DBMS LAB RECORD (TEST -2)

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CSE-4A

Question:-

Program 6:

Consider the following schema for Order Database: SALESMAN (Salesman_id, Name, City, Commission) CUSTOMER (Customer_id, Cust_Name, City, Grade, Salesman_id) ORDERS (Ord_No, Purchase_Amt, Ord_Date, Customer_id, Salesman_id) Write SQL queries to 1. Count the customers with grades above Bangalore's average. 2. Find the name and numbers of all salesmen who had more than one customer. 3. List all salesmen and indicate those who have and don't have customers in their cities (Use UNION operation.) 4. Create a view that finds the salesman who has the customer with the highest order of a day. 5. Demonstrate the DELETE operation by removing

salesman with id 1000. All his orders must also be deleted.

```
Program 6:
create database orderdb1;
use orderdb1;
create table salesman(
salesman_id varchar(20),
salesman_name varchar(20),
salesman city varchar(20),
commission varchar(20),
primary key(salesman_id)
);
create table customer(
customer_id varchar(20),
customer_name varchar(20),
```

```
customer_city varchar(20),
grade varchar(20),
salesman_id varchar(20),
primary key(customer_id),
foreign key(salesman_id) references
salesman(salesman_id) on delete set
null);
create table orders(
ord_no int,
purchase_amt double,
ord_date date,
customer_id varchar(20),
salesman_id varchar(20),
```

```
foreign key(salesman_id) references
salesman(salesman_id) on delete
cascade,
foreign key(customer_id) references
customer(customer id) on delete
cascade
);
insert into salesman
values("1000","JHON","BANGLORE","2
5%"),
("2000","RAVI","BANGLORE","20%"),
("3000","KUMAR","MYSORE","15%"),
("4000", "SMITH", "DELHI", "30%"),
("5000","HARSHA","HYDRABAD","15%"
);
select * from salesman;
```

```
insert into customer
values("10","PREETHI","BANGLORE","1
00","1000"),
("11","VIVEK","MANGLORE","300","10
00"),
("12","BHASKAR","CHENNAI","400","20
00"),
("13","CHETHAN","BANGLORE","200","
2000"),
("14","MAMTHA","BANGLORE","400","
3000");
select * from customer;
insert into orders
values("50","5000","17-05-
04","10","1000"),
("51","450","17-01-20","10","2000"),
("52","1000","17-02-24","13","2000"),
```

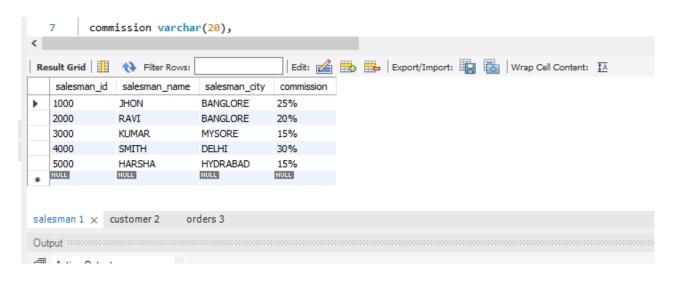
```
("53","3500","17-04-13","14","3000"),
("54", "550", "17-03-09", "12", "2000");
select * from orders;
insert into salesman
values("1000","JHON","BANGLORE","2
5%"),
("2000", "RAVI", "BANGLORE", "20%"),
("3000","KUMAR","MYSORE","15%"),
("4000","SMITH","DELHI","30%"),
("5000","HARSHA","HYDRABAD","15%"
);
select * from salesman;
insert into customer
values("10","PREETHI","BANGLORE","1
00","1000"),
```

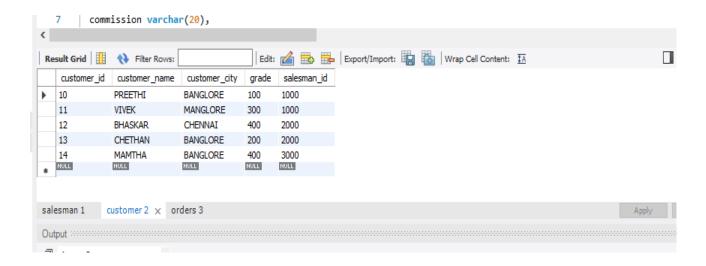
```
("11","VIVEK","MANGLORE","300","10
00"),
("12","BHASKAR","CHENNAI","400","20
00"),
("13","CHETHAN","BANGLORE","200","
2000"),
("14","MAMTHA","BANGLORE","400","
3000");
select * from customer;
insert into orders
values("50","5000","17-05-
04","10","1000"),
("51","450","17-01-20","10","2000"),
("52","1000","17-02-24","13","2000"),
("53","3500","17-04-13","14","3000"),
("54","550","17-03-09","12","2000");
```

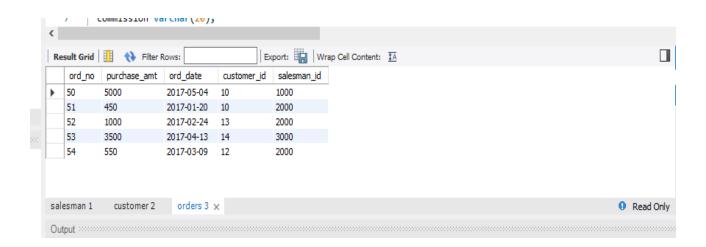
```
select * from orders;
select grade, count (distinct
customer_id) from customer group by
grade having grade > (select
avg(grade) from customer where
customer city = "BANGLORE");
select salesman_id ,salesman_name
from salesman S where 1 <(select
count(*) from customer
where salesman_id = S.salesman_id);
select salesman.salesman id
,salesman_name,customer_name,com
mission from
salesman, customer where
salesman_city = customer_city union
select
```

```
salesman_id,salesman_name,'NO
MATCH FOUND', commission from
salesman where not
salesman_city = any(select
customer_city from customer)order by
2 desc;
create view best_salesman as select
b.ord_date
,a.salesman_id,a.salesman_name from
salesman a, orders b where
a.salesman_id=b.salesman_id and
b.purchase amt=(select
max(purchase_amt) from orders c
where c.ord date=b.ord date);
select * from best_salesman;
delete from salesman where
salesman_id = 1000;
```

