ----order by clause
select * from instructor order by salary asc,name desc;
---view
create view faculty as
select ID,name,dept_name from instructor select
* from instructor
----index create index dept_inx on
instructor(dept_name)
---procedure
create procedure instruct_proc
AS
BEGIN
select name as authors_name from instructor where ID = '15151'
END
exec instruct_proc
```

Output:

Group By Clause

	dept_name	avg_salary
1	Comp.Sci	65000.000000
2	Finance	90000.000000
3	History	60000.000000
4	Music	40000.000000
5	Physics	91000.000000

Order By (Ascending order)

	ID	name	dept_name	salary
1	15151	Mozart	Music	40000.00
2	32343	EI Said	History	60000.00
3	10101	Srinivas…	Comp.Sci	65000.00
4	33456	Gold	Physics	87000.00
5	12121	Wu	Finance	90000.00
6	22222	Einstein	Physics	95000.00

Create view as faculty

	ID	name	dept_name
1	10101	Srinivas…	Comp.Sci
2	12121	Wu	Finance
3	15151	Mozart	Music
4	22222	Einstein	Physics
5	32343	EI Said	History
6	33456	Gold	Physics

Code:

```
use university create table
depart(          dept_name
varchar(20),
```

```
                bulding varchar(20),
        budget numeric(8,2),
   primary key(dept_name)
);
insert into depart values('ICE','Watson','90000') insert
into depart values('CSE','Science','85000') insert into
depart values('EEE','Engineering','80000') insert into
depart values('CE','Engineering','68000') insert into
depart values('EECE','Science','55000') insert into
depart values('Arct','Painter','95000') create table
instruct(
        ID varchar(20),
                name varchar(15) not null,
        dept_name varchar(15),
salary numeric(8,2),                primary
key(ID));
insert into instruct(ID,name,dept_name,salary) values('1012','sumu','ICE','1000') insert
into instruct(ID,name,dept_name,salary) values('3245','summuu','CSE','1001') insert into
instruct(ID,name,dept_name,salary) values('3865','raiyan','BANGLA','1002') insert into
instruct(ID,name,dept_name,salary) values('4755','RIYA','ENGLISH','1003') insert into
instruct(ID,name,dept_name,salary) values('6789','MAHI','PHYSICS','10004') select *
from depart select * from instruct ---cartesian product
select bulding,salary from instruct,depart where depart.dept_name = instruct.dept_name; --
--join product
select ID,name,budget from instruct join depart on depart.dept_name = instruct.dept_name;
---left outer join
select * from instruct left outer join depart on depart.dept_name=instruct.dept_name;
---right outer join
```

select * from instruct right outer join depart on depart.dept_name=instruct.dept_name;

---full outer join

select * from instruct full outer join depart on depart.dept_name=instruct.dept_name;

Output:

---cartesian product

		bulding	salary
1		Watson	1000.00
2		Science	1001.00

----join product

	ID	name	budget
1	1012	sumu	90000.00
2	3245	summ	85000.00

---left outer join

ID	name	dept_name	salary	dept_name	bulding	budget
1	1012	sumu	ICE	1000.00	ICE	Watson	90000.00
2	3245	sumu	CSE	1001.00	CSE	Science	85000.00
3	3865	uamme	BANGLA	1002.00	NULL	NULL	NULL
4	4755	RIYA	ENGLISH	1003.00	NULL	NULL	NULL
5	6789	MAHI	PHYSICS	10004.00	NULL	NULL	NULL

---right outer join

ID	name	dept_name	salary	dept_name	bulding	budget

1	NULL	NULL	NULL	NULL	Arct	Painter	95000.00
2	NULL	NULL	NULL	NULL	CE	Engineeri…	68000.00
3	3245	summ…	CSE	1001.00	CSE	Science	85000.00
4	NULL	NULL	NULL	NULL	EECE	Science	55000.00
5	NULL	NULL	NULL	NULL	EEE	Engineeri…	80000.00
6	1012	sumu	ICE	1000.00	ICE	Watson	90000.00

---full outer join

ID name dept_name salary dept_name bulding budget

1	1012	sumu	ICE	1000.00	ICE	Watson	90000.00
2	3245	summ…	CSE	1001.00	CSE	Science	85000.00
3	3865	raiyan	BANGLA	1002.00	NULL	NULL	NULL
4	4755	RIYA	ENGLISH	1003.00	NULL	NULL	NULL
5	6789	MAHI	PHYSICS	10004.00	NULL	NULL	NULL
6	NULL	NULL	NULL	NULL	Arct	Painter	95000.00
7	NULL	NULL	NULL	NULL	CE	Engineeri…	68000.00
8	NULL	NULL	NULL	NULL	EECE	Science	55000.00
9	NULL	NULL	NULL	NULL	EEE	Engineeri…	80000.00

Code:

```
create database university use
university
create table  instructorSalary(
ID varchar(20),
                        dept_name varchar(20),
        salary numeric(8,2),
                        primary key(ID)
);

insert into instructorSalary values('1212','ICE','60000')
insert into instructorSalary values('1215','CE','77000') insert
into instructorSalary values('1219','CSE','85000') insert into
instructorSalary values('1214','EEE','65000')

select * from instructorSalary

select count(ID) as count_ID from instructorSalary select
max(salary) as max_salary from instructorSalary select
min(salary) as min_salary from instructorSalary select
avg(salary) as avg_salary from instructorSalary select
SUM(salary) as total_salary from instructorSalary
```

Output:

--Table

	ID	dept_name	salary
1	1212	ICE	60000.00
2	1214	EEE	65000.00
3	1215	CE	77000.00
4	1219	CSE	85000.00

--count

count_ID

1	4

--max

	max_salary
1	85000.00

--min

	min_salary
1	60000.00

--Avg

	avg_salary
1	71750.000000

--sum

	total_salary
1	287000.00

```
use University create
table instructor
( ID int, name nvarchar(50), dept_name nvarchar(50),salary int )
select * from instructor insert into instructor
values(22222,'Einstein','Physics',95000) insert into instructor
values(12121,'We','Finance',90000) insert into instructor
values(32343,'El Said','History',60000) insert into instructor
values(45565,'Katz','CSE',75000) insert into instructor
values(98345,'Kim','EEE',80000) insert into instructor
values(98346,'AL AMIN','ICE',80000)
select * from instructor
```

Code:

```
--create another table for update value keeping create
table backup_ins
( ID int, name nvarchar(50), dept_name nvarchar(50),salary int ) select
* from backup_ins
--create another table for deleted value keeping create
table backup_del
( ID int, name nvarchar(50), dept_name nvarchar(50),salary int )
select * from backup_del --creating trrigger create trigger
ins_trigger on instructor  after insert as begin
 print'The tigger inserted successfully'
end --update trigger alter
TRIGGER ins_trigger
ON instructor
AFTER INSERT
AS
BEGIN
   INSERT INTO backup_ins(ID, name, dept_name, salary)
   SELECT ID, name, dept_name, salary
   FROM inserted;
END;
--deleted tigger create
TRIGGER del_trigger
ON instructor
AFTER DELETE
AS
BEGIN
   INSERT INTO backup_del (ID, name, dept_name, salary)
   SELECT ID, name, dept_name, salary
   FROM deleted;
END;

DELETE FROM instructor WHERE ID = 32343;
select * from backup_del
```

Output:

The orginal table instructor is

ID	name	dept_name	salary

1	22222	Einstein	Physics	95000
2	12121	We	Finance	90000
3	32343	El Said	History	60000
4	45565	Katz	CSE	75000
5	98345	Kim	EEE	80000

After inserting one element the inserted table

ID	name	dept_name	salary
1	98346	AL AMIN	ICE	80000

After deleted tuple from instructor table the backup table is

ID	name	dept_name	salary
1	32343	El Said	History	60000

```
<?php
$base = mysqli_connect('localhost', 'root', '', 'insert');
if(isset($_POST['submit'])){      $name =
$_POST['name'];
   $email = $_POST['email'];
   $password = $_POST['password'];
   $sql = "INSERT INTO insertform(name, email, password) VALUES ('$name', '$email',
'$password')";
   if(mysqli_query($base, $sql)){
echo "Inserted successfully";
   }
else{
      echo "Insertion failed: " . mysqli_error($base); // Added error message for debugging
   }
}
```

Code:

```
mysqli_close($base); // Close the connection after use
?>
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>indert form</title>
   <style>        body{
background-color: antiquewhite;
          font-family: Arial, Helvetica, sans-serif;
       }        h1{
text-align: center;
       }
             label {
font-weight: bold;
          margin-bottom: 5px;

}

       input {            width:
100%;            padding: 8px;
margin-bottom: 10px;
border-radius: 8px;
          border-color: green;
       }
       input[type="submit"] {
background-color: blueviolet;            color:
white;            cursor: pointer;
padding: 5px 5px;            margin: 0 auto;
          display: block;

       }
   </style>
</head>
<body>
   <h1>Personal Details</h1>

   <form action="insert.php" method="POST">

       <label for="name">First Name : </label>
```

```
        <input type="text" id="name" name="name" placeholder="Enter your name"><br>
<label for="email">Email : </label>
        <input type="email" id="email" name="email" placeholder="Enter valid email "><br>
        <label for="passward">Passward : </label>
        <input type="password" id="password" name="password" placeholder="Enter 6 digit
password"><br>
        <input type="submit" name="submit" value="submit">
    </form>
</body>
</html>
```