**Question1:**

Query01:-

SELECT \* FROM DEMO\_CLASSROOM;

SELECT \* FROM DEMO\_COURSE;

SELECT \* FROM DEMO\_REGISTRATION;

SELECT \* FROM DEMO\_INSTRUCTOR;

SELECT \* FROM DEMO\_STUDENT;

**RESULT:**

DEMO\_CLASSROOM:

|  |  |  |
| --- | --- | --- |
| CRID | DESCR | CAP |
| BA 116 | BA 116 | 220 |
| BA 250 | BA 250 | 40 |
| BA 356 | BA 356 | 50 |
| BO 115 | Biology 115 | 70 |
| CR 204 | Curry 204 | 110 |
| CR 205 | Curry 205 | 110 |
| CR 121 | Computer Science 212 | 50 |
| LA 200 | Language 200 | 65 |
| MU 245 | Music 245 | 50 |
| PH 110 | Physics 110 | 250 |

DEMO\_COURSE:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CID | TITLE | IID | HOUR | CRID |
| C01 | Introduction to Business | I01 | 3 | BA 116 |
| C02 | Introduction to Business | I06 | 3 | CR 204 |
| C03 | Business Communications | I03 | 3 | CR 205 |
| C04 | Business Ethics | I01 | 2 | BA 356 |
| C05 | Economic Policies | I06 | 2 | BO 115 |
| C06 | Computer Programming | I02 | 3 | CR 121 |
| C07 | Statistics | I04 | 3 | PH 110 |
| C08 | Database | I05 | 3 | BA 356 |
| C09 | Java | I02 | 3 | BA 250 |

DEMO\_REGISTRATION:

|  |  |  |
| --- | --- | --- |
| RID | SID | CID |
| R01 | S01 | C03 |
| R02 | S02 | C03 |
| R03 | S02 | C06 |
| R04 | S03 | C01 |
| R05 | S03 | C06 |
| R06 | S03 | C07 |
| R07 | S04 | C01 |
| R08 | S04 | C03 |
| R09 | S04 | C07 |
| R10 | S05 | C06 |
| R11 | S05 | C07 |
| R12 | S06 | C02 |
| R13 | S06 | C06 |
| R14 | S07 | C06 |
| R15 | S07 | C07 |
| R16 | S08 | C03 |
| R17 | S08 | C05 |
| R18 | S09 | C02 |
| R19 | S09 | C05 |
| R20 | S09 | C07 |
| R21 | S01 | C08 |
| R22 | S02 | C09 |
| R23 | S05 | C08 |
| R24 | S06 | C09 |
| R25 | S01 | C09 |

DEMO\_INSTRUCTOR:

|  |  |  |
| --- | --- | --- |
| IID | NAME | DEPT |
| I01 | Becker | BCIS |
| I02 | Lee | Computer |
| I03 | Ferguson | English |
| I04 | Harvey | Statisitics |
| I05 | Koh | BCIS |
| I06 | Kent | Economics |

DEMO\_STUDENT:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| SID | NAME | MAJOR | YEAR | GPA |
| S01 | Bird | Philosophy | 2 | 3.5 |
| S02 | Austin | English | 2 | 3.7 |
| S03 | Scott | Statistics | 3 | 2.5 |
| S04 | Coleman | Business | 1 | 1.4 |
| S05 | Jefferson | - | 2 | 1.8 |
| S06 | Newsome | Business | 1 | 2.9 |
| S07 | Hampton | Computer | 2 | 2.4 |
| S08 | Hartman | Business | 1 | 3.2 |
| S09 | Jones | Computer | 4 | 3.9 |
| S10 | Oldham | Business | 1 | 3 |

**Question2:**

Query02:-

SELECT NAME, YEAR, GPA FROM DEMO\_STUDENT WHERE MAJOR='Business' ORDER BY MAJOR DESC;

**RESULT:**

|  |  |  |
| --- | --- | --- |
| NAME | YEAR | GPA |
| Coleman | 1 | 1.4 |
| Newsome | 1 | 2.9 |
| Hartman | 1 | 3.2 |
| Oldham | 1 | 3 |

**Question 3:**

Query03:-

SELECT CID as CourseID, TITLE as Course Title , CRID as Classroom FROM DEMO\_COURSE WHERE IID='I06';

**RESULT:**

|  |  |  |
| --- | --- | --- |
| COURSEID | COURSE\_TITLE | CLASSROOM |
| C02 | Introduction to Business | CR 204 |
| C05 | Economic Policies | BO 115 |

**Question 4:**

Query04:-

select CO.CID as CourseID, CO.TITLE as COURSETITLE, CL.DESCR as Description, CL.CAP as capacity FROM demo\_course CO inner join demo\_classroom CL ON CO.CRID = CL.CRID where DESCR = 'Curry 205';

**RESULT**

|  |  |  |  |
| --- | --- | --- | --- |
| COURSEID | COURSETITLE | DESCRIPTION | CAPACITY |
| C03 | Business Communications | Curry 205 | 110 |

**Question 5:**

Query05:-

SELECT IID as InstructorID

FROM DEMO\_COURSE

group by IID having count(IID)>1;