Output:







```
Question:-
Program 7:
BOOK (Book id, Title, Publisher Name,
Pub_Year) BOOK_AUTHORS (Book_id,
Author Name) PUBLISHER (Name,
Address, Phone) BOOK COPIES (Book id,
Branch id, No-of Copies) BOOK LENDING
(Book_id, Branch_id, Card_No, Date_Out,
Due_Date) LIBRARY_BRANCH (Branch_id,
Branch Name, Address)
Program 7:
create database bookdb1;
use bookdb1;
CREATE TABLE PUBLISHER
(NAME VARCHAR(20) PRIMARY KEY,
```

PHONE VARCHAR(10),

ADDRESS VARCHAR(20));

SELECT * FROM PUBLISHER; CREATE TABLE BOOK(BOOK ID INTEGER PRIMARY KEY, TITLE VARCHAR(20), PUB_YEAR VARCHAR(20), PUBLISHER NAME VARCHAR(20), FOREIGN KEY (PUBLISHER_NAME) REFERENCES PUBLISHER (NAME) ON **DELETE** CASCADE); SELECT * FROM BOOK; CREATE TABLE BOOK_AUTHORS(AUTHOR_NAME VARCHAR(20), BOOK ID INTEGER,

```
PRIMARY KEY (BOOK_ID,
AUTHOR NAME),
FOREIGN KEY (BOOK_ID) REFERENCES
BOOK (BOOK_ID) ON DELETE CASCADE
);
SELECT * FROM BOOK_AUTHORS;
CREATE TABLE LIBRARY_BRANCH (
BRANCH ID INTEGER PRIMARY KEY,
BRANCH NAME VARCHAR(20),
ADDRESS VARCHAR(20));
SELECT * FROM LIBRARY BRANCH;
CREATE TABLE BOOK_COPIES
NO OF COPIES INTEGER,
BOOK ID INTEGER,
```

```
BRANCH_ID INTEGER,
PRIMARY KEY (BOOK_ID, BRANCH_ID),
FOREIGN KEY (BOOK ID) REFERENCES
BOOK (BOOK ID) ON DELETE CASCADE,
FOREIGN KEY (BRANCH ID)
REFERENCES LIBRARY_BRANCH
(BRANCH_ID) ON
DELETE CASCADE);
SELECT * FROM BOOK COPIES;
CREATE TABLE CARD
(CARD NO INTEGER PRIMARY KEY);
SELECT * FROM CARD;
CREATE TABLE BOOK LENDING(
DATE_OUT DATE,
DUE DATE DATE,
```

BOOK_ID INTEGER,

BRANCH_ID INTEGER,

CARD_NO INTEGER,

PRIMARY KEY (BOOK_ID, BRANCH_ID, CARD_NO),

FOREIGN KEY (BOOK_ID) REFERENCES BOOK (BOOK_ID) ON DELETE CASCADE,

FOREIGN KEY (CARD_NO) REFERENCES CARD (CARD_NO) ON DELETE CASCADE,

FOREIGN KEY (BRANCH_ID)
REFERENCES LIBRARY_BRANCH
(BRANCH_ID) ON

DELETE CASCADE);

SELECT * FROM BOOK LENDING;

```
INSERT INTO PUBLISHER VALUES
("MCGRAW-HILL", "9989076587",
"BANGALORE"),
("PEARSON", "9889076565",
"NEWDELHI"),
("RANDOM HOUSE", "7455679345",
"HYDRABAD"),
("HACHETTE LIVRE", "8970862340",
"CHENNAI"),
("GRUPO
PLANETA","7756120238","BANGALORE
");
INSERT INTO BOOK VALUES
("1","DBMS","JAN-2017", "MCGRAW-
HILL"),
("2","ADBMS","JUN-2016", "MCGRAW-
HILL"),
```

```
("3","CN","SEP-2016", "PEARSON"),
("4","CG","SEP-2015","GRUPO
PLANETA"),
("5","OS","MAY-2016","PEARSON");
INSERT INTO BOOK AUTHORS VALUES
("NAVATHE","1"),
("NAVATHE","2"),
("TANENBAUM","3"),
("EDWARD ANGEL","4"),
("GALVIN","5");
INSERT INTO LIBRARY BRANCH VALUES
("10", "RR NAGAR", "BANGALORE"),
("11", "RNSIT", "BANGALORE"),
("12", "RAJAJI NAGAR", "BANGALORE"),
("13","NITTE","MANGALORE"),
```

```
("14","MANIPAL","UDUPI");
INSERT INTO BOOK COPIES VALUES
("10", "1",
"10"),("5","1","11"),("2","2","12"),("5",
"2","13"),("7","3","14"),("1","5","10"),(
"3","4","11");
INSERT INTO CARD VALUES
("100"),("101"),("102"),("103"),("104");
INSERT INTO BOOK LENDING VALUES
("17-01-01","17-06-
01","1","10","101"),
("17-01-17","17-03-17","3", "14",
"101"),
("17-02-21","17-04-21", 2, 13, 101),
("17-03-15","17-07-15", "4", "11",
"101"),
```

("17-04-12","17-05-12", "1", "11", "104");

SELECT B.BOOK_ID, B.TITLE, B.PUBLISHER_NAME,

A.AUTHOR_NAME,C.NO_OF_COPIES,L. BRANCH_ID

FROM BOOK B, BOOK_AUTHORS A, BOOK_COPIES C, LIBRARY_BRANCH L

WHERE B.BOOK_ID=A.BOOK_ID AND B.BOOK_ID=C.BOOK_ID AND

L.BRANCH_ID=C.BRANCH_ID;

SELECT CARD_NO FROM BOOK_LENDING

WHERE DATE_OUT BETWEEN "2017-01-01" AND "2017-07-01"

GROUP BY CARD_NO

```
HAVING COUNT(*)>3;
```

DELETE FROM BOOK

WHERE BOOK_ID=3;

CREATE VIEW YEAR_OF_PUBLICATION AS SELECT PUB_YEAR

FROM BOOK;

SELECT * FROM YEAR_OF_PUBLICATION;

CREATE VIEW
BOOKS AVAILABLE IN LIBRARY AS

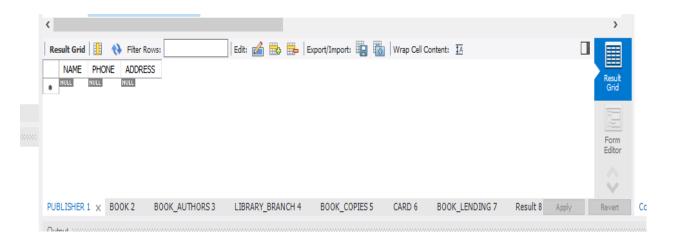
SELECT B.BOOK_ID, B.TITLE, C.NO OF COPIES

