JIS College of Engineering Department of Computer Science and Engineering Paper Name: Database Management System Lab Paper Code: CS 593

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Group	2
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Computer Science and Engineering Paper
Name: Database Management System Lab
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Vision and Mission of the Department:-

Vision

The Computer Science and Engineering Department at JIS College of Engineering will be a leader in computing innovation through excellence in undergraduate and graduate education, active research programs and the dissemination of knowledge. The Department will leverage both the international and interdisciplinary nature of computing.

Mission

The Department's mission is

- To provide students and faculty with an open environment that encourages professional and personal growth.
- To prepare students for flexible career paths and continuing advancement in computing.
- To motivate and encourage the students to build successful career in the computing professions through flexible programme of study that can be adapted to support individual career goals.

Department Program Educational Objectives (PEOs)

The Program Educational Objectives (PEO) of the Mechanical Engineering Program will demonstrate the essential components of a successful engineer for the best career based professional accomplishments after graduation. Therefore the objectives are following:

PEO 1: Graduates will be engineering practitioners and leaders, who would assist to resolve industry's technological problems.

PEO 2: Graduates will be engineering professionals, innovators or entrepreneurs engaged in technology development, technology deployment, or engineering system implementation in industry and research institute.

PEO 3: Graduates will interact with their peers in other disciplines in industry and society and contribute to social awareness and the economic growth of the country.

PEO 4: Graduates will be successful in pursuing higher studies in engineering or management and will pursue career paths in teaching or research.

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Program Specific Outcomes (PSOs)

A graduate of the Computer Science and Engineering Program will demonstrate:

PSO1: Professional Skills: The ability to understand, analyze and develop computer programs in the areas related to algorithms, system software, multimedia, web design, big data analytics, and networking for efficient design of computer-based systems of varying complexity.

PSO2: Problem-Solving Skills: The ability to apply standard practices and strategies in software project development using open-ended programming environments to deliver a quality product for business success.

PSO3: Successful Career and Entrepreneurship: The ability to employ modern computer languages, environments, and platforms in creating innovative career paths to be an entrepreneur, and a zest for higher studies and research.

Course Outcomes (COs) :

On completion of the course students will be able to

1. CO1: Apply the knowledge of Entity Relationship (E-R) diagram for an application.
2. CO2: Create a normalized relational database model
3. CO3: Analyze real world queries to generate reports from it.
4. CO4: Determine whether the transaction satisfies the ACID properties.
5. CO5: Create and maintain the database of an organization

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3	Pre-Assignment 3	29/9/20	29/9/20		
4	Pre-Assignment 4	6/10/20	6/10/20		
5	Pre-Assignment 5	13/10/20	13/10/20		
6	Assignment 1	10/11/20	10/11/20		
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Pre-Assignment 1:

Create table faculty Eid, Ename, Eadd, Edep, Esal Insert 10 rows

1. Find the address of employee

2. Find the name of employee whose address is Mumbai

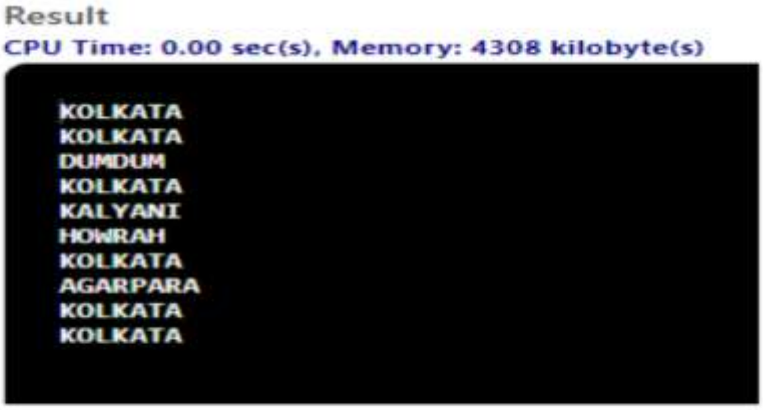
3. Find the Eid, Edept, Esal when address is Delhi

4. Find the address of the employee whose department is cse and salary greater than 50000

5. Find the address of employee where id is 101 & dept is CSE

6. Sort the table order to dept

```
create table employee(id int, name char(20), dist char(20), dept char(3), sal int); insert
into employee values(101,'SOUNETRA GHOSAL','KOLKATA','CSE',10000); insert
into employee values(020,'SANJIT GHOSAL','KOLKATA','EE',35000); insert into
employee values(030,'ARUNA GHOSAL','MUMBAI','ECE',55000);
insert into employee values(040,'DHARAMPAL SINGH SIR','KOLKATA','CSE',65000);
insert into employee values(050,'APURBA PAL SIR','DELHI','CSE',45000); insert into
employee values(060,'BIKRAMJIT SIR','MUMBAI','CSE',75000);
insert into employee values(070,'ADRIJA GUHA MADAM','KOLKATA','HU',15000);
insert into employee values(080,'SABYASACHI SEN SIR','DELHI','PHY',55000);

insert into employee values(090,'ANANYA BARMAN MADAM','KOLKATA','CHE',35000);
insert into employee values(100,'APURBA GHOSH SIR','KOLKATA','MAT',55000); select
dist from employee;
```

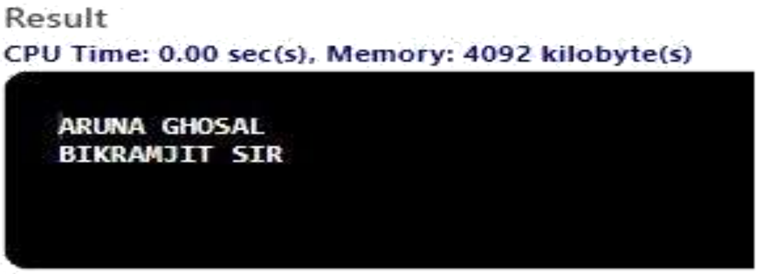


Result

CPU Time: 0.00 sec(s), Memory: 4308 kilobyte(s)

```
KOLKATA
KOLKATA
DUMDUM
KOLKATA
KALYANI
HOWRAH
KOLKATA
AGARPARA
KOLKATA
KOLKATA
```

```
create table employee(id int, name char(20), dist char(20), dept char(3), sal int); insert
into employee values(101,'SOUNETRA GHOSAL','KOLKATA','CSE',10000); insert
into employee values(020,'SANJIT GHOSAL','KOLKATA','EE',35000); insert into
employee values(030,'ARUNA GHOSAL','MUMBAI','ECE',55000);
insert into employee values(040,'DHARAMPAL SINGH SIR','KOLKATA','CSE',65000);
insert into employee values(050,'APURBA PAL SIR','DELHI','CSE',45000); insert into
employee values(060,'BIKRAMJIT SIR','MUMBAI','CSE',75000);
insert into employee values(070,'ADRIJA GUHA MADAM','KOLKATA','HU',15000);
insert into employee values(080,'SABYASACHI SEN SIR','DELHI','PHY',55000);
insert into employee values(090,'ANANYA BARMAN MADAM','KOLKATA','CHE',35000);
insert into employee values(100,'APURBA GHOSH SIR','KOLKATA','MAT',55000); select
name from employee where dist = 'MUMBAI';
```

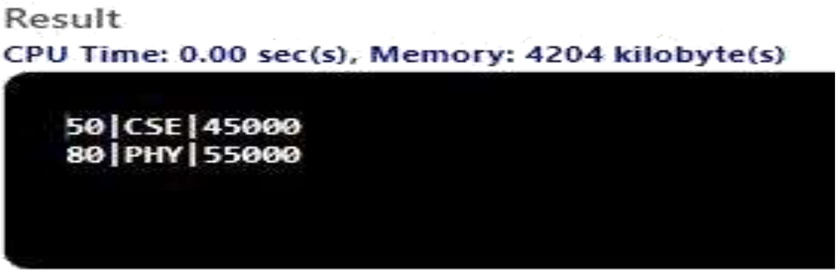


Result

CPU Time: 0.00 sec(s), Memory: 4092 kilobyte(s)

```
ARUNA GHOSAL
BIKRAMJIT SIR
```

```
create table employee(id int, name char(20), dist char(20), dept char(3), sal int); insert
into employee values(101,'SOUNETRA GHOSAL','KOLKATA','CSE',10000); insert
into employee values(020,'SANJIT GHOSAL','KOLKATA','EE',35000); insert into
employee values(030,'ARUNA GHOSAL','MUMBAI','ECE',55000);
insert into employee values(040,'DHARAMPAL SINGH SIR','KOLKATA','CSE',65000);
insert into employee values(050,'APURBA PAL SIR','DELHI','CSE',45000); insert into
employee values(060,'BIKRAMJIT SIR','MUMBAI','CSE',75000);
insert into employee values(070,'ADRIJA GUHA MADAM','KOLKATA','HU',15000);
insert into employee values(080,'SABYASACHI SEN SIR','DELHI','PHY',55000);
insert into employee values(090,'ANANYA BARMAN MADAM','KOLKATA','CHE',35000);
insert into employee values(100,'APURBA GHOSH SIR','KOLKATA','MAT',55000); select
id,dept,sal from employee where dist = 'DELHI';
```

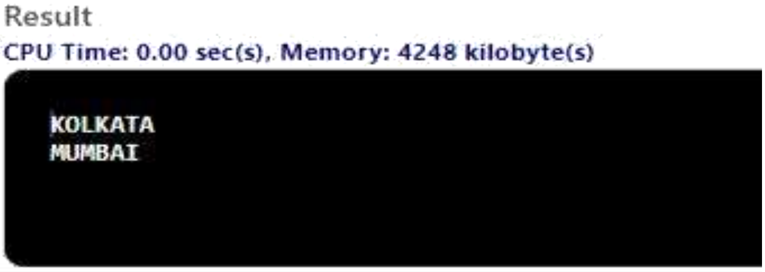


Result

CPU Time: 0.00 sec(s), Memory: 4204 kilobyte(s)

```
50|CSE|45000
80|PHY|55000
```

```
create table employee(id int, name char(20), dist char(20), dept char(3), sal int); insert
into employee values(101,'SOUNETRA GHOSAL','KOLKATA','CSE',10000); insert
into employee values(020,'SANJIT GHOSAL','KOLKATA','EE',35000); insert into
employee values(030,'ARUNA GHOSAL','MUMBAI','ECE',55000);
insert into employee values(040,'DHARAMPAL SINGH SIR','KOLKATA','CSE',65000);
insert into employee values(050,'APURBA PAL SIR','DELHI','CSE',45000); insert into
employee values(060,'BIKRAMJIT SIR','MUMBAI','CSE',75000);
insert into employee values(070,'ADRIJA GUHA MADAM','KOLKATA','HU',15000);
insert into employee values(080,'SABYASACHI SEN SIR','DELHI','PHY',55000);
insert into employee values(090,'ANANYA BARMAN MADAM','KOLKATA','CHE',35000);
insert into employee values(100,'APURBA GHOSH SIR','KOLKATA','MAT',55000); select
dist from employee where dept = 'CSE' AND sal>50000;
```

