CREATE TABLE STUDENT(USN CHAR(10),

SNAME VARCHAR(20),

ADDRESS VARCHAR(25),

PHONE BIGINT,

GENDER CHAR,

CONSTRAINT A PRIMARY KEY(USN)

);

CREATE TABLE SEMSEC(SSID CHAR(2),

SEM INT,

SEC CHAR,

CONSTRAINT B PRIMARY KEY(SSID),

CONSTRAINT C CHECK(SEM BETWEEN 1 AND 8)

);

CREATE TABLE CLASS(USN CHAR(10),

SSID CHAR(2),

CONSTRAINT D PRIMARY KEY(USN,SSID),

CONSTRAINT E FOREIGN KEY(USN) REFERENCES STUDENT(USN) ON DELETE CASCADE,

CONSTRAINT F FOREIGN KEY(SSID) REFERENCES SEMSEC(SSID) ON DELETE CASCADE

);

CREATE TABLE SUBJECT(SUBCODE VARCHAR(7),

TITLE VARCHAR(20),

SEM INT,

CREDITS INT,

CONSTRAINT G PRIMARY KEY(SUBCODE)

);

CREATE TABLE IAMARKS(USN CHAR(10),

SUBCODE VARCHAR(7),

SSID CHAR(2),

TEST1 INT(2),

TEST2 INT(2),

TEST3 INT(2),

FINALIA INT(2),

CONSTRAINT H PRIMARY KEY(USN,SUBCODE,SSID),

CONSTRAINT I FOREIGN KEY(USN) REFERENCES STUDENT(USN) ON DELETE CASCADE,

CONSTRAINT J FOREIGN KEY(SSID) REFERENCES SEMSEC(SSID) ON DELETE CASCADE, CONSTRAINT K FOREIGN KEY(SUBCODE) REFERENCES SUBJECT(SUBCODE) ON DELETE CASCADE

);

INSERT INTO STUDENT VALUES('21GACSE032', 'RAM', 'BENGALURU', 1234567890, 'M');

INSERT INTO STUDENT VALUES('21GACSE033', 'RAVI', 'MANGALURU', 1544567890, 'M');

INSERT INTO STUDENT VALUES('20GACSE056', 'VINAY', 'KARVAR', 1544562390, 'M');

INSERT INTO STUDENT VALUES('20GACSE048', 'REKHA', 'HUBBALLI', 9244568390, 'F');

INSERT INTO STUDENT VALUES('20GACSE065', 'REVATHI', 'BENGALURU', 9244568390, 'F');

INSERT INTO STUDENT VALUES('20GACSE043', 'RAKESH', 'BENGALURU', 9244568630, 'M');

INSERT INTO STUDENT VALUES('21GACSE043', 'RAMESH', 'MANGALURU', 9244168630, 'M');

INSERT INTO STUDENT VALUES('18GACSE043', 'KAVYA', 'MYSORE', 9244162130, 'F');

INSERT INTO STUDENT VALUES('18GACSE052', 'KISHORE', 'MYSORE', 9334162130, 'M');

INSERT INTO STUDENT VALUES('18GACSE056', 'RAJESH', 'DHARWAD', 9334232130, 'M');

INSERT INTO SEMSEC VALUES('2A', 2, 'A');

INSERT INTO SEMSEC VALUES('2B', 2, 'B');

INSERT INTO SEMSEC VALUES('2C', 2, 'C');

INSERT INTO SEMSEC VALUES('4A', 4, 'A');

INSERT INTO SEMSEC VALUES('4B', 4, 'B');

INSERT INTO SEMSEC VALUES('4C', 4, 'C');

INSERT INTO SEMSEC VALUES('8A', 8, 'A');

INSERT INTO SEMSEC VALUES('8B', 8, 'B');

INSERT INTO SEMSEC VALUES('8C', 8, 'C');

INSERT INTO CLASS VALUES('21GACSE032', '2A');