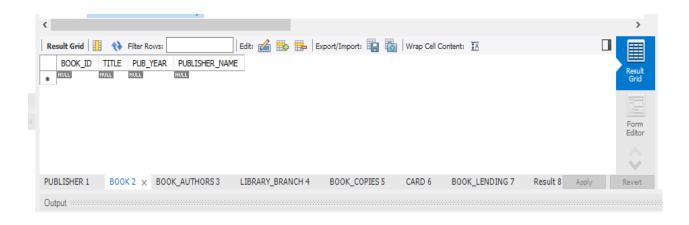
FROM BOOK B, BOOK_COPIES C, LIBRARY_BRANCH L

WHERE B.BOOK_ID=C.BOOK_ID

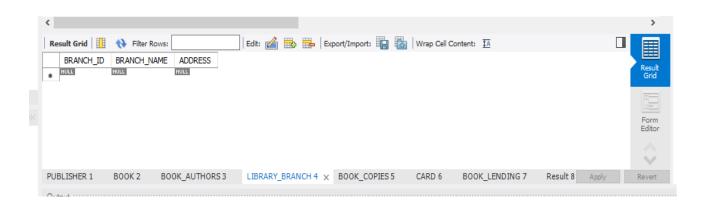
AND C.BRANCH_ID=L.BRANCH_ID;

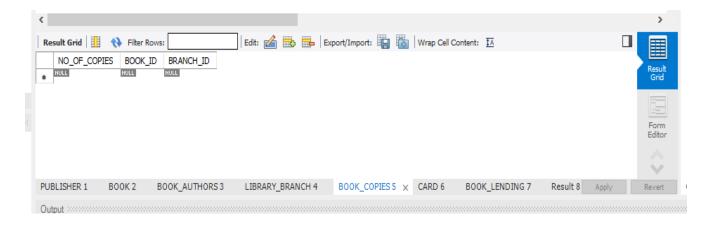
SELECT * FROM BOOKS_AVAILABLE_IN_LIBRARY; Output:

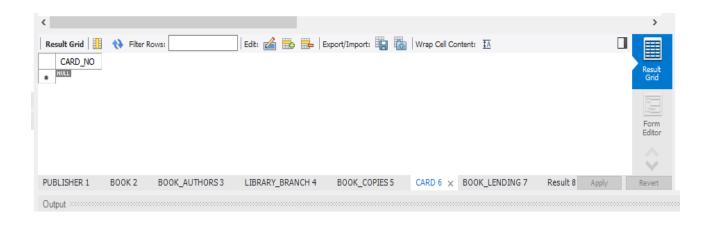


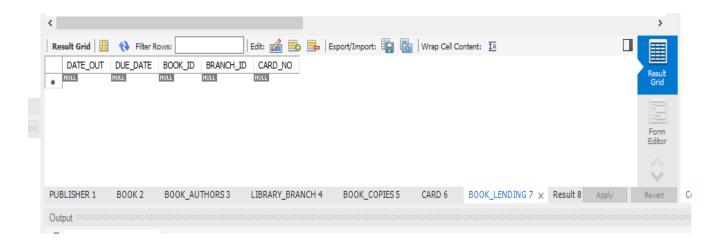


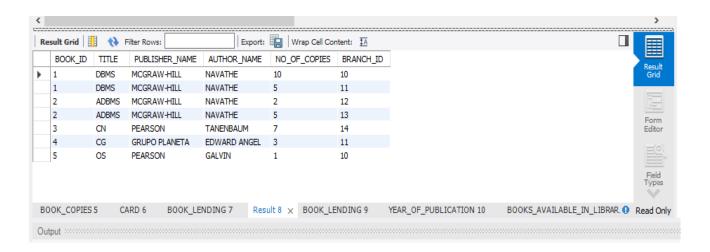


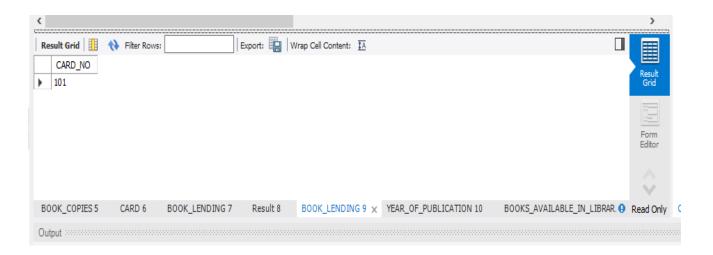


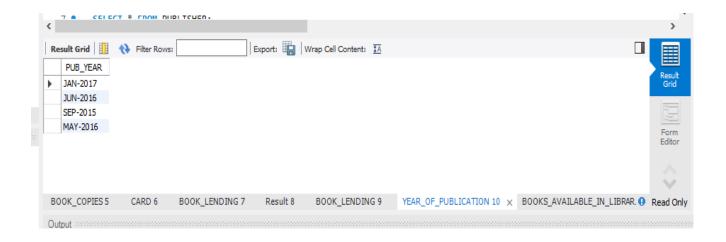


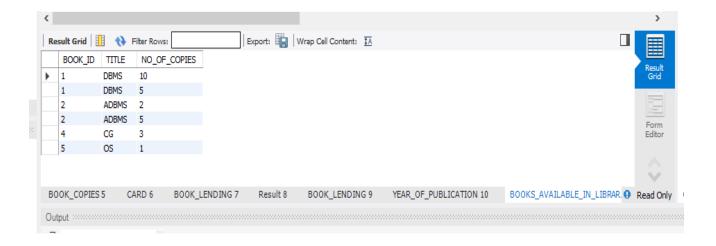












Question:-

Program 8:

STUDENT ENROLLMENT DATABASE

Consider the following database of student enrollment in courses and books adopted for each course.