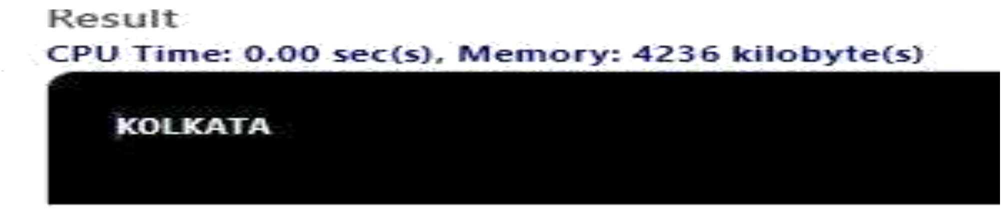


Result

CPU Time: 0.00 sec(s), Memory: 4248 kilobyte(s)

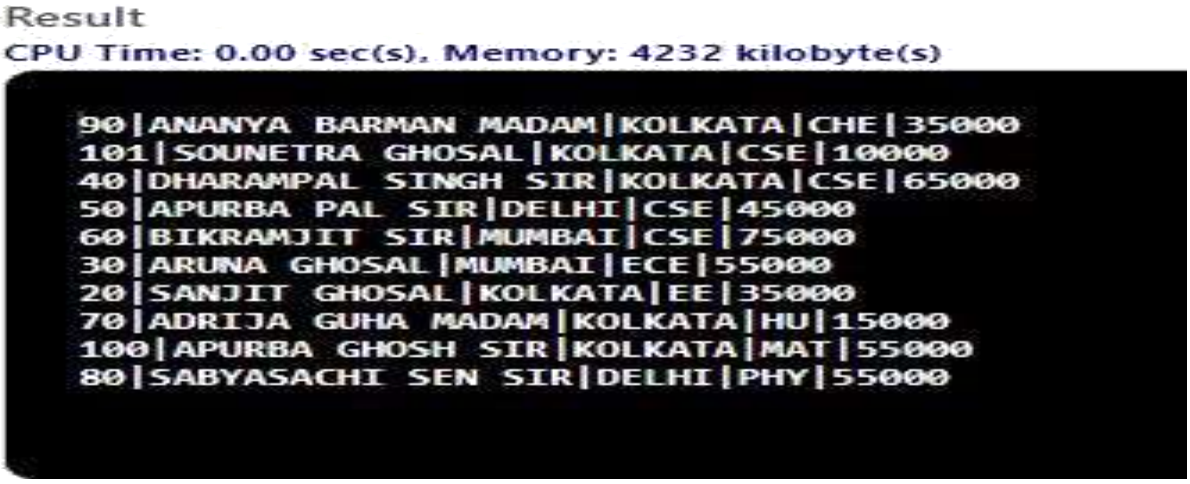
```
KOLKATA
MUMBAI
```

```
create table employee(id int, name char(20), dist char(20), dept char(3), sal int); insert
into employee values(101,'SOUNETRA GHOSAL','KOLKATA','CSE',10000); insert
into employee values(020,'SANJIT GHOSAL','KOLKATA','EE',35000); insert into
employee values(030,'ARUNA GHOSAL','MUMBAI','ECE',55000);
insert into employee values(040,'DHARAMPAL SINGH SIR','KOLKATA','CSE',65000);
insert into employee values(050,'APURBA PAL SIR','DELHI','CSE',45000); insert into
employee values(060,'BIKRAMJIT SIR','MUMBAI','CSE',75000);
insert into employee values(070,'ADRIJA GUHA MADAM','KOLKATA','HU',15000);
insert into employee values(080,'SABYASACHI SEN SIR','DELHI','PHY',55000);
insert into employee values(090,'ANANYA BARMAN MADAM','KOLKATA','CHE',35000);
insert into employee values(100,'APURBA GHOSH SIR','KOLKATA','MAT',55000); select
dist from employee where id = 101 AND dept= 'CSE';
```



```
Result
CPU Time: 0.00 sec(s), Memory: 4236 kilobyte(s)

KOLKATA
```

```
create table employee(id int, name char(20), dist char(20), dept char(3), sal int); insert
into employee values(101,'SOUNETRA GHOSAL','KOLKATA','CSE',10000); insert
into employee values(020,'SANJIT GHOSAL','KOLKATA','EE',35000); insert into
employee values(030,'ARUNA GHOSAL','MUMBAI','ECE',55000);
insert into employee values(040,'DHARAMPAL SINGH SIR','KOLKATA','CSE',65000);
insert into employee values(050,'APURBA PAL SIR','DELHI','CSE',45000); insert into
employee values(060,'BIKRAMJIT SIR','MUMBAI','CSE',75000);
insert into employee values(070,'ADRIJA GUHA MADAM','KOLKATA','HU',15000);
insert into employee values(080,'SABYASACHI SEN SIR','DELHI','PHY',55000);
insert into employee values(090,'ANANYA BARMAN MADAM','KOLKATA','CHE',35000);
insert into employee values(100,'APURBA GHOSH SIR','KOLKATA','MAT',55000);
SELECT * FROM employee ORDER BY dept;
```



Result

CPU Time: 0.00 sec(s), Memory: 4232 kilobyte(s)

```
90|ANANYA BARMAN MADAM|KOLKATA|CHE|35000
101|SOUNETRA GHOSAL|KOLKATA|CSE|10000
40|DHARAMPAL SINGH SIR|KOLKATA|CSE|65000
50|APURBA PAL SIR|DELHI|CSE|45000
60|BIKRAMJIT SIR|MUMBAI|CSE|75000
30|ARUNA GHOSAL|MUMBAI|ECE|55000
20|SANJIT GHOSAL|KOLKATA|EE|35000
70|ADRIJA GUHA MADAM|KOLKATA|HU|15000
100|APURBA GHOSH SIR|KOLKATA|MAT|55000
80|SABYASACHI SEN SIR|DELHI|PHY|55000
```

Pre-Assignment 2:

1. Create faculty table & add fid primary key, fname, fadd, fdept, fsal
2. Add 10 rows
1. Find the name of the faculty belongs to CSE and IT
2.find the name of faculty belongs to ECE. IT.CSE, MCA, EE
3.Find the name of the faculty whose salary greater than 5000 and address 'Kolkata'
4. find the of the faculty not living in kolkata
5.Find the distinct faculty address from faculty table
6.Increase the salary of faculty by 5000 and display it
7. find the minimum salary from faculty table
8.find the maximum salary from faculty table
9.find the average salaryfrom faculty table
10.find the total salary of faculty
11. find the number of faculty present in faculty table

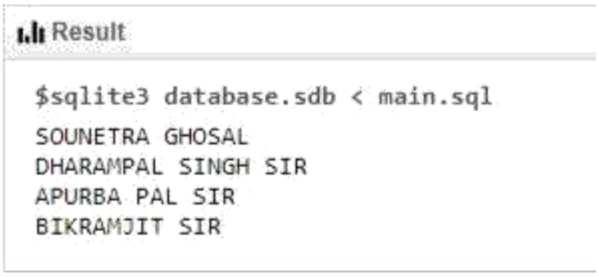
```
create table faculty(id int, name char(20), dist char(20), dept char(3), sal int);

insert into faculty values(101,'SOUNETRA GHOSAL','KOLKATA','IT',4000);

insert into faculty values(020,'SANJIT GHOSAL','KOLKATA','EE',3500); insert

into faculty values(030,'ARUNA GHOSAL','MUMBAI','ECE',55000);

insert into faculty values(040,'DHARAMPAL SINGH SIR','KOLKATA','CSE',1500);

insert into faculty values(050,'APURBA PAL SIR','KALYANI','CSE',45000);
```

insert into faculty values(060,'BIKRAMJIT SIR','MUMBAI','CSE',75000);

insert into faculty values(070,'ADRIJA GUHA MADAM','KOLKATA','HU',15000);

insert into faculty values(080,'SABYASACHI SEN SIR','DELHI','PHY',55000);

insert into faculty values(090,'ANANYA BARMAN MADAM','KOLKATA','CHE',35000); insert into faculty values(100,'APURBA GHOSH SIR','KOLKATA','MCA',55000); select name from faculty where dept in ('CSE','IT');



```
$sqlite3 database.sdb < main.sql
SOUNETRA GHOSAL
DHARAMPAL SINGH SIR
APURBA PAL SIR
BIKRAMJIT SIR
```

create table faculty(id int, name char(20), dist char(20), dept char(3), sal int);

insert into faculty values(101,'SOUNETRA GHOSAL','KOLKATA','IT',4000);

insert into faculty values(020,'SANJIT GHOSAL','KOLKATA','EE',3500); insert into faculty values(030,'ARUNA GHOSAL','MUMBAI','ECE',55000);

insert into faculty values(040,'DHARAMPAL SINGH SIR','KOLKATA','CSE',1500);

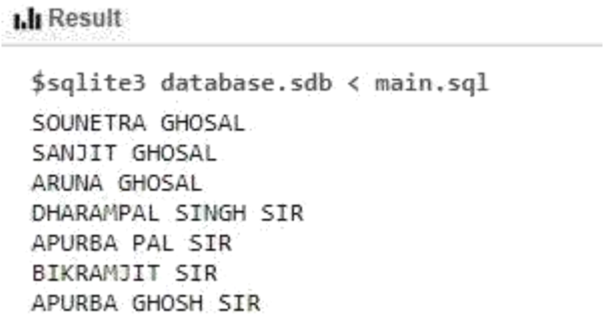
insert into faculty values(050,'APURBA PAL SIR','KALYANI','CSE',45000); insert into faculty values(060,'BIKRAMJIT SIR','MUMBAI','CSE',75000);

insert into faculty values(070,'ADRIJA GUHA MADAM','KOLKATA','HU',15000);

insert into faculty values(080,'SABYASACHI SEN SIR','DELHI','PHY',55000);

insert into faculty values(090,'ANANYA BARMAN MADAM','KOLKATA','CHE',35000);

insert into faculty values(100,'APURBA GHOSH SIR','KOLKATA','MCA',55000); select name from faculty where dept in ('CSE','IT','ECE','EE','MCA');



```
$sqlite3 database.sdb < main.sql
SOUNETRA GHOSAL
SANJIT GHOSAL
ARUNA GHOSAL
DHARAMPAL SINGH SIR
APURBA PAL SIR
BIKRAMJIT SIR
APURBA GHOSH SIR
```

create table faculty(id int, name char(20), dist char(20), dept char(3), sal int);

insert into faculty values(101,'SOUNETRA GHOSAL','KOLKATA','IT',4000);

insert into faculty values(020,'SANJIT GHOSAL','KOLKATA','EE',3500); insert

into faculty values(030,'ARUNA GHOSAL','MUMBAI','ECE',55000);

insert into faculty values(040,'DHARAMPAL SINGH SIR','KOLKATA','CSE',1500);

insert into faculty values(050,'APURBA PAL SIR','KALYANI','CSE',45000); insert

into faculty values(060,'BIKRAMJIT SIR','MUMBAI','CSE',75000);

