```sql
use demo
CREATE DATABASE DEMO


CREATE TABLE STUDENT_INFO
(Rno INT,
Name VARCHAR(10),
Branch VARCHAR(10),
Semester INT,
CPI DECIMAL(4,2)
)

INSERT INTO STUDENT_INFO
VALUES
(101,'Ramesh','CE',3,9),
(102,'Mahesh','EC',3,8),
(103,'Suresh','ME',4,7),
(104,'Amit','EE',4,8),
(105,'Anita','CE',4,8),
(106,'Reeta','ME',3,7),
(107,'Rohit','EE',4,9),
(108,'Chetan','CE',3,8),
(109,'Rakesh','CE',4,9)


SELECT * FROM STUDENT_INFO


--MAX CPI
SELECT MAX(CPI) FROM STUDENT_INFO


--BRANCH WISE HIGHEST SPI
SELECT MAX(CPI)
FROM STUDENT_INFO
GROUP BY Branch


SELECT BRANCH,MAX(CPI) AS HIGHEST_CPI
FROM STUDENT_INFO
GROUP BY Branch




--BRANCH WISE LOWEST CPI
SELECT BRANCH,MIN(CPI) AS LOWEST_CPI
FROM STUDENT_INFO
GROUP BY Branch




--BRANCH WISE AVERAGE CPI
SELECT BRANCH,AVG(CPI) AS AVERAGE_CPI
FROM STUDENT_INFO
GROUP BY Branch




--SEM WISE MAX AND MIN CPI
```

```sql
SELECT Semester ,MAX(CPI) AS HIGHEST , MIN(CPI) AS LOWEST
FROM STUDENT_INFO
GROUP BY Semester


-- AVG CPI OF CE BRANCH
SELECT BRANCH,AVG(CPI) AS AVG_CPI
FROM STUDENT_INFO
GROUP BY Branch
having BRANCH='CE'

--or
select avg(cpi) as avg_cpi_CE
from Student_Info
where branch='ce'



--avg CPI of 3rd sem students
SELECT SEMESTER, AVG(CPI) AS AVG_CPI
FROM STUDENT_INFO
GROUP BY SEMESTER
HAVING SEMESTER=3

--or
SELECT AVG(CPI) AS AVG_CPI_of_3rdsem
FROM STUDENT_INFO
where Semester=3



--Find out All the Branches with maximum CPI,
--whose maximum CPI is more than 8.
SELECT BRANCH,MAX(CPI) AS [MAX_CPI]
FROM STUDENT_INFO
GROUP BY BRANCH
HAVING MAX(CPI)>8


--BRANCH WISE, SEM WISE MIN CPI
SELECT SEMESTER,BRANCH, MIN(CPI)AS MIN_CPI
FROM STUDENT_INFO
GROUP BY SEMESTER,BRANCH


SELECT BRANCH,SEMESTER, MIN(CPI)AS MIN_CPI
FROM STUDENT_INFO
GROUP BY BRANCH,SEMESTER

select * from STUDENT_INFO




select cpi from STUDENT_INFO
---ORDER BY
SELECT CPI FROM STUDENT_INFO ORDER BY CPI

SELECT CPI FROM STUDENT_INFO ORDER BY CPI ASC

--DESCENDING
SELECT CPI FROM STUDENT_INFO ORDER BY CPI DESC
```

```sql
--SELECT BRANCH WISE MAXIMUM CPI IN ASCENDING ORDER
SELECT BRANCH,MAX(CPI) AS BRANCH_MAX_CPI
FROM STUDENT_INFO
GROUP BY BRANCH
ORDER BY MAX(CPI)


--SELECT BRANCH WISE MAXIMUM CPI IN DESCDENDING ORDER
SELECT BRANCH,MAX(CPI) BRANCH_MAX_CPI_
FROM STUDENT_INFO
GROUP BY BRANCH
ORDER BY MAX(CPI) DESC


--DISPLAY SEM WISE AVG SPI IN DESCENDING ORDER
SELECT SEMESTER,AVG(CPI) AS AVERAGE
FROM STUDENT_INFO
GROUP BY Semester
ORDER BY AVG(CPI) DESC


--Find out semester wise total students &
--arrange them in order with their count.
Select Semester, Count(Rno) AS [Total]
From STUDENT_INFO
Group By Semester
Order By Count(Rno)

--find Branch wise total students in descending order
SELECT Branch,COUNT(RNO) AS TOTAL
FROM STUDENT_INFO
GROUP BY BRANCH
ORDER BY  COUNT(RNO) DESC

--Find out Branch wise & Semester wise
--CE branch's students in which
--minimum CPI is greater than 7.
--Do arrange the result in descending order to semester.


Select  Semester,
MIN(CPI) AS [Min] From Student_info
Where Branch='CE'
Group By  Semester
Having MIN(CPI) > 7
Order By Semester Desc


Select Branch, Semester, MIN(CPI) AS [Min]
From Student_info
Group By Branch, Semester
Having MIN(CPI) > 7 and Branch='CE'
Order By Semester Desc
```