STUDENT (regno: String, name: String,

major: String, bdate: date)

COURSE (course #: int, cname: String, dept:

String)

ENROLL (regno: String, cname: String, sem:

int, marks: int)

BOOK_ADOPTION (course #: int, sem: int,

book-ISBN: int)

TEXT(book-ISBN:int, book-title:String,

publisher:String, author:String)

- i. Create the above tables by properly specifying the primary keys and the foreign keys.
- ii. Enter at least five tuples for each relation.
- iii. Demonstrate how you add a new text book to the database and make this book be adopted by some

department.

- iv. Produce a list of text books (include Course #, Book-ISBN, Book-title) in the alphabetical order for courses
- offered by the 'CS' department that use more than two books.

v. List any department that has all its adopted books published by a specific publisher.

Program 8:

CREATE DATABASE COLLEGE;
USE COLLEGE;

create table student(
regno Varchar(15),
sname Varchar(20),
major Varchar(20),
bdate Date,
PRIMARY KEY (regno));

courseno INT,

```
cname VARCHAR(20),
  dept VARCHAR(20),
  PRIMARY KEY (courseno));
  select * from course;
CREATE TABLE enroll(
  regno VARCHAR(15),
  courseno INT,
  sem INT(3),
  marks INT(4),
  PRIMARY KEY (regno, courseno),
  FOREIGN KEY (regno) REFERENCES
student (regno),
  FOREIGN KEY (courseno)
REFERENCES course (courseno));
```

```
CREATE TABLE text(
  book isbn INT(5),
  book title VARCHAR(20),
  publisher VARCHAR(20),
  author VARCHAR(20),
  PRIMARY KEY (book isbn));
CREATE TABLE book_adoption(
  courseno INT,
  sem INT(3),
  book_isbn INT(5),
  PRIMARY KEY (courseno, book_isbn),
  FOREIGN KEY (courseno)
REFERENCES course (courseno),
```

```
FOREIGN KEY (book_isbn)
REFERENCES text(book_isbn) );
```

```
INSERT INTO student
(regno,sname,major,bdate) VALUES
('1pe11cs002','b','sr','19930924'),
('1pe11cs003','c','sr','19931127'),
('1pe11cs004','d','sr','19930413'),
('1pe11cs005','e','jr','19940824');
INSERT INTO student
(regno,sname,major,bdate) VALUES
('1pe11cs001','a','jr','19930922');
```

```
INSERT INTO course VALUES
(111,'OS','CSE'),
   (112,'EC','CSE'),
   (113,'SS','ISE'),
   (114, 'DBMS', 'CSE'),
   (115, 'SIGNALS', 'ECE');
INSERT INTO text VALUES
  (10, DATABASE
SYSTEMS', 'PEARSON', 'SCHIELD'),
   (900, 'OPERATING
SYS', 'PEARSON', 'LELAND'),
   (901, 'CIRCUITS', 'HALL INDIA', 'BOB'),
   (902, 'SYSTEM
SOFTWARE', 'PETERSON', 'JACOB'),
```

```
(903,'SCHEDULING','PEARSON','PATIL'),

(904,'DATABASE
SYSTEMS','PEARSON','JACOB'),

(905,'DATABASE
MANAGER','PEARSON','BOB'),

(906,'SIGNALS','HALL
INDIA','SUMIT');
```

```
INSERT INTO enroll (regno,courseno,sem,marks) VALUES ('1pe11cs001',115,3,100), ('1pe11cs002',114,5,100), ('1pe11cs003',113,5,100), ('1pe11cs004',111,5,100),
```

('1pe11cs005',112,3,100);

```
INSERT INTO book_adoption
(courseno, sem, book isbn) VALUES
(111,5,900),
(111,5,903),
(111,5,904),
(112,3,901),
(113,3,10),
(114,5,905),
(113,5,902),
(115,3,906);
select * from student;
select * from course;
```

```
select * from enroll;
select * from book_adoption;
select * from text;
```

/*4. Produce a list of text books (include Course #, Book-ISBN, Book-title) in the alphabetical order for courses offered by the 'CS' department that use more than two books.*/

SELECT
c.courseno,t.book_isbn,t.book_title
FROM course c,book_adoption ba,text
t

WHERE c.courseno=ba.courseno

AND ba.book_isbn=t.book_isbn

AND c.dept='CSE'

AND 2<(
SELECT COUNT(book_isbn)

FROM book_adoption b

WHERE c.courseno=b.courseno)

ORDER BY t.book_title;

/*5. List any department that has all its adopted books published by a specific publisher.*/

SELECT DISTINCT c.dept
FROM course c

WHERE c.dept IN

(SELECT c.dept

FROM course c,book_adoption b,text t

WHERE c.courseno=b.courseno

AND t.book_isbn=b.book_isbn

AND t.publisher='HALL INDIA')

AND c.dept NOT IN

(SELECT c.dept

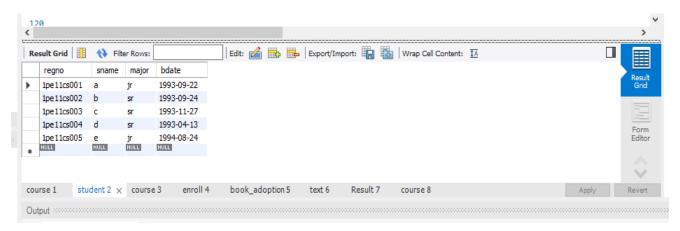
FROM course c,book_adoption b,text t

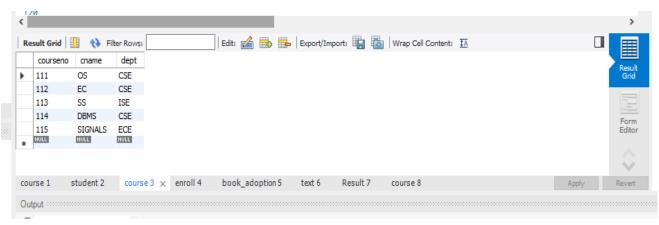
WHERE c.courseno=b.courseno

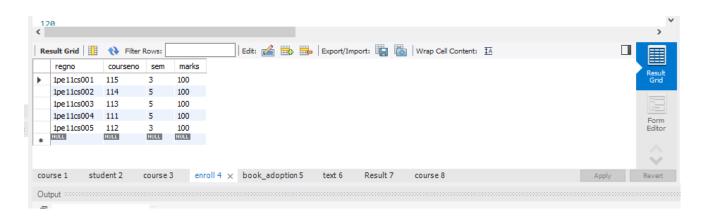
AND t.book_isbn=b.book_isbn

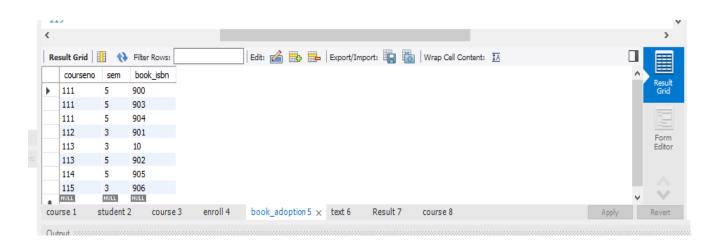
AND t.publisher != 'HALL INDIA');
Output:

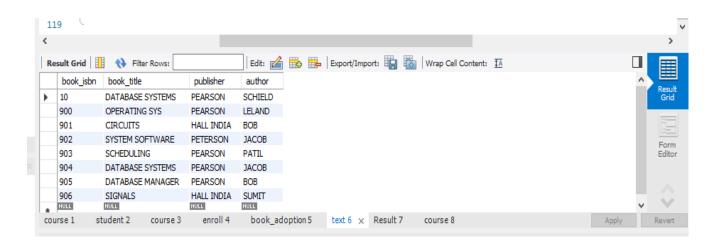


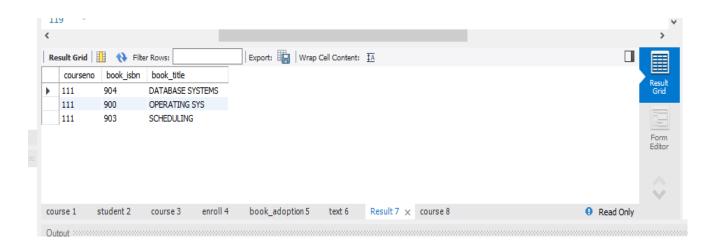














Question:-

Program 9:

MOVIE DATABASE

Consider the schema for Movie Database:

ACTOR(Act_id, Act_Name, Act_Gender)

DIRECTOR(Dir_id, Dir_Name, Dir_Phone)

MOVIES(Mov_id, Mov_Title, Mov_Year, Mov_Lang, Dir_id)

MOVIE_CAST(Act_id, Mov_id, Role)

RATING(Mov_id, Rev_Stars)

Write SQL queries to

- i. List the titles of all movies directed by 'Hitchcock'.
- ii. Find the movie names where one or more actors acted in two or more movies.
- iii. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation).
- iv. Find the title of movies and number of stars for each movie that has at least one rating and find the highest

number of stars that movie received. Sort the result by movie title.

v. Update rating of all movies directed by 'Steven Spielberg' to 5.

Program 9:

CREATE DATABASE MOVIE;

USE MOVIE;

CREATE TABLE ACTOR (

ACT_ID INT,

ACT_NAME VARCHAR (20),

ACT_GENDER CHAR (1),

PRIMARY KEY (ACT_ID));

CREATE TABLE DIRECTOR (
DIR_ID INT,
DIR_NAME VARCHAR (20),
DIR_PHONE LONG,
PRIMARY KEY (DIR_ID));

CREATE TABLE MOVIES (
MOV_ID INT,
MOV_TITLE VARCHAR (25),

MOV_YEAR INT,

MOV_LANG VARCHAR (12),

DIR_ID INT,

PRIMARY KEY (MOV_ID),

FOREIGN KEY (DIR_ID) REFERENCES

DIRECTOR (DIR_ID));

CREATE TABLE MOVIE_CAST (
ACT_ID INT,
MOV_ID INT,
AROLE VARCHAR(10),
PRIMARY KEY (ACT_ID, MOV_ID),
FOREIGN KEY(ACT_ID) REFERENCES
ACTOR(ACT_ID) ON DELETE CASCADE,

FOREIGN KEY(MOV_ID) REFERENCES MOVIES(MOV_ID) ON DELETE CASCADE);

CREATE TABLE RATING (
MOV_ID INT,
REV_STARS VARCHAR (25),
PRIMARY KEY (MOV_ID),
FOREIGN KEY (MOV_ID) REFERENCES
MOVIES (MOV_ID));

INSERT INTO ACTOR VALUES (301,'ANUSHKA','F');
INSERT INTO ACTOR VALUES (302,'PRABHAS','M');

INSERT INTO ACTOR VALUES (303, 'PUNITH', 'M');

INSERT INTO ACTOR VALUES (304, 'JERMY', 'M');

INSERT INTO DIRECTOR VALUES (60, 'RAJAMOULI', 8751611001);

INSERT INTO DIRECTOR VALUES (61, 'HITCHCOCK', 7766138911);

INSERT INTO DIRECTOR VALUES (62, FARAN', 9986776531);

INSERT INTO DIRECTOR VALUES (63, 'STEVEN SPIELBERG', 8989776530);

INSERT INTO MOVIES VALUES (1001, 'BAHUBALI-2', 2017, 'TELAGU', 60);

INSERT INTO MOVIES VALUES (1002, 'BAHUBALI-1', 2015, 'TELAGU', 60);

INSERT INTO MOVIES VALUES (1003,'AKASH', 2008, 'KANNADA', 61);

INSERT INTO MOVIES VALUES (1004,'WAR HORSE', 2011, 'ENGLISH', 63);

INSERT INTO MOVIE_CAST VALUES (301, 1002, 'HEROINE');

INSERT INTO MOVIE_CAST VALUES (301, 1001, 'HEROINE');

INSERT INTO MOVIE_CAST VALUES (303, 1003, 'HERO');

INSERT INTO MOVIE_CAST VALUES (303, 1002, 'GUEST');

INSERT INTO MOVIE_CAST VALUES (304, 1004, 'HERO');

```
INSERT INTO RATING VALUES (1001, 4);
INSERT INTO RATING VALUES (1002, 2);
INSERT INTO RATING VALUES (1003, 5);
INSERT INTO RATING VALUES (1004, 4);
```

```
select * from rating;
select * from actor;
select * from director;
select * from movies;
select * from movie_cast;
```

/*1. List the titles of all movies directed by 'Hitchcock'. */

SELECT MOV_TITLE

FROM MOVIES

WHERE DIR_ID IN (SELECT DIR_ID

FROM DIRECTOR

WHERE DIR NAME = 'HITCHCOCK');

/*2. Find the movie names where one or more actors acted in two or more movies. */

SELECT MOV_TITLE
FROM MOVIES M, MOVIE CAST MV

WHERE M.MOV_ID=MV.MOV_ID AND ACT_ID IN (SELECT ACT_ID FROM MOVIE_CAST GROUP BY ACT_ID HAVING COUNT(ACT_ID)>1)
GROUP BY MOV_TITLE
HAVING COUNT(*)>1;

/*3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation).*/

SELECT ACT_NAME, MOV_TITLE, MOV_YEAR

FROM ACTOR A

JOIN MOVIE_CAST C

ON A.ACT_ID=C.ACT_ID

JOIN MOVIES M

ON C.MOV_ID=M.MOV_ID

WHERE M.MOV_YEAR NOT BETWEEN
2000 AND 2015;

/*4. Find the title of movies and number of stars for each movie that has at least one rating and find the highest number of stars that movie received.