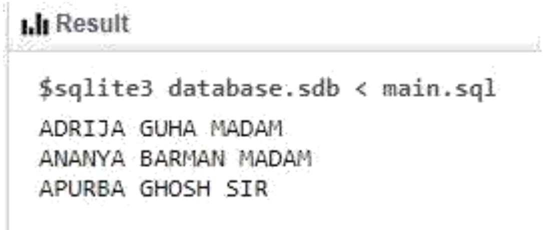
insert into faculty values(070,'ADRIJA GUHA MADAM','KOLKATA','HU',15000);

insert into faculty values(080,'SABYASACHI SEN SIR','DELHI','PHY',55000);

insert into faculty values(090,'ANANYA BARMAN MADAM','KOLKATA','CHE',35000);

insert into faculty values(100,'APURBA GHOSH SIR','KOLKATA','MCA',55000); select

name from faculty where sal > 5000 and dist = 'KOLKATA';



```
$sqlite3 database.sdb < main.sql
ADRIJA GUHA MADAM
ANANYA BARMAN MADAM
APURBA GHOSH SIR
```

create table faculty(id int, name char(20), dist char(20), dept char(3), sal int);

insert into faculty values(101,'SOUNETRA GHOSAL','KOLKATA','IT',4000);

insert into faculty values(020,'SANJIT GHOSAL','KOLKATA','EE',3500); insert

into faculty values(030,'ARUNA GHOSAL','MUMBAI','ECE',55000);

insert into faculty values(040,'DHARAMPAL SINGH SIR','KOLKATA','CSE',1500);

insert into faculty values(050,'APURBA PAL SIR','KALYANI','CSE',45000);

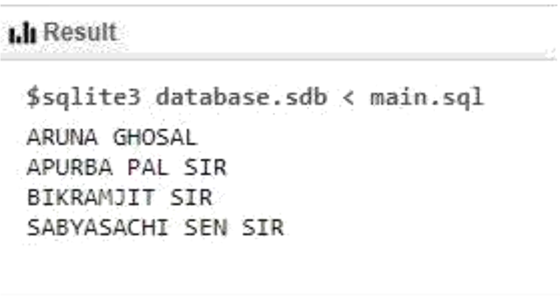
insert into faculty values(060,'BIKRAMJIT SIR','MUMBAI','CSE',75000);

insert into faculty values(070,'ADRIJA GUHA MADAM','KOLKATA','HU',15000);

insert into faculty values(080,'SABYASACHI SEN SIR','DELHI','PHY',55000);

insert into faculty values(090,'ANANYA BARMAN MADAM','KOLKATA','CHE',35000);

insert into faculty values(100,'APURBA GHOSH SIR','KOLKATA','MCA',55000); select name from faculty where dist NOT IN ('KOLKATA') ;



```
$sqlite3 database.sdb < main.sql
ARUNA GHOSAL
APURBA PAL SIR
BIKRAMJIT SIR
SABYASACHI SEN SIR
```

create table faculty(id int, name char(20), dist char(20), dept char(3), sal int);

insert into faculty values(101,'SOUNETRA GHOSAL','KOLKATA','IT',4000);

insert into faculty values(020,'SANJIT GHOSAL','KOLKATA','EE',3500); insert into faculty values(030,'ARUNA GHOSAL','MUMBAI','ECE',55000);

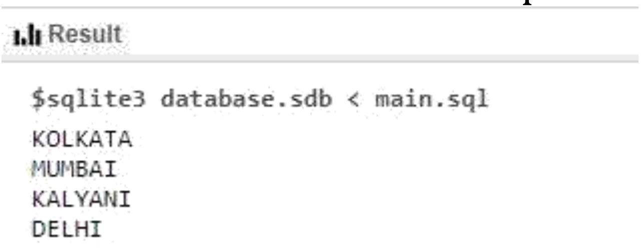
insert into faculty values(040,'DHARAMPAL SINGH SIR','KOLKATA','CSE',1500);

insert into faculty values(050,'APURBA PAL SIR','KALYANI','CSE',45000); insert into faculty values(060,'BIKRAMJIT SIR','MUMBAI','CSE',75000);

insert into faculty values(070,'ADRIJA GUHA MADAM','KOLKATA','HU',15000);

insert into faculty values(080,'SABYASACHI SEN SIR','DELHI','PHY',55000);

insert into faculty values(090,'ANANYA BARMAN MADAM','KOLKATA','CHE',35000); insert into faculty values(100,'APURBA GHOSH SIR','KOLKATA','MCA',55000); select distinct dist from faculty;



```
$sqlite3 database.sdb < main.sql
KOLKATA
MUMBAI
KALYANI
DELHI
```

create table faculty(id int, name char(20), dist char(20), dept char(3), sal int);

insert into faculty values(101,'SOUNETRA GHOSAL','KOLKATA','IT',4000);

insert into faculty values(020,'SANJIT GHOSAL','KOLKATA','EE',3500); insert

into faculty values(030,'ARUNA GHOSAL','MUMBAI','ECE',55000);

insert into faculty values(040,'DHARAMPAL SINGH SIR','KOLKATA','CSE',1500);

insert into faculty values(050,'APURBA PAL SIR','KALYANI','CSE',45000); insert

into faculty values(060,'BIKRAMJIT SIR','MUMBAI','CSE',75000);

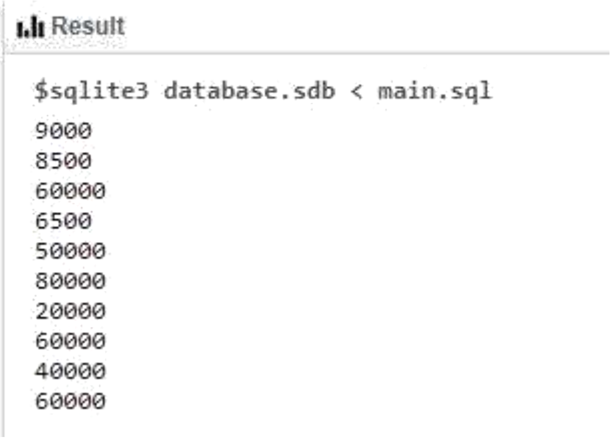
insert into faculty values(070,'ADRIJA GUHA MADAM','KOLKATA','HU',15000);

insert into faculty values(080,'SABYASACHI SEN SIR','DELHI','PHY',55000);

insert into faculty values(090,'ANANYA BARMAN

MADAM','KOLKATA','CHE',35000); insert into faculty values(100,'APURBA GHOSH

SIR','KOLKATA','MCA',55000); select sal+5000 from faculty;



```
$sqlite3 database.sdb < main.sql
9000
8500
60000
6500
50000
80000
20000
60000
40000
60000
```

create table faculty(id int, name char(20), dist char(20), dept char(3), sal int);

insert into faculty values(101,'SOUNETRA GHOSAL','KOLKATA','IT',4000);

insert into faculty values(020,'SANJIT GHOSAL','KOLKATA','EE',3500);

insert into faculty values(030,'ARUNA GHOSAL','MUMBAI','ECE',55000);

insert into faculty values(040,'DHARAMPAL SINGH SIR','KOLKATA','CSE',1500);

insert into faculty values(050,'APURBA PAL SIR','KALYANI','CSE',45000); insert

into faculty values(060,'BIKRAMJIT SIR','MUMBAI','CSE',75000);

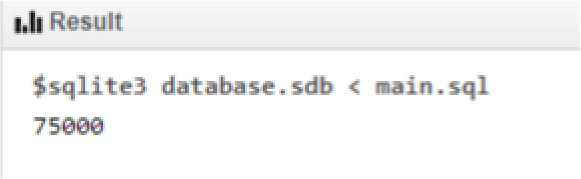
insert into faculty values(070,'ADRIJA GUHA MADAM','KOLKATA','HU',15000);

insert into faculty values(080,'SABYASACHI SEN SIR','DELHI','PHY',55000);

insert into faculty values(090,'ANANYA BARMAN

MADAM','KOLKATA','CHE',35000); insert into faculty values(100,'APURBA GHOSH

SIR','KOLKATA','MCA',55000); select MAX(sal) from faculty;



```
$sqlite3 database.sdb < main.sql
75000
```

create table faculty(id int, name char(20), dist char(20), dept char(3), sal int);

insert into faculty values(101,'SOUNETRA GHOSAL','KOLKATA','IT',4000);

insert into faculty values(020,'SANJIT GHOSAL','KOLKATA','EE',3500); insert

into faculty values(030,'ARUNA GHOSAL','MUMBAI','ECE',55000);

insert into faculty values(040,'DHARAMPAL SINGH SIR','KOLKATA','CSE',1500);

insert into faculty values(050,'APURBA PAL SIR','KALYANI','CSE',45000); insert

into faculty values(060,'BIKRAMJIT SIR','MUMBAI','CSE',75000);

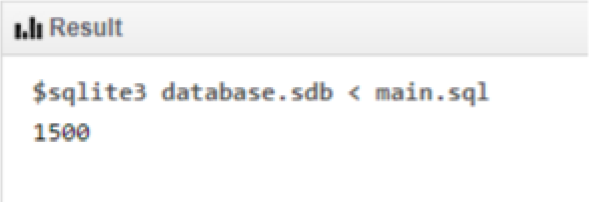
insert into faculty values(070,'ADRIJA GUHA MADAM','KOLKATA','HU',15000);

insert into faculty values(080,'SABYASACHI SEN SIR','DELHI','PHY',55000);

insert into faculty values(090,'ANANYA BARMAN

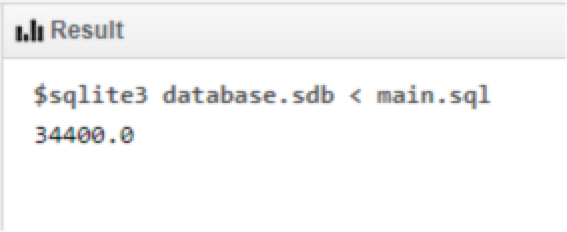
MADAM','KOLKATA','CHE',35000); insert into faculty values(100,'APURBA GHOSH

SIR','KOLKATA','MCA',55000); select MIN(sal) from faculty;