**RESULT**:

|  |
| --- |
| INSTRUCTORID |
| I06 |
| I02 |
| I01 |

**QUESTION 6:**

Query06:-

SELECT \* FROM DEMO\_COURSE

WHERE IID IN (SELECT IID from DEMO\_COURSE group by IID HAVING count(IID)>1)

AND (TITLE LIKE '%Business%' or HOUR<=2);

**RESULT:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CID | TITLE | IID | HOUR | CRID |
| C01 | Introduction to Business | I01 | 3 | BA 116 |
| C02 | Introduction to Business | I06 | 3 | CR 204 |
| C04 | Business Ethics | I01 | 2 | BA 356 |
| C05 | Economic Policies | I06 | 2 | BO 115 |

**QUESTION 7:**

Query07:-

select name, dept from demo\_instructor

where iid in (select iid from demo\_course group by iid having count(\*)=1);

**RESULT:**

|  |  |
| --- | --- |
| NAME | DEPT |
| Ferguson | English |
| Harvey | Statisitics |
| Koh | BCIS |

**QUESTION 8:**

Query08:-

select CID,count(SID) as studentcount

from demo\_registration

group by CID;

**RESULT:**

|  |  |
| --- | --- |
| CID | STUDENTCOUNT |
| C05 | 2 |
| C08 | 2 |
| C06 | 5 |
| C01 | 2 |
| C03 | 4 |
| C02 | 2 |
| C07 | 5 |
| C09 | 3 |

**QUESTION 9:**

Query09:-

select \* from demo\_course

where cid in (select cid from demo\_registration group by cid having count(sid)>4);

**RESULT:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CID | TITLE | IID | HOUR | CRID |
| C06 | Computer Programming | I02 | 3 | CR 121 |
| C07 | Statistics | I04 | 3 | PH 110 |

**QUESTION 10:**

Query10:-

select \* from demo\_classroom

where cap in (select cap, count(cap) as capacity\_count from demo\_classroom group by cap having count(cap)>1) and crid <> descr;

**RESULT:**

|  |  |  |
| --- | --- | --- |
| CRID | DESCR | CAP |
| CR 204 | Curry 204 | 110 |
| CR 205 | Curry 205 | 110 |
| CR 121 | Computer Science 212 | 50 |
| MU 245 | Music 245 | 50 |

**QUESTION 11:**

Query11:-

create table Temp\_Q10\_Resultss

as

( select \* from demo\_classroom

where cap in (select cap from demo\_classroom group by cap having count(cap)>1) and crid <> descr

);

select \* from Temp\_Q10\_Resultss

**RESULT:**

|  |  |  |
| --- | --- | --- |
| CRID | DESCR | CAP |
| CR 204 | Curry 204 | 110 |
| MU 245 | Music 245 | 50 |
| CR 121 | Computer Science 212 | 50 |
| CR 205 | Curry 205 | 110 |

**QUESTION 12:**

Query12:-

select year, avg(gpa) as Average\_GPA from demo\_student group by year order by year;

**RESULT:**

|  |  |
| --- | --- |
| YEAR | AVERAGE\_GPA |
| 1 | 2.625 |
| 2 | 2.85 |
| 3 | 2.5 |
| 4 | 3.9 |

**QUESTION 13:**

Query13:-

select year, avg(gpa),

row\_number() over (order by avg(gpa)) as RowNumberGPA

from demo\_student

group by year;

**RESULT:**

|  |  |  |
| --- | --- | --- |
| YEAR | AVG(GPA) | ROWNUMBERGPA |
| 3 | 2.5 | 1 |
| 1 | 2.625 | 2 |
| 2 | 2.85 | 3 |
| 4 | 3.9 | 4 |

**QUESTION 14:**

Query14:-

select year, AverageGPA

from (select year, avg(gpa) as AverageGPA,

row\_number() over (order by avg(gpa)) as rownumber

from demo\_student

group by year)

where rownumber = 1;

**RESULT:**

|  |  |
| --- | --- |
| YEAR | AVERAGEGPA |
| 3 | 2.5 |

**QUESTION 15:**

Query15:-

select \* from demo\_student

where year = '1' and gpa < 2;

**RESULT:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| SID | NAME | MAJOR | YEAR | GPA |
| S04 | Coleman | Business | 1 | 1.4 |

**QUESTION 16:**

Query16:-

select cid, sid from demo\_registration where sid in (select sid from demo\_student where major ='Computer');

**RESULT:**

|  |  |
| --- | --- |
| CID | SID |
| C06 | S07 |
| C07 | S07 |
| C02 | S09 |
| C05 | S09 |
| C07 | S09 |

**QUESTION 17:**

Query17:-

select \* from demo\_course where cid in (select cid from demo\_registration where sid in (select sid from demo\_student where major ='Computer'));

**RESULT:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CID | TITLE | IID | HOUR | CRID |
| C02 | Introduction to Business | I06 | 3 | CR 204 |
| C05 | Economic Policies | I06 | 2 | BO 115 |
| C06 | Computer Programming | I02 | 3 | CR 121 |
| C07 | Statistics | I04 | 3 | PH 110 |