Sort the result by movie title. */
SELECT MOV_TITLE, MAX(REV_STARS)
FROM MOVIES
INNER JOIN RATING USING (MOV_ID)
GROUP BY MOV_TITLE

HAVING MAX(REV_STARS)>0
ORDER BY MOV TITLE;

/*5. Update rating of all movies directed by 'Steven Spielberg' to 5 KL */

UPDATE RATING

SET REV_STARS=5

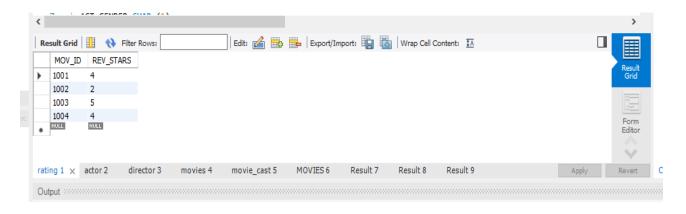
WHERE MOV_ID IN(SELECT MOV_ID FROM MOVIES

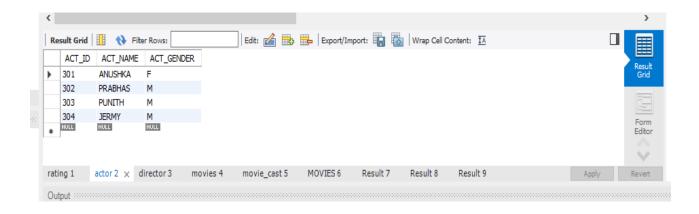
WHERE DIR_ID IN(SELECT DIR_ID

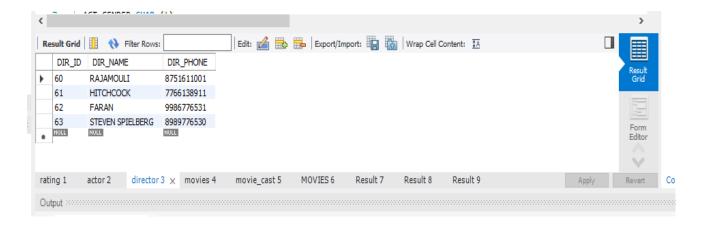
FROM DIRECTOR

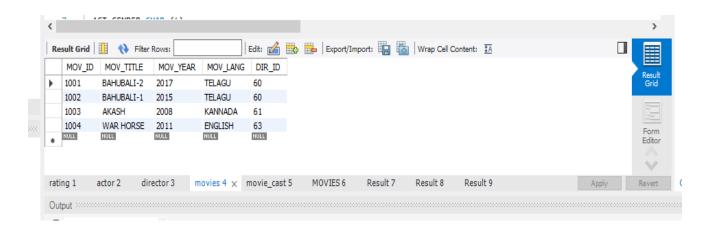
WHERE DIR_NAME = 'STEVEN SPIELBERG'));

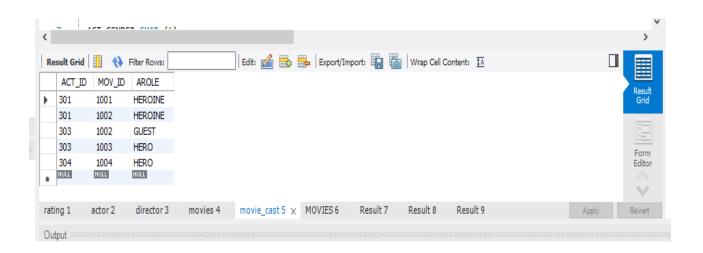
select * from rating; Output:

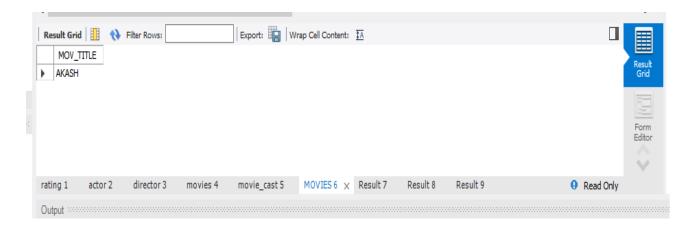


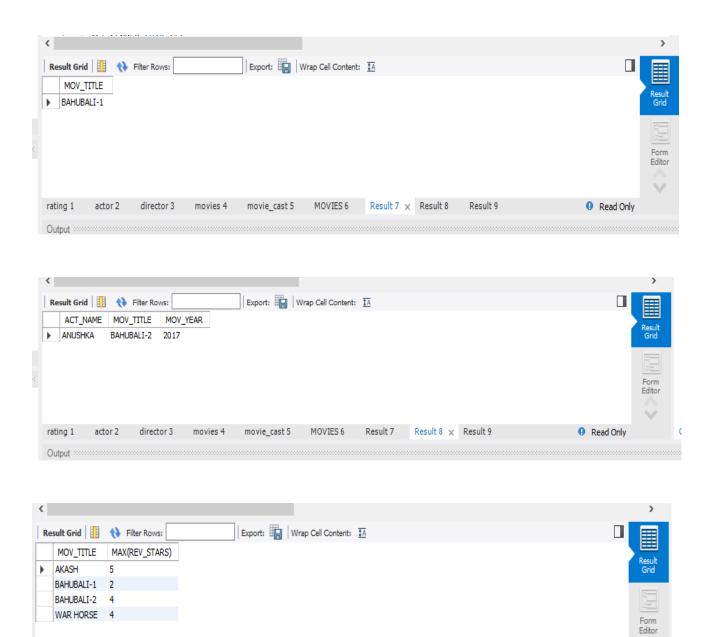












Result 8

Result 9 ×

Read Only

Result 7

MOVIES 6

movie_cast 5

Question:-

Program 10:

director 3

COLLEGE DATABASE

Consider the schema for College Database:

STUDENT(USN, SName, Address, Phone, Gender)

SEMSEC(SSID, Sem, Sec)

CLASS(USN, SSID)

SUBJECT(Subcode, Title, Sem, Credits)

IAMARKS(USN, Subcode, SSID, Test1, Test2, Test3, FinalIA)

Write SQL queries to

- i. List all the student details studying in fourth semester 'C' section.
- ii. Compute the total number of male and female students in each semester and in each section.
- iii. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects.