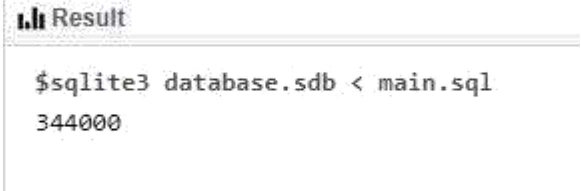
```
$sqlite3 database.sdb < main.sql
1500
```

```
create table faculty(id int, name char(20), dist char(20), dept char(3), sal int);
insert into faculty values(101,'SOUNETRA GHOSAL','KOLKATA','IT',4000);
insert into faculty values(020,'SANJIT GHOSAL','KOLKATA','EE',3500); insert
into faculty values(030,'ARUNA GHOSAL','MUMBAI','ECE',55000);
insert into faculty values(040,'DHARAMPAL SINGH SIR','KOLKATA','CSE',1500);
insert into faculty values(050,'APURBA PAL SIR','KALYANI','CSE',45000); insert
into faculty values(060,'BIKRAMJIT SIR','MUMBAI','CSE',75000);
insert into faculty values(070,'ADRIJA GUHA MADAM','KOLKATA','HU',15000);
insert into faculty values(080,'SABYASACHI SEN SIR','DELHI','PHY',55000);
insert into faculty values(090,'ANANYA BARMAN
MADAM','KOLKATA','CHE',35000); insert into faculty values(100,'APURBA GHOSH
SIR','KOLKATA','MCA',55000); select avg(sal) from faculty;
```



```
$sqlite3 database.sdb < main.sql
34400.0
```

```
create table faculty(id int, name char(20), dist char(20), dept char(3), sal int);
insert into faculty values(101,'SOUNETRA GHOSAL','KOLKATA','IT',4000);
insert into faculty values(020,'SANJIT GHOSAL','KOLKATA','EE',3500); insert
into faculty values(030,'ARUNA GHOSAL','MUMBAI','ECE',55000);
insert into faculty values(040,'DHARAMPAL SINGH SIR','KOLKATA','CSE',1500);
insert into faculty values(050,'APURBA PAL SIR','KALYANI','CSE',45000); insert
into faculty values(060,'BIKRAMJIT SIR','MUMBAI','CSE',75000);
insert into faculty values(070,'ADRIJA GUHA MADAM','KOLKATA','HU',15000);
insert into faculty values(080,'SABYASACHI SEN SIR','DELHI','PHY',55000);
insert into faculty values(090,'ANANYA BARMAN
MADAM','KOLKATA','CHE',35000); insert into faculty values(100,'APURBA GHOSH
SIR','KOLKATA','MCA',55000); select sum(sal) from faculty;
```



```
$sqlite3 database.sdb < main.sql
344000
```

create table faculty(id int, name char(20), dist char(20), dept char(3), sal int);

insert into faculty values(101,'SOUNETRA GHOSAL','KOLKATA','IT',4000);

insert into faculty values(020,'SANJIT GHOSAL','KOLKATA','EE',3500); insert

into faculty values(030,'ARUNA GHOSAL','MUMBAI','ECE',55000);

insert into faculty values(040,'DHARAMPAL SINGH SIR','KOLKATA','CSE',1500);

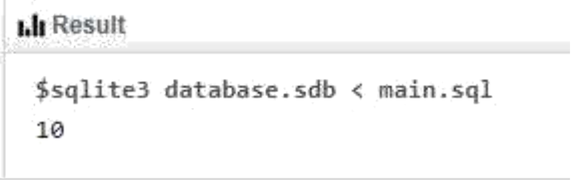
insert into faculty values(050,'APURBA PAL SIR','KALYANI','CSE',45000); insert

into faculty values(060,'BIKRAMJIT SIR','MUMBAI','CSE',75000);

insert into faculty values(070,'ADRIJA GUHA MADAM','KOLKATA','HU',15000);

insert into faculty values(080,'SABYASACHI SEN SIR','DELHI','PHY',55000);

insert into faculty values(090,'ANANYA BARMAN MADAM','KOLKATA','CHE',35000); insert into faculty values(100,'APURBA GHOSH SIR','KOLKATA','MCA',55000); select count(*) from faculty;



```
$sqlite3 database.sdb < main.sql
10
```

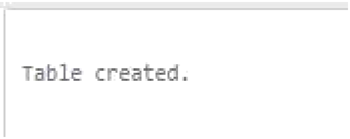
Pre-Assignment 3:

Emp(Empid , emap name , empadd, esal, edept)

Q1: Find the total amount of the salary on each dept

Q2: Find the average amount of the salary on each dept
Q3: Find the number of student according to address
Q4: Find the number of student according to address having value greater than 1
Q5: Find the average amount of the salary on each dept having value greater than 50

create table empl (eid number (6) primary key, ename varchar2(20), eadd varchar2(20), edept varchar2(6), esal number(8,2));



```
Table created.
```

insert into empl values(010,'SOUNETRA GHOSAL','KOLKATA','CSE',10);

insert into empl values(020,'SANJIT GHOSAL','KOLKATA','EE',20); insert

into empl values(030,'ARUNA GHOSAL','MUMBAI','ECE',30);

insert into empl values(040,'DHARAMPAL SINGH SIR','KOLKATA','CSE',40);

insert into empl values(050,'APURBA PAL SIR','KALYANI','CSE',50); insert into

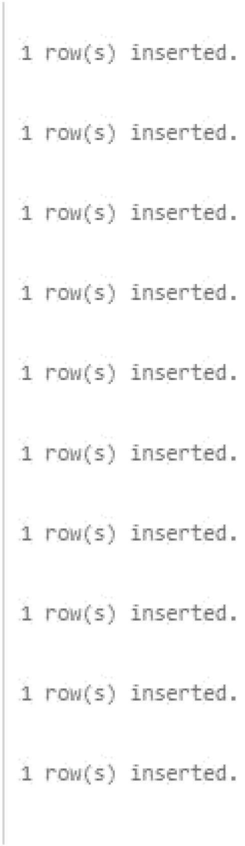
empl values(060,'BIKRAMJIT SIR','MUMBAI','CSE',60);

insert into empl values(070,'ADRIJA GUHA MADAM','KOLKATA','HU',70);

insert into empl values(080,'SABYASACHI SEN SIR','DELHI','PHY',80);

insert into empl values(090,'ANANYA BARMAN MADAM','KOLKATA','CHE',90);

insert into empl values(100,'APURBA GHOSH SIR','KOLKATA','MAT',100);



```
1 row(s) inserted.

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```
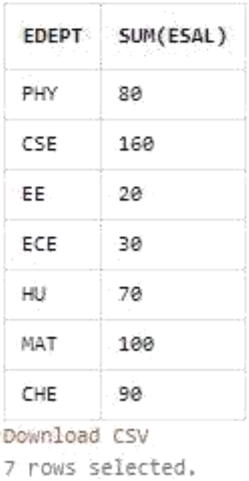

select edept, sum(esal) from empl group by edept;

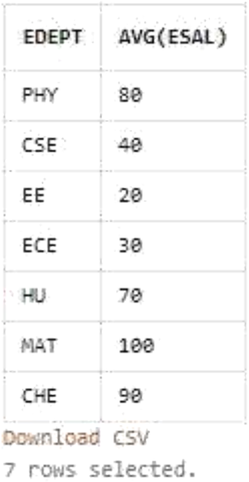


EDEPT	SUM(ESAL)
PHY	80
CSE	160
EE	20
ECE	30
HU	70
MAT	100
CHE	90

Download CSV

7 rows selected.

select edept, avg(esal) from empl group by edept;

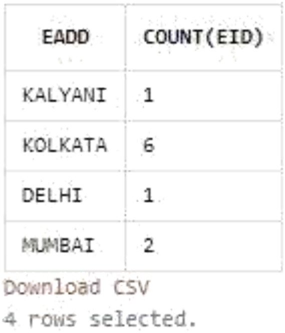


EDEPT	AVG(ESAL)
PHY	80
CSE	40
EE	20
ECE	30
HU	70
MAT	100
CHE	90

Download CSV

7 rows selected.

select eadd, count(eid) from empl group by eadd;

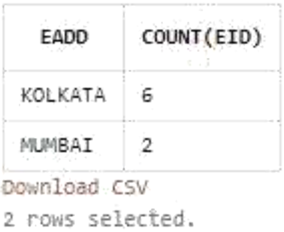


EADD	COUNT(EID)
KALYANI	1
KOLKATA	6
DELHI	1
MUMBAI	2

Download CSV

4 rows selected.

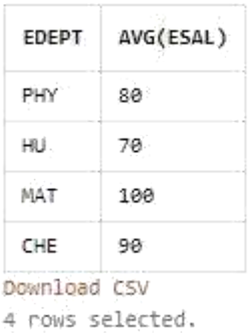
select eadd, count(eid) from empl group by eadd having count(eid)>1;



EADD	COUNT(EID)
KOLKATA	6
MUMBAI	2

```
Download CSV
2 rows selected.
```

select edept, avg(esal) from empl group by edept having avg(esal)>50;



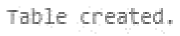
EDEPT	AVG(ESAL)
PHY	80
HU	70
MAT	100
CHE	90

```
Download CSV
4 rows selected.
```

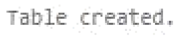
Pre-Assignment 4:

create table sales (said number (6) primary key, sname varchar2(12), scity varchar2(12), scom number(8,2));

create table cust (cid number (6), cname varchar2(12), ccity varchar2(12), cgrade varchar2(3), said number (6) references sales);



```
Table created.
```



```
Table created.
```

insert into sales values(101,'SOUNETRA','KOLKATA',100);

insert into sales values(102,'SANJIT','DELHI',500); insert

into sales values(103,'ARUNA','MUMBAI',1000); insert into

sales values(104,'NILADRI','CHENNAI',1500); insert into

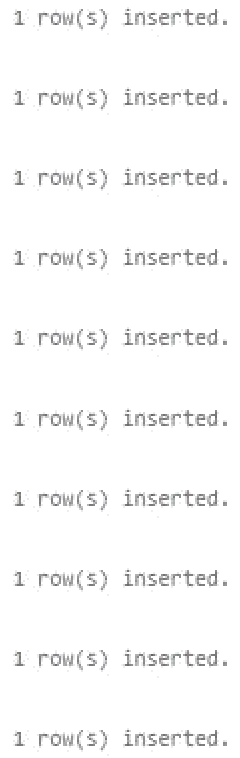
sales values(105,'INDRAJIT','KALYANI',2000); insert into

sales values(106,'SUMAN','NAGPUR',3000); insert into

sales values(107,'SAIKAT','KASHMIR',4000); insert into

sales values(108,'MAINAK','GOA',5000);

```
insert  into  sales  values(109,'NILESH','KERALA',6000);

insert into sales values(110,'SAYAK','SILIGURI',7000);
```



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1 row(s) inserted.

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1 row(s) inserted.

1 row(s) inserted.
```

```
insert into cust values(201,'DPS SIR','KOLKATA','A++',101);

insert into cust values(202,'AP SIR','DELHI','AA',101); insert

into cust values(203,'BKJ SIR','PATNA','B',102); insert into cust

values(204,'PR MADAM','RANCHI','C',103); insert into cust

values(205,'SB MADAM','KALYANI','F',104); insert into cust

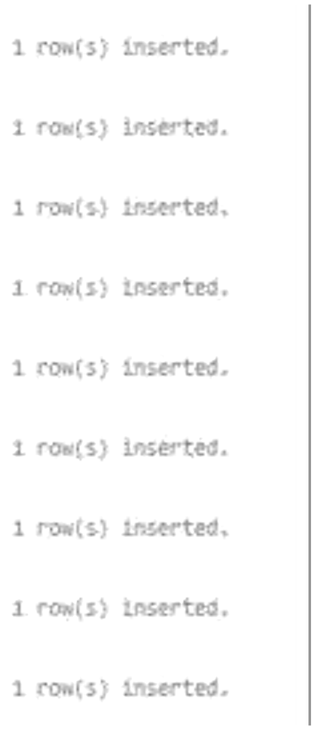
values(206,'AG SIR','HOWRAH','C++',109); insert into cust

values(207,'BN SIR','BISHNUPUR','AA',108); insert into cust

values(208,'JC SIR','KANCHRAPARA','B++',109); insert into

cust values(209,'SS SIR','SHANTINIKETAN','D',110); insert into

cust values(210,'IN MADAM','MALDA','A',110);
```



