1)Retrieve name of course and name of its pre-requisite:
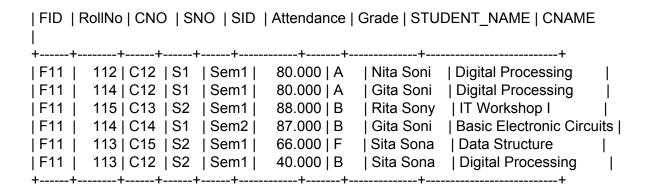
METHOD1:
SELECT C1.CNAME,C2.CNAME PRCNAME
FROM PREREQUISITE_COURSES PC, COURSE C1,COURSE C2
WHERE
C1.CNO=PC.CNO AND
C2.CNO=PC.PRCNO;

```
+-------------------------+-------------------+
| CNAME                   | PRCNAME           |
+-------------------------+-------------------+
| Basic Electronic Circuits | Digital Processing |
| Data Structure          | Programming       |
| Data Structure          | IT Workshop I     |
+-------------------------+-------------------+
```

METHOD2:

CREATE VIEW VIEW1 AS
SELECT C.CNAME, PC.PRCNO
FROM COURSE C, PREREQUISITE_COURSES PC
WHERE C.CNO=PC.CNO;

```
+-------------------------+-------+
| CNAME                   | PRCNO |
+-------------------------+-------+
| Basic Electronic Circuits | C12   |
| Data Structure          | C11   |
| Data Structure          | C13   |
+-------------------------+-------+
```

SELECT V.CNAME, C.CNAME PRCNAME
FROM VIEW1 V, COURSE C
WHERE V.PRCNO=C.CNO;

```
+-------------------------+-------------------+
| CNAME                   | PRCNAME           |
+-------------------------+-------------------+
| Basic Electronic Circuits | Digital Processing |
| Data Structure          | Programming       |
| Data Structure          | IT Workshop I     |
+-------------------------+-------------------+
```

2) name of students who took a course but not its pre-requisite course along with course name and prerequisite course.

CREATE VIEW VIEW1 AS
SELECT T.RollNo, T.CNO, CONCAT(S.FNAME,' ',S.LNAME) STUDENT_NAME ,
C.CNAME

```
FROM  STUDENT S, COURSE C, TAKES T
WHERE S.RollNumber=T.RollNo AND
T.CNO=C.CNO;
```

```
+--------+------+--------------+-------------------------+
| RollNo | CNO  | STUDENT_NAME | CNAME                   |
+--------+------+--------------+-------------------------+
|   112  | C12  | Nita Soni    | Digital Processing      |
|   114  | C12  | Gita Soni    | Digital Processing      |
|   115  | C13  | Rita Sony    | IT Workshop I           |
|   114  | C14  | Gita Soni    | Basic Electronic Circuits |
|   113  | C15  | Sita Sona    | Data Structure          |
|   113  | C12  | Sita Sona    | Digital Processing      |
+--------+------+--------------+-------------------------+
```

```
CREATE VIEW PRC_VIEW AS
SELECT PC.CNO,PC.PRCNO,C.CNAME PRCNAME
FROM PREREQUISITE_COURSES PC, COURSE C
WHERE
C.CNO=PC.PRCNO;
```

```
+-----+-------+--------------------+
| CNO | PRCNO | PRCNAME            |
+-----+-------+--------------------+
| C15 | C11   | Programming        |
| C14 | C12   | Digital Processing |
| C15 | C13   | IT Workshop I      |
+-----+-------+--------------------+
```

```
SELECT V1.STUDENT_NAME, V1.CNAME, PC.PRCNAME FROM VIEW1 V1, PRC_VIEW
PC
WHERE V1.CNO=PC.CNO AND PC.PRCNO NOT IN
(
SELECT V2.CNO FROM VIEW1 V2
WHERE V2.RollNo = V1.RollNo
);
```

```
+--------------+----------------+---------------+
| STUDENT_NAME | CNAME          | PRCNAME       |
+--------------+----------------+---------------+
| Sita Sona    | Data Structure | Programming   |
| Sita Sona    | Data Structure | IT Workshop I |
+--------------+----------------+---------------+
```

3) name of pair of students with same grade in same course

```
CREATE VIEW VIEW1 AS
SELECT T.FID,T.RollNo, T.CNO,T.SNO, T.SID, T.Attendance, T.Grade,
CONCAT(S.FNAME,' ',S.LNAME) STUDENT_NAME , C.CNAME
FROM  STUDENT S, COURSE C,TAKES T
WHERE S.RollNumber=T.RollNo AND
T.CNO=C.CNO;
```

```
+------+--------+------+------+------+------------+-------+-------------+-------------------------+
```

```
| FID  | RollNo | CNO  | SNO  | SID  | Attendance | Grade | STUDENT_NAME | CNAME                   |
+------+--------+------+------+------+------------+-------+--------------+-------------------------+
| F11  |    112 | C12  | S1   | Sem1 |     80.000 | A     | Nita Soni    | Digital Processing      |
| F11  |    114 | C12  | S1   | Sem1 |     80.000 | A     | Gita Soni    | Digital Processing      |
| F11  |    115 | C13  | S2   | Sem1 |     88.000 | B     | Rita Sony    | IT Workshop I           |
| F11  |    114 | C14  | S1   | Sem2 |     87.000 | B     | Gita Soni    | Basic Electronic Circuits |
| F11  |    113 | C15  | S2   | Sem1 |     66.000 | F     | Sita Sona    | Data Structure          |
| F11  |    113 | C12  | S2   | Sem1 |     40.000 | B     | Sita Sona    | Digital Processing      |
+------+--------+------+------+------+------------+-------+--------------+-------------------------+
```

```
SELECT V1.STUDENT_NAME,V2.STUDENT_NAME , V1.CNAME
FROM VIEW1 V1, VIEW1 V2
WHERE V1.STUDENT_NAME > V2.STUDENT_NAME AND
V1.CNO = V2.CNO AND
V1.Grade=V2.Grade;
```

```
+--------------+--------------+--------------------+
| STUDENT_NAME | STUDENT_NAME | CNAME              |
+--------------+--------------+--------------------+
| Nita Soni    | Gita Soni    | Digital Processing |
+--------------+--------------+--------------------+
```