- iv. Calculate the FinalIA (average of best two test marks) and update the corresponding table for all students.
- v. Categorize students based on the following criterion:

If FinalIA = 17 to 20 then CAT = 'Outstanding'

If FinalIA = 12 to 16 then CAT = 'Average'

If FinalIA < 12 then CAT = 'Weak'

Give these details only for 8th semester A, B, and C section students.

Program 10:

CREATE DATABASE COLLEGEDB;
USE COLLEGEDB;

CREATE TABLE STUDENT (

USN VARCHAR (10),
SNAME VARCHAR (25),
ADDRESS VARCHAR (25),
PHONE LONG,
GENDER CHAR (1),
PRIMARY KEY (USN));

select * from student;

CREATE TABLE SEMSEC (
SSID VARCHAR (5),
SEM INT,
SEC CHAR (1),
PRIMARY KEY (SSID));

select * from semsec;

CREATE TABLE CLASS (
USN VARCHAR (10),
SSID VARCHAR (5),
PRIMARY KEY (USN, SSID),
FOREIGN KEY (USN) REFERENCES
STUDENT (USN),
FOREIGN KEY (SSID) REFERENCES
SEMSEC (SSID));
select * from class;

CREATE TABLE SUBJECT (
SUBCODE VARCHAR (8),
TITLE VARCHAR (20),

```
SEM INT,
CREDITS INT,
PRIMARY KEY (SUBCODE));
select * from subject;
CREATE TABLE IAMARKS (
USN VARCHAR (10),
SUBCODE VARCHAR (8),
SSID VARCHAR (5),
TEST1 INT,
TEST2 INT,
TEST3 INT,
FINALIA INT,
```

PRIMARY KEY (USN, SUBCODE, SSID),

FOREIGN KEY (USN) REFERENCES STUDENT (USN),

FOREIGN KEY (SUBCODE) REFERENCES SUBJECT (SUBCODE),

FOREIGN KEY (SSID) REFERENCES SEMSEC (SSID));

select * from iamarks;

INSERT INTO STUDENT VALUES ('1RN13CS020','AKSHAY','BELAGAVI', 8877881122,'M');

INSERT INTO STUDENT VALUES ('1RN13CS062','SANDHYA','BENGALUR U', 7722829912,'F');

INSERT INTO STUDENT VALUES ('1RN13CS091','TEESHA','BENGALURU', 7712312312,'F');

INSERT INTO STUDENT VALUES ('1RN13CS066','SUPRIYA','MANGALUR U', 8877881122,'F');

INSERT INTO STUDENT VALUES ('1RN14CS010','ABHAY','BENGALURU', 9900211201,'M');

INSERT INTO STUDENT VALUES ('1RN14CS032','BHASKAR','BENGALURU', 9923211099,'M');

INSERT INTO STUDENT VALUES ('1RN14CS025','ASMI','BENGALURU', 7894737377,'F');

INSERT INTO STUDENT VALUES ('1RN15CS011','AJAY','TUMKUR', 9845091341,'M');

INSERT INTO STUDENT VALUES ('1RN15CS029','CHITRA','DAVANGERE', 7696772121,'F');

INSERT INTO STUDENT VALUES ('1RN15CS045','JEEVA','BELLARY', 9944850121,'M');

INSERT INTO STUDENT VALUES ('1RN15CS091','SANTOSH','MANGALUR U', 8812332201,'M');

INSERT INTO STUDENT VALUES ('1RN16CS045','ISMAIL','KALBURGI', 9900232201,'M');

INSERT INTO STUDENT VALUES ('1RN16CS088','SAMEERA','SHIMOGA', 9905542212,'F');

INSERT INTO STUDENT VALUES ('1RN16CS122','VINAYAKA','CHIKAMAG ALUR', 8800880011,'M');

```
INSERT INTO SEMSEC VALUES ('CSE8A',
8,'A');
INSERT INTO SEMSEC VALUES ('CSE8B',
8,'B');
INSERT INTO SEMSEC VALUES ('CSE8C',
8,'C');
INSERT INTO SEMSEC VALUES ('CSE7A',
7,'A');
INSERT INTO SEMSEC VALUES ('CSE7B',
7,'B');
INSERT INTO SEMSEC VALUES ('CSE7C',
7,'C');
```

```
INSERT INTO SEMSEC VALUES ('CSE6A',
6,'A');
INSERT INTO SEMSEC VALUES ('CSE6B',
6,'B');
INSERT INTO SEMSEC VALUES ('CSE6C',
6,'C');
INSERT INTO SEMSEC VALUES ('CSE5A',
5,'A');
INSERT INTO SEMSEC VALUES ('CSE5B',
5,'B');
INSERT INTO SEMSEC VALUES ('CSE5C',
5,'C');
INSERT INTO SEMSEC VALUES ('CSE4A',
4,'A');
INSERT INTO SEMSEC VALUES ('CSE4B',
4,'B');
```

```
INSERT INTO SEMSEC VALUES ('CSE4C',
4,'C');
INSERT INTO SEMSEC VALUES ('CSE3A',
3,'A');
INSERT INTO SEMSEC VALUES ('CSE3B',
3,'B');
INSERT INTO SEMSEC VALUES ('CSE3C',
3,'C');
INSERT INTO SEMSEC VALUES ('CSE2A',
2,'A');
INSERT INTO SEMSEC VALUES ('CSE2B',
2,'B');
INSERT INTO SEMSEC VALUES ('CSE2C',
2,'C');
INSERT INTO SEMSEC VALUES ('CSE1A',
1,'A');
```

```
INSERT INTO SEMSEC VALUES ('CSE1B',
1,'B');
INSERT INTO SEMSEC VALUES ('CSE1C',
1,'C');
INSERT INTO CLASS VALUES
('1RN13CS020','CSE8A');
INSERT INTO CLASS VALUES
('1RN13CS062','CSE8A');
INSERT INTO CLASS VALUES
('1RN13CS066','CSE8B');
INSERT INTO CLASS VALUES
('1RN13CS091','CSE8C');
INSERT INTO CLASS VALUES
('1RN14CS010','CSE7A');
INSERT INTO CLASS VALUES
('1RN14CS025','CSE7A');
```