INSERT INTO CLASS VALUES('21GACSE033', '2B');

INSERT INTO CLASS VALUES('21GACSE043', '2C');

INSERT INTO CLASS VALUES('20GACSE043', '4A');

INSERT INTO CLASS VALUES('20GACSE048', '4B');

INSERT INTO CLASS VALUES('20GACSE056', '4C');

INSERT INTO CLASS VALUES('20GACSE065', '4C');

INSERT INTO CLASS VALUES('18GACSE043', '8A');

INSERT INTO CLASS VALUES('18GACSE052', '8B');

INSERT INTO CLASS VALUES('18GACSE056', '8C');

INSERT INTO SUBJECT VALUES('20CSEM2', 'M2', 2, 3);

INSERT INTO SUBJECT VALUES('20CSEPS', 'PPS', 2, 4);

INSERT INTO SUBJECT VALUES('21CSDAA', 'DAA', 4, 4);

INSERT INTO SUBJECT VALUES('21CSSE', 'SE', 4, 3);

INSERT INTO SUBJECT VALUES('22CSDS', 'DS', 8, 4);

INSERT INTO SUBJECT VALUES('22CSPR', 'PR', 8, 3);

INSERT INTO IAMARKS VALUES('18GACSE043', '22CSDS', '8A', 15, 16, 19, NULL);

INSERT INTO IAMARKS VALUES('18GACSE043', '22CSPR', '8A', 17, 15, 14, NULL);

INSERT INTO IAMARKS VALUES('18GACSE052', '22CSDS', '8B', 15, 16, 18, NULL);

INSERT INTO IAMARKS VALUES('18GACSE052', '22CSPR', '8B', 17, 18, 16, NULL);

INSERT INTO IAMARKS VALUES('18GACSE056', '22CSDS', '8C', 17, 18, 19, NULL);

INSERT INTO IAMARKS VALUES('18GACSE056', '22CSPR', '8C', 16, 18, 15, NULL);

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

FROM STUDENT S,CLASS C,SEMSEC SS

WHERE S.USN=C.USN AND

SS.SSID=C.SSID AND

SS.SEM=4 AND

SS.SEC='C';

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

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;

CREATE VIEW TEST1\_MARKS AS

SELECT USN,SUBCODE,TEST1

FROM IAMARKS

WHERE USN='18GACSE056';

mysql> SELECT \* FROM TEST1\_MARKS;

DELIMITER //

CREATE PROCEDURE AVG\_MARKS()

BEGIN

DECLARE C\_A INTEGER;

DECLARE C\_B INTEGER;

DECLARE C\_C INTEGER;

DECLARE C\_SUM INTEGER;

DECLARE C\_AVG INTEGER;

DECLARE C\_USN VARCHAR(10);

DECLARE C\_SUBCODE VARCHAR(8);

DECLARE C\_SSID VARCHAR(5);

DECLARE C\_IAMARKS CURSOR FOR

SELECT GREATEST(TEST1,TEST2) AS A, GREATEST(TEST1,TEST3) AS B, GREATEST(TEST3,TEST2) AS C, USN, SUBCODE, SSID

FROM IAMARKS

WHERE FINALIA IS NULL

FOR UPDATE;

OPEN C\_IAMARKS;

LOOP

FETCH C\_IAMARKS INTO C\_A, C\_B, C\_C, C\_USN, C\_SUBCODE, C\_SSID;

IF (C\_A != C\_B) THEN

SET C\_SUM=C\_A+C\_B;

ELSE

SET C\_SUM=C\_A+C\_C;

END IF;

SET C\_AVG=C\_SUM/2;

UPDATE IAMARKS SET FINALIA = C\_AVG

WHERE USN = C\_USN AND SUBCODE = C\_SUBCODE AND SSID = C\_SSID;

END LOOP;

CLOSE C\_IAMARKS;

END;

//

CALL AVG\_MARKS();

SELECT \* FROM IAMARKS;

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

(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;