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1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```
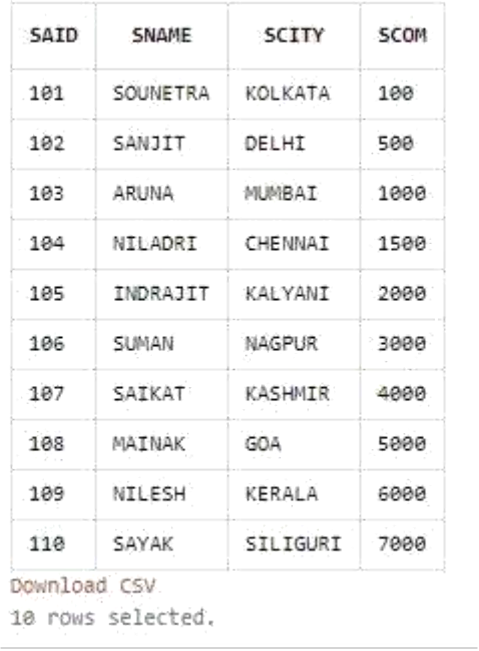
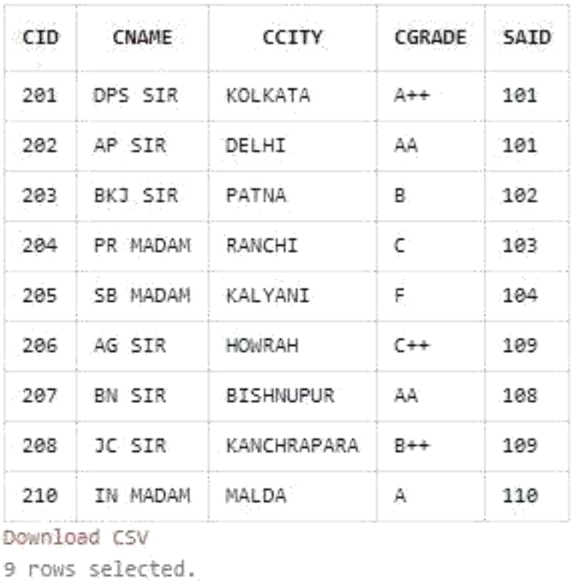

select * from sales;



SAID	SNAME	SCITY	SCOM
101	SOUNETRA	KOLKATA	100
102	SANJIT	DELHI	500
103	ARUNA	MUMBAI	1000
104	NILADRI	CHENNAI	1500
105	INDRAJIT	KALYANI	2000
106	SUMAN	NAGPUR	3000
107	SAIKAT	KASHMIR	4000
108	MAINAK	GOA	5000
109	NILESH	KERALA	6000
110	SAYAK	SILIGURI	7000

```
Download CSV
10 rows selected.
```

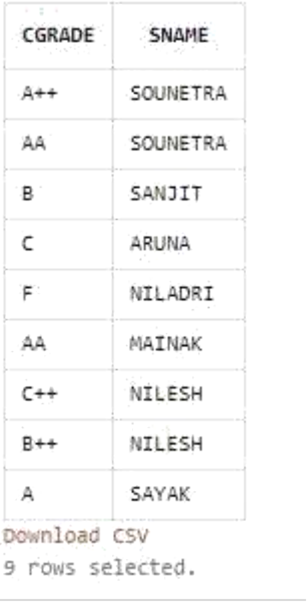
select * from cust;



CID	CNAME	CCITY	CGRADE	SAID
201	DPS SIR	KOLKATA	A++	101
202	AP SIR	DELHI	AA	101
203	BKJ SIR	PATNA	B	102
204	PR MADAM	RANCHI	C	103
205	SB MADAM	KALYANI	F	104
206	AG SIR	HOWRAH	C++	109
207	BN SIR	BISHNUPUR	AA	108
208	JC SIR	KANCHRAPARA	B++	109
210	IN MADAM	MALDA	A	110

Download CSV
9 rows selected.

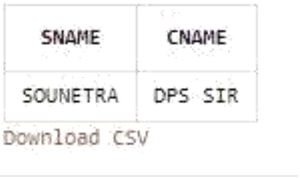
select cust.cgrade, sales.sname from sales inner join cust on sales.said=cust.said;



CGRADE	SNAME
A++	SOUNETRA
AA	SOUNETRA
B	SANJIT
C	ARUNA
F	NILADRI
AA	MAINAK
C++	NILESH
B++	NILESH
A	SAYAK

Download CSV
9 rows selected.

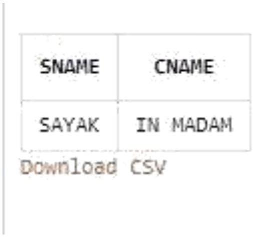
select sales.sname, cust.cname from sales inner join cust on cust.cname='DPS SIR'
AND sales.said=cust.said;



SNAME	CNAME
SOUNETRA	DPS SIR

Download CSV

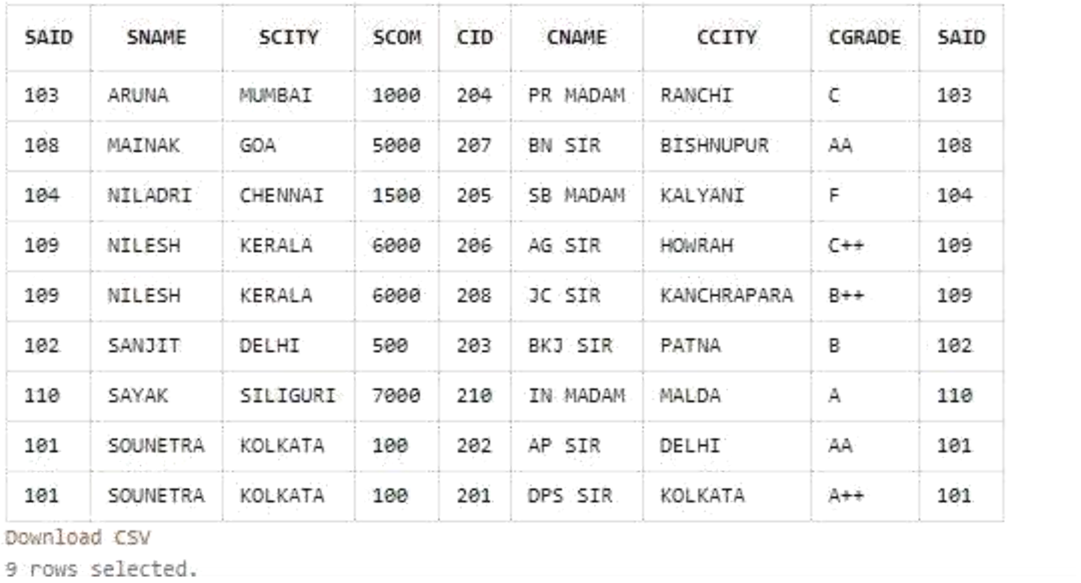
select sales.sname, cust.cname from sales inner join cust on cust.cgrade='A' AND sales.said=cust.said;



SNAME	CNAME
SAYAK	IN MADAM

Download CSV

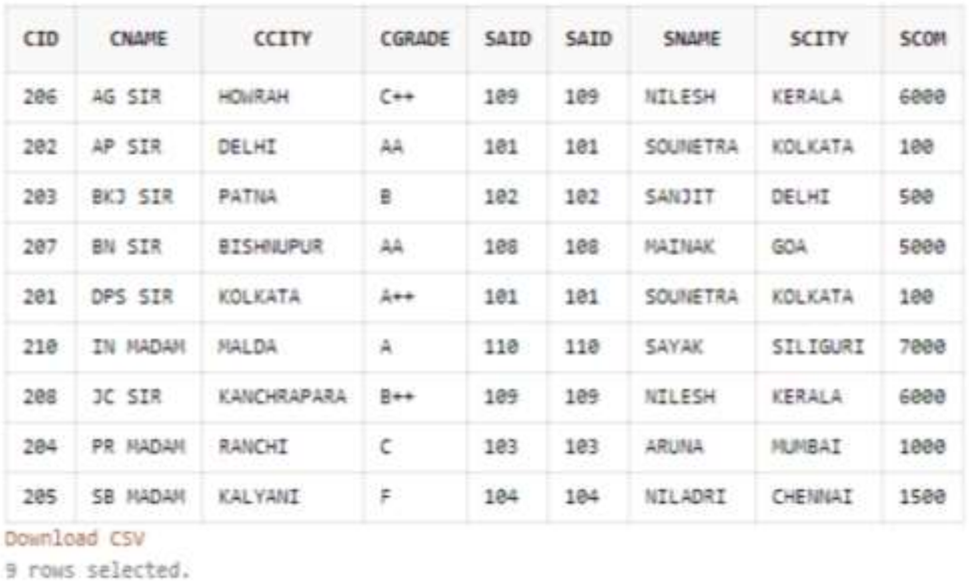
select * from sales, cust where sales.said=cust.said order by sales.sname;



SAID	SNAME	SCITY	SCOM	CID	CNAME	CCITY	CGRADE	SAID
103	ARUNA	MUMBAI	1000	204	PR MADAM	RANCHI	C	103
108	MAINAK	GOA	5000	207	BN SIR	BISHNUPUR	AA	108
104	NILADRI	CHENNAI	1500	205	SB MADAM	KALYANI	F	104
109	NILESH	KERALA	6000	206	AG SIR	HOWRAH	C++	109
109	NILESH	KERALA	6000	208	JC SIR	KANCHRAPARA	B++	109
102	SANJIT	DELHI	500	203	BKJ SIR	PATNA	B	102
110	SAYAK	SILIGURI	7000	210	IN MADAM	MALDA	A	110
101	SOUNETRA	KOLKATA	100	202	AP SIR	DELHI	AA	101
101	SOUNETRA	KOLKATA	100	201	DPS SIR	KOLKATA	A++	101

Download CSV
9 rows selected.

select * from cust, sales where sales.said=cust.said order by cust.cname;



CID	CNAME	CCITY	CGRADE	SAID	SAID	SNAME	SCITY	SCOM
206	AG SIR	HOWRAH	C++	109	109	NILESH	KERALA	6000
202	AP SIR	DELHI	AA	101	101	SOUNETRA	KOLKATA	100
203	BKJ SIR	PATNA	B	102	102	SANJIT	DELHI	500
207	BN SIR	BISHNUPUR	AA	108	108	MAINAK	GOA	5000
201	DPS SIR	KOLKATA	A++	101	101	SOUNETRA	KOLKATA	100
210	IN MADAM	MALDA	A	110	110	SAYAK	SILIGURI	7000
208	JC SIR	KANCHRAPARA	B++	109	109	NILESH	KERALA	6000
204	PR MADAM	RANCHI	C	103	103	ARUNA	MUMBAI	1000
205	SB MADAM	KALYANI	F	104	104	NILADRI	CHENNAI	1500

Download CSV
9 rows selected.

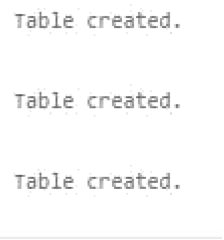
JIS College of Engineering Department of Computer Science and Engineering Paper Name: Database Management System Lab Paper Code: CS 593

Pre-Assignment 5:

create table student (stid number(6) primary key, sname varchar2(12));

create table subject (code varchar2(7) primary key, lecturer_name varchar2(15));

create table enroll (stid number(6) references student, code varchar2(7) references subject);

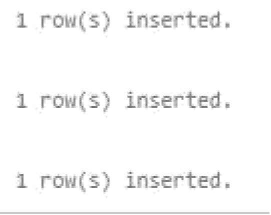


```
Table created.

Table created.

Table created.
```

insert into student values (1234, 'JOE');

insert into student values (4000, 'HECTOR');

insert into student values (2000, 'LING');



```
1 row(s) inserted.

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1 row(s) inserted.
```

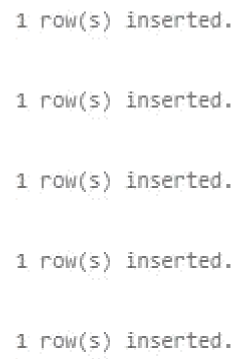
insert into subject values ('CS1500', 'CURTIS');

insert into subject values ('CS1200', 'DAVE');

insert into subject values ('CS3010', 'CURTIS');

insert into subject values ('CS2001', 'OLIVIER');

insert into subject values ('MA3000', 'ROGER');



```
1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```

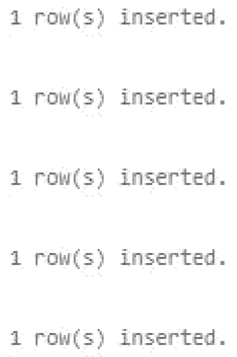
insert into enroll values (1234, 'CS1500');

insert into enroll values (1234, 'CS1200');

insert into enroll values (1234, 'CS2001');

insert into enroll values (4000, 'CS3010');

insert into enroll values (4000, 'MA3000');



```
1 row(s) inserted.

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1 row(s) inserted.
```
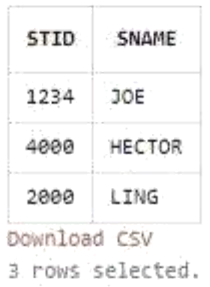
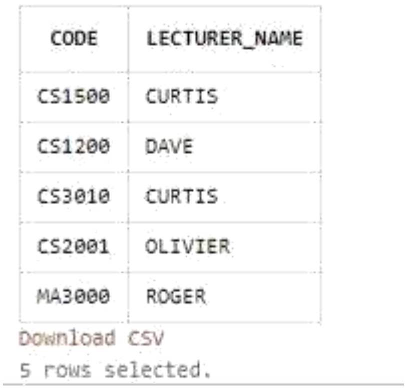

select * from student;

select * from subject;



STID	SNAME
1234	JOE
4000	HECTOR
2000	LING

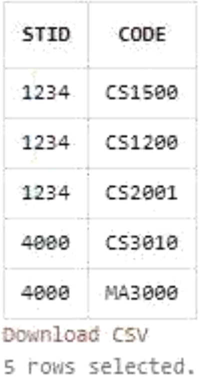
```
Download CSV
3 rows selected.
```



CODE	LECTURER_NAME
CS1500	CURTIS
CS1200	DAVE
CS3010	CURTIS
CS2001	OLIVIER
MA3000	ROGER

```
Download CSV
5 rows selected.
```

select * from enroll;

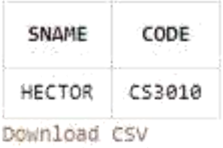


STID	CODE
1234	CS1500
1234	CS1200
1234	CS2001
4000	CS3010
4000	MA3000

Download CSV
5 rows selected.

1. What are the names of students enrolled in cs3010?

select student.sname, enroll.code from student inner join enroll on enroll.code='CS3010' and enroll.stid=student.stid;

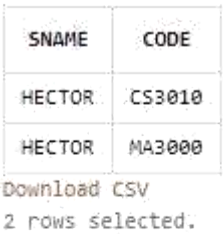


SNAME	CODE
HECTOR	CS3010

Download CSV

2. Which subjects is Hector taking?

select student.sname, enroll.code from student inner join enroll on enroll.stid=4000 and enroll.stid=student.stid;

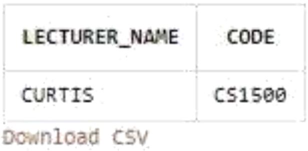


SNAME	CODE
HECTOR	CS3010
HECTOR	MA3000

Download CSV
2 rows selected.

3. Who teaches cs1500?

select subject.lecturer_name , subject.code from subject where subject.code='CS1500';

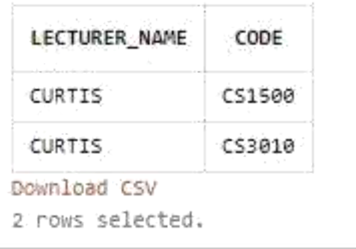


LECTURER_NAME	CODE
CURTIS	CS1500

Download CSV

4. Who teaches cs1500 or cs3010?

select lecturer_name , code from subject where code='CS1500' or code='CS3010';

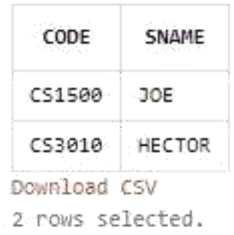


LECTURER_NAME	CODE
CURTIS	CS1500
CURTIS	CS3010

Download CSV
2 rows selected.

6. What are the names of students in cs1500 or cs3010?

select enroll.code, student.sname from student inner join enroll on enroll.code='CS1500' or enroll.code='CS3010' where student.stid=enroll.stid;

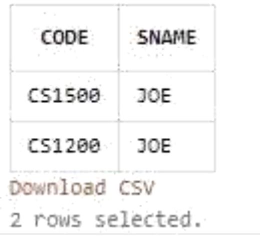


CODE	SNAME
CS1500	JOE
CS3010	HECTOR

Download CSV
2 rows selected.

7. What are the names of students in both cs1500 and cs1200?

select enroll.code, student.sname from student inner join enroll on enroll.code='CS1500' or enroll.code='CS1200' where student.stid=enroll.stid;

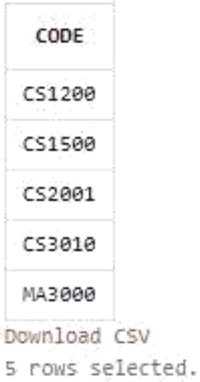


CODE	SNAME
CS1500	JOE
CS1200	JOE

Download CSV
2 rows selected.

8.
9. What are the codes of all the subjects taught?

select code from subject;



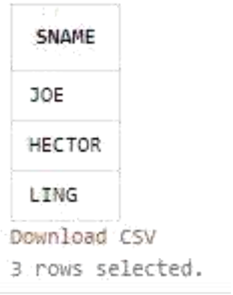
CODE
CS1200
CS1500
CS2001
CS3010
MA3000

Download CSV

5 rows selected.

10. What are the names of all the

students? select sname from student;



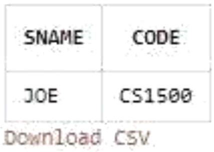
SNAME
JOE
HECTOR
LING

Download CSV

3 rows selected.

11. What are the names of all the students in cs1500?

select student.sname, enroll.code from student inner join enroll on enroll.code='CS1500' and enroll.stid=student.stid;

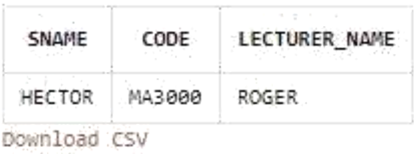


SNAME	CODE
JOE	CS1500

Download CSV

12. What are the names of students taking a subject taught by Roger.

select student.sname, enroll.code, subject.lecturer_name from student inner join enroll on enroll.stid=student.stid inner join subject on subject.lecturer_name='ROGER' and subject.code=enroll.code;

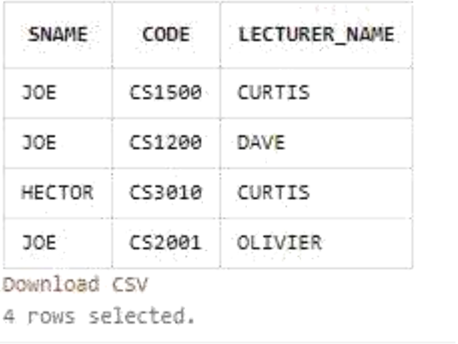


SNAME	CODE	LECTURER_NAME
HECTOR	MA3000	ROGER

Download CSV

13. What are the names of students who are taking a subject not taught by Roger?

select student.sname, enroll.code, subject.lecturer_name from student inner join enroll on enroll.stid=student.stid inner join subject on not subject.lecturer_name='ROGER' and subject.code=enroll.code;



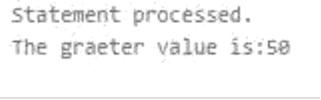
SNAME	CODE	LECTURER_NAME
JOE	CS1500	CURTIS
JOE	CS1200	DAVE
HECTOR	CS3010	CURTIS
JOE	CS2001	OLIVIER

Download CSV
4 rows selected.

Assignment 1:

1. Write a PL/SQL program to find the greatest of two numbers

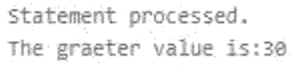
```
declare

b number(3):=50;

h  number(3):=30;

begin

        if b>h then

                dbms_output.put_line('The graeter value is:'||b);

        else

           dbms_output.put_line('The graeter value

        is:'||h); end if;

end;
```



```
Statement processed.
The graeter value is:50
```

2. Write a PL/SQL program to find the greatest of three numbers

```
declare

b number(3):=20;

h  number(3):=30;

x  number(3):=10;

begin

            if b>h and b>x then

                        dbms_output.put_line('The graeter value is:'||b);

            elsif h>b and h>x then


 dbms_output.put_line('The graeter value is:'||h);

            else

               dbms_output.put_line('The graeter value is:'||x);

end if;

end;
```



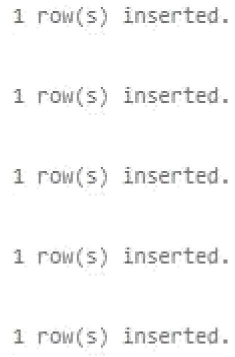
```
Statement processed.
The graeter value is:30
```

3. Write a PL/SQL program to grade the marks of the student whose id is 1001 and grade like “E’, O, A, B, C etc..