INSERT INTO CLASS VALUES ('1RN14CS032','CSE7A');

INSERT INTO CLASS VALUES ('1RN15CS011','CSE4A');

INSERT INTO CLASS VALUES ('1RN15CS029','CSE4A');

INSERT INTO CLASS VALUES ('1RN15CS045','CSE4B');

INSERT INTO CLASS VALUES ('1RN15CS091','CSE4C');

INSERT INTO CLASS VALUES ('1RN16CS045','CSE3A');

INSERT INTO CLASS VALUES ('1RN16CS088','CSE3B');

INSERT INTO CLASS VALUES ('1RN16CS122','CSE3C');

INSERT INTO SUBJECT VALUES ('10CS81','ACA', 8, 4);

INSERT INTO SUBJECT VALUES ('10CS82','SSM', 8, 4);

INSERT INTO SUBJECT VALUES ('10CS83','NM', 8, 4);

INSERT INTO SUBJECT VALUES ('10CS84','CC', 8, 4);

INSERT INTO SUBJECT VALUES ('10CS85','PW', 8, 4);

INSERT INTO SUBJECT VALUES ('10CS71','OOAD', 7, 4);

INSERT INTO SUBJECT VALUES ('10CS72','ECS', 7, 4);

INSERT INTO SUBJECT VALUES ('10CS73','PTW', 7, 4);

INSERT INTO SUBJECT VALUES ('10CS74','DWDM', 7, 4);

INSERT INTO SUBJECT VALUES ('10CS75','JAVA', 7, 4);

INSERT INTO SUBJECT VALUES ('10CS76', 'SAN', 7, 4);

INSERT INTO SUBJECT VALUES ('15CS51', 'ME', 5, 4);

INSERT INTO SUBJECT VALUES ('15CS52','CN', 5, 4);

INSERT INTO SUBJECT VALUES ('15CS53','DBMS', 5, 4);

INSERT INTO SUBJECT VALUES ('15CS54','ATC', 5, 4);

INSERT INTO SUBJECT VALUES ('15CS55','JAVA', 5, 3);

INSERT INTO SUBJECT VALUES ('15CS56','AI', 5, 3);

INSERT INTO SUBJECT VALUES ('15CS41','M4', 4, 4);

INSERT INTO SUBJECT VALUES ('15CS42','SE', 4, 4);

INSERT INTO SUBJECT VALUES ('15CS43','DAA', 4, 4);

INSERT INTO SUBJECT VALUES ('15CS44','MPMC', 4, 4);

INSERT INTO SUBJECT VALUES ('15CS45','OOC', 4, 3);

INSERT INTO SUBJECT VALUES ('15CS46','DC', 4, 3);

INSERT INTO SUBJECT VALUES ('15CS31','M3', 3, 4);

INSERT INTO SUBJECT VALUES ('15CS32','ADE', 3, 4);

INSERT INTO SUBJECT VALUES ('15CS33','DSA', 3, 4);

INSERT INTO SUBJECT VALUES ('15CS34','CO', 3, 4);

INSERT INTO SUBJECT VALUES ('15CS35','USP', 3, 3);

INSERT INTO SUBJECT VALUES ('15CS36','DMS', 3, 3);

INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1, TEST2, TEST3) VALUES ('1RN13CS091','10CS81','CSE8C', 15, 16, 18);

INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1, TEST2, TEST3) VALUES

('1RN13CS091','10CS82','CSE8C', 12, 19, 14);

INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1, TEST2, TEST3) VALUES ('1RN13CS091','10CS83','CSE8C', 19, 15, 20);

INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1, TEST2, TEST3) VALUES ('1RN13CS091','10CS84','CSE8C', 20, 16, 19);

INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1, TEST2, TEST3) VALUES ('1RN13CS091','10CS85','CSE8C', 15, 15, 12);

/*1. List all the student details studying in fourth semester 'C' section. */

SELECT S.*, SS.SEM, SS.SEC

FROM STUDENT S, SEMSEC SS, CLASS C

WHERE S.USN = C.USN AND

SS.SSID = C.SSID AND

SS.SEM = 4 AND SS.SEC='C';

/*2. Compute the total number of male and female students in each semester and in each section. */

SELECT SS.SEM, SS.SEC, S.GENDER, COUNT(S.GENDER) AS COUNT

FROM STUDENT S, SEMSEC SS, CLASS C

WHERE S.USN = C.USN AND

SS.SSID = C.SSID

GROUP BY SS.SEM, SS.SEC, S.GENDER ORDER BY SEM;

/*3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects. */

CREATE VIEW
STU_TEST1_MARKS_VIEW

AS

SELECT TEST1, SUBCODE

FROM IAMARKS

WHERE USN = '1RN13CS091';

```
SELECT * FROM
STU_TEST1_MARKS_VIEW;
```

/*5. Categorize students based on the following criterion:

If FinalIA = 17 to 20 then CAT = 'Outstanding'

If FinalIA = 12 to 16 then CAT = 'Average'

If FinalIA< 12 then CAT = 'Weak'

Give these details only for 8th semester A, B, and C section students. */

SELECT S.USN,S.SNAME,S.ADDRESS,S.PHONE,S. GENDER,

(CASE

WHEN IA.FINALIA BETWEEN 17 AND 20 THEN 'OUTSTANDING'

WHEN IA.FINALIA BETWEEN 12 AND 16 THEN 'AVERAGE'

ELSE 'WEAK'

END) AS CAT

FROM STUDENT S, SEMSEC SS, IAMARKS IA, SUBJECT SUB

WHERE S.USN = IA.USN AND

SS.SSID = IA.SSID AND

SUB.SUBCODE = IA.SUBCODE AND

SUB.SEM = 8;

Output:

