**Program 1**

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 ’01-JAN-2017’ AND ’01-JUN-2017’ GROUP BY CARD\_NO HAVING COUNT (\*)>3;

DELETE FROM BOOK WHERE BOOK\_ID=3;

CREATE VIEW V\_BOOKS 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 V\_BOOKS

CREATE VIEW V\_PUBLICATION AS SELECT PUB\_YEAR FROM BOOK; select \* from V\_PUBLICATION;

**Program 2**

SELECT GRADE,COUNT (DISTINCT CUSTOMER\_ID) FROM CUSTOMER1 GROUP BY GRADE Dept. of CSE, GAT 46 DBMS LAB - 18CSL58 HAVING GRADE > (SELECT AVG(GRADE) FROM CUSTOMER1 WHERE CITY='BANGALORE');

SELECT SALESMAN\_ID, NAME FROM SALESMAN A WHERE 1 < (SELECT COUNT (\*) FROM CUSTOMER1 WHERE SALESMAN\_ID=A.SALESMAN\_ID);

SELECT SALESMAN.SALESMAN\_ID, NAME, CUST\_NAME, COMMISSION FROM SALESMAN, CUSTOMER1 WHERE SALESMAN.CITY = CUSTOMER1.CITY UNION SELECT SALESMAN\_ID, NAME, 'NO MATCH', COMMISSION FROM SALESMAN WHERE NOT CITY = ANY (SELECT CITY FROM CUSTOMER1) ORDER BY 2 DESC;

CREATE VIEW ELITSALESMAN AS SELECT B.ORD\_DATE, A.SALESMAN\_ID, A.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 ELITSALESMAN;

DELETE FROM SALESMAN WHERE SALESMAN\_ID=1000;

**Program 3**

SELECT MOV\_TITLE FROM MOVIES WHERE DIR\_ID IN ( SELECT DIR\_ID FROM DIRECTOR WHERE DIR\_NAME='HITCHCOCK');

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

SELECT ACT\_NAME, MOV\_TITLE, MOV\_YEAR FROM ACTOR AJOIN MOVIE\_CAST CON A.ACT\_ID=C.ACT\_ID JOIN MOVIES MON C.MOV\_ID=M.MOV\_ID WHERE M.MOV\_YEAR NOT BETWEEN 2000 AND 2015;

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;

UPDATE RATING SET REV\_STARS=5 WHERE MOV\_ID IN (SELECT MOV\_ID FROM MOVIES M,DIRECTOR D WHERE M.DIR\_ID=D.DIR\_ID AND D.DIR\_NAME='STEVEN SPIELBERG'); SELECT \* FROM RATING

**Program 4**

SELECT S.\*, SS.SEM, SS.SEC FROM STUDENT S, SEMSEC SS, CLASS C WHERE S.USN = C.USN ANDSS.SSID = C.SSID AND SS.SEM = 4 ANDSS.SEC=’C’;

SELECT SS.SEM, SS.SEC, S.GENDER, COUNT (S.GENDER) AS COUNT FROM STUDENT S, SEMSEC SS, CLASS C WHERES.USN = C.USN AND SS.SSID = C.SSID GROUP BY SS.SEM, SS.SEC, S.GENDER ORDER BY SEM;

CREATE VIEW STU\_TEST1\_MARKS\_VIEW AS SELECT TEST1, SUBCODE FROM IAMARKS WHERE USN=1GA15CS091'; SELECT \* FROM STU\_TEST1\_MARKS\_VIEW;

CREATE OR REPLACE PROCEDURE AVGMARKS IS CURSOR C\_IAMARKS IS SELECT GREATEST(TEST1,TEST2) AS A, GREATEST(TEST1,TEST3) AS B, GREATEST(TEST3,TEST2) AS C FROM IAMARKS WHERE FINALIA IS NULL FOR UPDATE; C\_A NUMBER; C\_B NUMBER; C\_C NUMBER; C\_SM NUMBER; C\_AV NUMBER; BEGIN OPEN C\_IAMARKS; LOOP FETCH C\_IAMARKS INTO C\_A, C\_B, C\_C; EXIT WHEN C\_IAMARKS%NOTFOUND; --DBMS\_OUTPUT.PUT\_LINE (C\_A || ' ' ||C\_B || ' ' || C\_C); IF (C\_A! = C\_B) THEN C\_SM:=C\_A+C\_B; ELSE C\_SM:=C\_A+C\_C; END IF; C\_AV:=C\_SM/2; --DBMS\_OUTPUT.PUT\_LINE('SUM '||C\_SM); DBMS\_OUTPUT.PUT\_LINE('AVERAGE = '||C\_AV); UPDATE IAMARKS SET FINALIA=C\_AV WHERE CURRENT OF C\_IAMARKS; END LOOP; CLOSE C\_IAMARKS; END; SELECT \* FROM IAMARKS;

SELECT S.USN,S.SNAME,S.ADDRESS,S.PHONE,S.GENDER, (CASEWHEN 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;

**Program 5**

(SELECT DISTINCT P.PNO FROM PROJECT P, DEPARTMENT D, EMPLOYEE E WHERE P.DNO=D.DNO AND D.MGRSSN=E.SSN AND E.LNAME=’KUMAR’) UNION (SELECT DISTINCT P1.PNO FROM PROJECT P1, WORKS\_ON W, EMPLOYEEE1 WHERE P1.PNO=W.PNO AND E1.SSN=W.SSN AND E1.LNAME=’KUMAR’);

SELECT E.FNAME, E.LNAME, 1.1\*E.SALARY AS INCR\_SAL FROM EMPLOYEE E, WORKS\_ON W, PROJECT P WHERE E.SSN=W.SSN AND W.PNO=P.PNO AND P.PNAME=’IOT’;

SELECT SUM (E.SALARY), MAX (E.SALARY), MIN (E.SALARY), AVG (E.SALARY) FROM EMPLOYEE E, DEPARTMENT D WHERE E.DNO=D.DNOAND D.DNAME=’ACCOUNTS’;

SELECT E.FNAME, E.LNAME FROM EMPLOYEE E WHERE NOT EXISTS((SELECT PNO FROM PROJECT WHERE DNO=’5’) MINUS (SELECT PNO FROM WORKS\_ON WHERE E.SSN=SSN));

SELECT D.DNO, COUNT (\*) FROM DEPARTMENT D, EMPLOYEE E WHERE D.DNO=E.DNOAND E.SALARY>600000AND D.DNO IN (SELECT E1.DNO FROM EMPLOYEE E1 GROUP BY E1.DNO HAVING COUNT (\*)>5) GROUP BY D.DNO;