```
create table std(stid number(6) primary key, sname varchar2(20), smarks number(3));
```

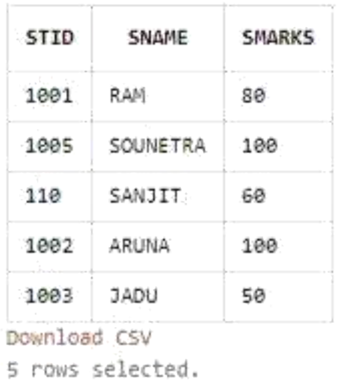
```
Table created.
```

```
insert into std values(1001, 'RAM', 80);

insert into std values(1005, 'SOUNETRA', 100);

insert into std values(110, 'SANJIT', 60);

insert into std values(1002, 'ARUNA', 100);

insert into std values(1003, 'JADU', 50);
```



```
1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```

select * from std;

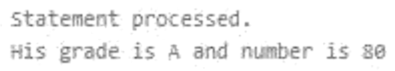


STID	SNAME	SMARKS
1001	RAM	80
1005	SOUNETRA	100
110	SANJIT	60
1002	ARUNA	100
1003	JADU	50

Download CSV
5 rows selected.

```
declare
marks number(3);
begin
select smarks into marks from std where stid=1001;
if marks>90 then
   dbms_output.put_line('His grade is O and number is '||marks);
elsif marks<=90 and marks>80 then
   dbms_output.put_line('His grade is E and number is '||marks);
elsif marks<=80 and marks>70 then
   dbms_output.put_line('His grade is A and number is '||marks);
elsif marks<=70 and marks>80 then
   dbms_output.put_line('His grade is B and number is '||marks);
```

```
else
   dbms_output.put_line('His grade is C and number is '||marks);
end if;
end;
```



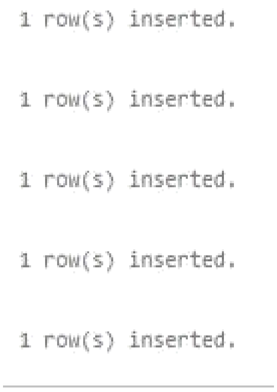
```
Statement processed.
His grade is A and number is 80
```

4. Write a PL/SQL program to take the balance of customer(cid 101) as an input and if balance is less than Rs. 5000, deduct 100 fine and update in actual table else do nothing.

```
create table cust(cid number(6) primary key, cname varchar2(20), cbal number (10));
```

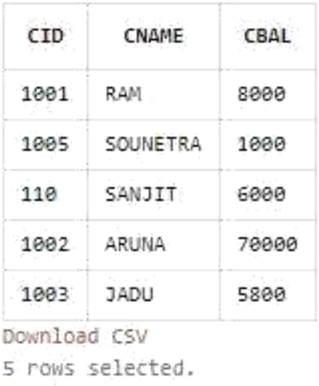
```
Table created.
```

```
insert into cust values(1001, 'RAM', 8000);
insert into cust values(1005, 'SOUNETRA', 1000);
insert into cust values(110, 'SANJIT', 6000);
insert into cust values(1002, 'ARUNA', 70000);
insert into cust values(1003, 'JADU', 5800);
```



```
1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```

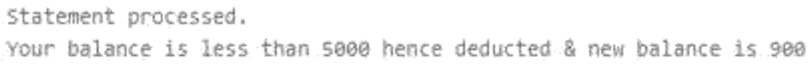
```
select * from cust;
```



CID	CNAME	CBAL
1001	RAM	8000
1005	SOUNETRA	1000
110	SANJIT	6000
1002	ARUNA	70000
1003	JADU	5800

Download CSV
5 rows selected.

```
declare

balance number(10);


new_bal number(10);

begin

select cbal into balance from cust where cbal<5000;

if balance<5000 then

   new_bal:=balance-100;

   dbms_output.put_line('Your balance is less than 5000 hence deducted & new balance is '
||new_bal);

end if;

end;
```



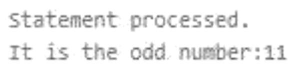
```
Statement processed.
Your balance is less than 5000 hence deducted & new balance is 900
```

---

5. Write a PL/SQL program to check whether the given number is odd or even.

```
declare

b number(2):=11;

begin

        if (b mod 2=1) then

                dbms_output.put_line('It is the odd number:'||b);

        else
```

```
         dbms_output.put_line('It is the even number:'||b);
       end if;
end;
```

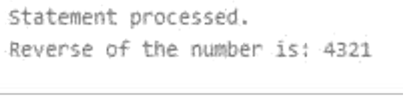


```
Statement processed.
It is the odd number:11
```

Assignment 2:

Write a pl/sql program to reverse a number

```
declare
  x number(5):=1234;
  r number(5):=0;
begin
  WHILE x>0 LOOP
    r:=(r*10) + mod(x,10);
    x:=x/10;
  end loop;
  dbms_output.put_line('Reverse of the number is: ' || r);
end;
/
```

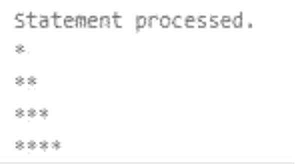


```
Statement processed.
Reverse of the number is: 4321
```

Write a pl/sql program to print right angled pyramid

```
declare
       x number(2):= 4;
        y number(3);
       z number(3);
begin
       for y in 1..x loop
              for z in 1..y loop
```

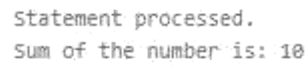
```
                        dbms_output.put_line ('*');
                end loop;
                dbms_output.new_line;
        end loop;
end;
```



```
Statement processed.
*
**
***
****
```

Write a pl/sql program to Sum of digits of a number

```
declare
   x number(5):=1234;
   s number(5):=0;
begin
   while x>0 loop
      s:=s + mod(x,10);
      x:=x/10;
   end loop;
   DBMS_OUTPUT.PUT_LINE(' Sum of the number is: ' || s);
END;
```

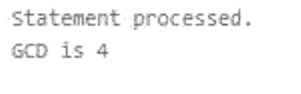


```
Statement processed.
Sum of the number is: 10
```

Write a pl/sql program to GCD of two numbers

```
declare
        x number(2):=4;
        y number(2):=8;
        z number(2);
```

```
begin
        while mod(y, x)!= 0 LOOP
                z := MOD(y, x);
                y := x;
                x := z;
        end loop;
        dbms_output.Put_line('GCD is '||x);
end;
```

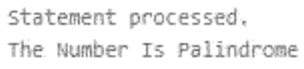


```
Statement processed.
GCD is 4
```

Write a pl/sql program to Check whether a string is palindrome or not

```
declare
  x number(5):=121;
  r number(5):=0;
  remain number(6);
begin
  remain:=x;
  WHILE x>0 LOOP
    r:=(r*10) + mod(x,10);
    x:=x/10;
  END LOOP;
  if r=remain then
    DBMS_OUTPUT.PUT_LINE('The Number Is
  Palindrome'); end if;



END;
```

```
/
```



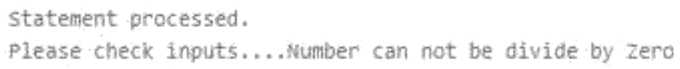
```
Statement processed.
The Number Is Palindrome
```

Assignment 3:

Write a pl/sql program to raise sytem defined exception when dividing with zero

```
declare
   x number(6):=8;
   y number(6):=0;
   div number(6,2);
begin
   div:=x/y;
   dbms_output.put_line('Result is'||div);
exception
   when zero_divide then
      dbms_output.put_line('Please check inputs....Number can not be divide by Zero');
end;
/
```

Output:



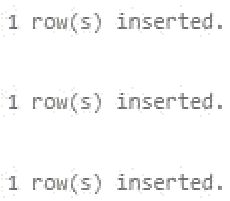
```
Statement processed.
Please check inputs....Number can not be divide by Zero
```

Write a pl/sql program where program asks for a customer id when the user enters an invalid id the exception invalid_id is raised

```
create table cus(cid number(3), cname varchar2(20));
```

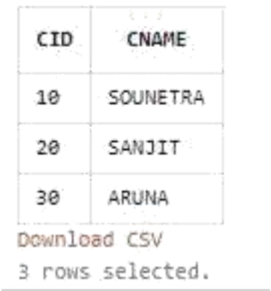
```
Table created.
```

```
insert into cus values(10,'SOUNETRA');

insert into cus values(20,'SANJIT');
insert into cus values(30,'ARUNA');
```



```
1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```

```
select * from cus;
```



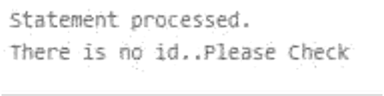
CID	CNAME
10	SOUNETRA
20	SANJIT
30	ARUNA

Download CSV

3 rows selected.

```
declare
   temp varchar2(20);
begin
   select cname into temp from cus where cid=11;
exception
   when no_data_found then
      dbms_output.put_line('There is no id..Please Check');
end;
/
```

Output:



```
Statement processed.
There is no id..Please Check
```

Write a pl/sql program where program asks for a customer name, address when the user enters a name not present in table, then show data is not found.

```
create table cust(cname varchar2(20), cadd varchar2(20));
```

```
Table created.
```

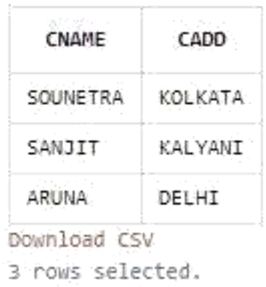
```
insert into cust values('SOUNETRA','KOLKATA');

insert into cust values('SANJIT','KALYANI');

insert into cust values('ARUNA','DELHI');
```

```
1 row(s) inserted.
```

```
1 row(s) inserted.
```

```
1 row(s) inserted.
```

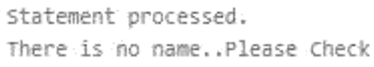
```
select * from cust;
```



CNAME	CADD
SOUNETRA	KOLKATA
SANJIT	KALYANI
ARUNA	DELHI

```
Download CSV
3 rows selected.
```

```
declare
   temp varchar2(20);
begin
   select cadd into temp from cust where
cname='AB'; exception
   when no_data_found then
      dbms_output.put_line('There is no name..Please Check');
end;
```



```
Statement processed.
There is no name..Please Check
```

JIS College of Engineering Department of Computer Science and Engineering Paper Name: Database Management System Lab Paper Code: CS 593

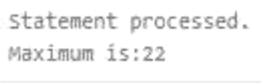
Assignment 4:

Write a pl/sql program to find the maximum of two numbers

```
create or replace function mamin(n1 in number, n2 in number)

return number

is

begin

          if n1>n2 then

             return n1;

          else

             return n2;

           end if;

end;
```

```
Function created.
```

```
declare

   n3 number(2);

begin

          n3:=mamin(11,22);

          dbms_output.put_line('Maximum is:'||n3);

end;

/
```



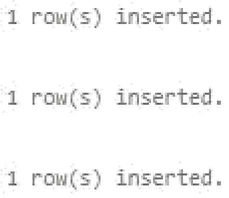
```
Statement processed.
Maximum is:22
```

Write a pl/sql program to find number of student present in student table.

```
create table std(stid number(3), sname varchar2(20), smark number(3));
```

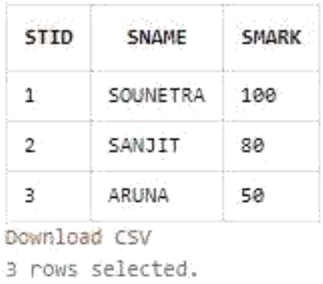
```
Table created.
```

```
insert into std values(1,'SOUNETRA',100);

insert into std values(2,'SANJIT',80);

insert into std values(3,'ARUNA',50);
```



```
1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```

```
select * from std;
```



STID	SNAME	SMARK
1	SOUNETRA	100
2	SANJIT	80
3	ARUNA	50

Download CSV
3 rows selected.

```
create or replace function sou

return number

as

        total number(6):=0;

begin

        select count(stid) into total from std;

        return total;

end;
```

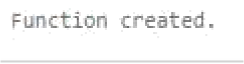
```
Function created.
```

```
declare

        answer number(6);
```

```
begin
        answer:=sou();
        dbms_output.put_line('Total number is:'||answer);
end;
/
```

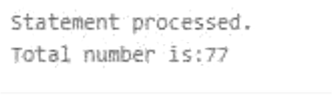
Write a PL/SQL program to find average marks of the students.

```
    create table std(stid number(3), sname varchar2(20), smark number(3));



    insert into std values(1,'SOUNETRA',100);
    insert into std values(2,'SANJIT',80);
    insert into std values(3,'ARUNA',50);



    select * from std;



    create or replace function my
    return number
    as
        total number(6):=0;
    begin
        select avg(smark) into total from std;
        return total;
    end;
```



```
Function created.
```

```
declare
        answer number(6);
begin
        answer:=my();
        dbms_output.put_line('Total number is:'||answer);
end;
/
```



```
Statement processed.
Total number is:77
```

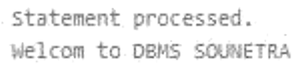
Assignment 5:

Write a pl/sql program to create a procedure that takes the name as input and prints the welcome message as output.

```
create or replace procedure abc(sname in varchar2)
is
begin
        dbms_output.put_line('Welcom to DBMS '||sname);
end;
/
```

```
Procedure created.
```

```
begin

        abc('SOUNETRA');

end;
```



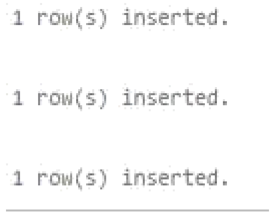
```
Statement processed.
Welcom to DBMS SOUNETRA
```

Write a pl/sql program to update the value in the table.

```
create table std(stid number(3), sname varchar2(20), smark number(3));
```

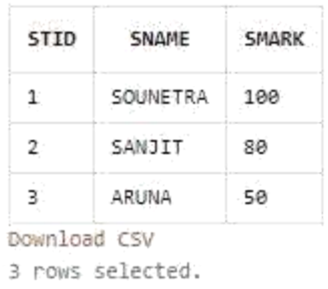
```
Table created.
```

```
insert into std values(1,'SOUNETRA',100);

insert into std values(2,'SANJIT',80);

insert into std values(3,'ARUNA',50);
```



```
1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```

```
select * from std;
```



STID	SNAME	SMARK
1	SOUNETRA	100
2	SANJIT	80
3	ARUNA	50

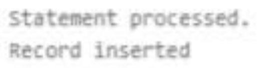
Download CSV
3 rows selected.

```
create or replace procedure sou(yname in varchar2, zmark in number)

is
```

```
begin
        update std set sname=yname, smark=zmark where stid=1;
end;
```

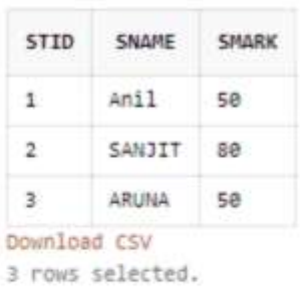
```
Procedure created.
```

```
begin
        sou('Anil',50);
        dbms_output.put_line('Record inserted');
end;
```



```
Statement processed.
Record inserted
```

```
select * from std;
```



STID	SNAME	SMARK
1	Anil	50
2	SANJIT	80
3	ARUNA	50

Download CSV

3 rows selected.

Write a pl/sql program to delete the value in the table where id is 1.

```
create table std(stid number(3), sname varchar2(20), smark number(3));
```

```
Table created.
```

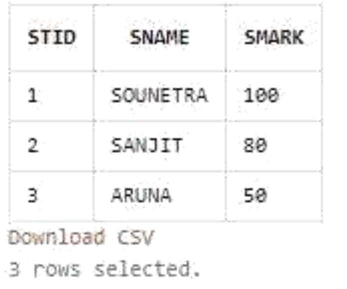
```
insert into std values(1,'SOUNETRA',100);
insert into std values(2,'SANJIT',80);
insert into std values(3,'ARUNA',50);
```

```
1 row(s) inserted.
```

```
1 row(s) inserted.
```

```
1 row(s) inserted.
```

```
select * from std;
```



STID	SNAME	SMARK
1	SOUNETRA	100
2	SANJIT	80
3	ARUNA	50

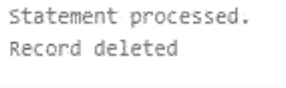
Download CSV

3 rows selected.

```
create or replace procedure del(xid in number)

is

begin


delete from std where stid=xid;


end;
```

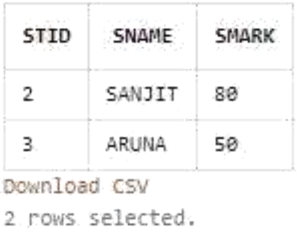
```
Procedure created.
```

```
begin
        del(1);
        dbms_output.put_line('Record deleted');
end;
```



```
Statement processed.
Record deleted
```

```
Select * from std;
```



STID	SNAME	SMARK
2	SANJIT	80
3	ARUNA	50

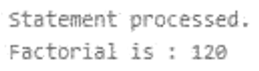
```
Download CSV
2 rows selected.
```

Write a pl/sql program to find factorial of a given number using function

```
create or replace function factorial(no in number)
return number
as
fac number := 1;
begin
   for i in 1..no
   loop
      fac := fac * i;


end loop;
   return fac;
end;
```

```
Function created.
```

```
declare
no number := 5;
fac number;
begin
fac := factorial(no);
dbms_output.put_line('Factorial is : ' || fac);
end;
```



```
Statement processed.
Factorial is : 120
```

Assignment 6:

create table emp(eid, ename,eadd,esal,edgree) & empd

1. ***Insert 10 values on emp table***

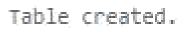
2. ***Create trigger on before update on table***

3. ***Create trigger on after update on table***

4. ***Create trigger before update on esal whose id is 1002***

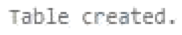
5. ***Create trigger before delete on esal whose id is 1001***

create table emp(eid number(5) primary key, ename varchar2(12), eadd varchar2(12), esal number(6), edeg varchar2(12));



```
Table created.
```

create table empd(eid number(5) primary key, ename varchar2(12), eadd varchar2(12), esal number(6), edeg varchar2(12));

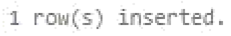


```
Table created.
```

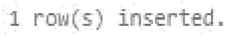
insert into emp values(1001,'SOUNETRA','KOLKATA',2500,'CSE');

insert into emp values(1002,'SANJIT','KALYANI',3500,'CE');

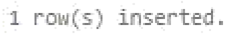
insert into emp values(1003,'ARUNA','DELHI',4500,'EE');



```
1 row(s) inserted.
```



```
1 row(s) inserted.
```



```
1 row(s) inserted.
```

create or replace trigger emp_history_trigger

before update of esal

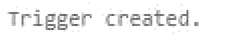
on emp

for each row

begin

insert into empd

values(:old.eid,:old.ename,:old.eadd,:old.esal,:old.edeg); end;



```
Trigger created.
```

create or replace trigger emp_history_trigger

before delete

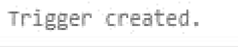
on emp

for each row

begin

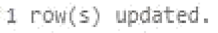
insert into empd

values(:old.eid,:old.ename,:old.eadd,:old.esal,:old.edeg); end;



```
Trigger created.
```

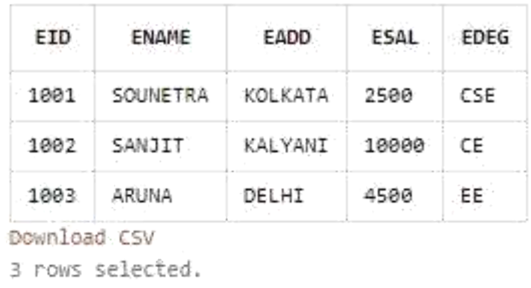
update emp set esal=10000 where eid=1002;



```
1 row(s) updated.
```

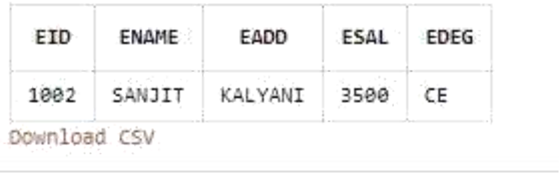
select * from emp;

select * from empd;



EID	ENAME	EADD	ESAL	EDEG
1001	SOUNETRA	KOLKATA	2500	CSE
1002	SANJIT	KALYANI	10000	CE
1003	ARUNA	DELHI	4500	EE

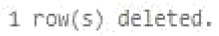
Download CSV
3 rows selected.



EID	ENAME	EADD	ESAL	EDEG
1002	SANJIT	KALYANI	3500	CE

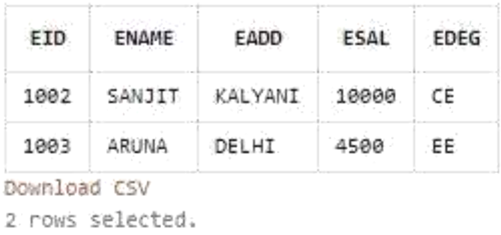
Download CSV

```
delete from emp where eid=1001;
```



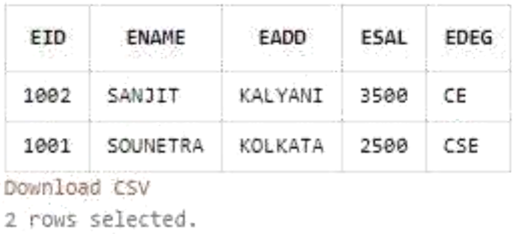
```
1 row(s) deleted.
```

```
select * from emp;

select * from empd;
```



EID	ENAME	EADD	ESAL	EDEG
1002	SANJIT	KALYANI	10000	CE
1003	ARUNA	DELHI	4500	EE

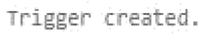
```
Download CSV
2 rows selected.
```



EID	ENAME	EADD	ESAL	EDEG
1002	SANJIT	KALYANI	3500	CE
1001	SOUNETRA	KOLKATA	2500	CSE

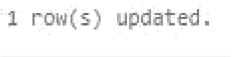
```
Download CSV
2 rows selected.
```

```
create or replace trigger emp_history_trigger

after update of esal

on emp

for each row

begin

insert into empd
values(:old.eid,:old.ename,:old.eadd,:old.esal,:old.edeg); end;
```



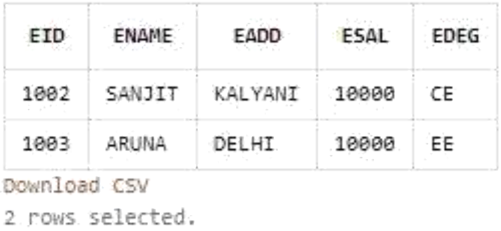
```
Trigger created.
```

```
update emp set esal=10000 where eid=1003;
```



```
1 row(s) updated.
```

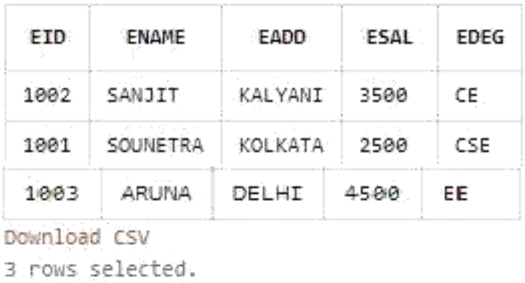
```
select * from emp;

select * from empd;
```



EID	ENAME	EADD	ESAL	EDEG
1002	SANJIT	KALYANI	10000	CE
1003	ARUNA	DELHI	10000	EE

Download CSV

2 rows selected.



EID	ENAME	EADD	ESAL	EDEG
1002	SANJIT	KALYANI	3500	CE
1001	SOUNETRA	KOLKATA	2500	CSE
1003	ARUNA	DELHI	4500	EE

Download CSV

3 rows selected.