Basic SQL

1. Consider the following relations

   Employee(employee-name, street, city)

   Bank(bank-name, city)

   Works(employee-name, bank-name, salary)

   Manages(employee-name ,manager-name)

   Write the following queries in SQL.

   1. Find the names and cities of residence of all employees who work for State Bank of India.
   2. Find the names, street, address and cities of residence of all employees who work for State Bank of India and earn more than Rs.14, 000
   3. Find all the employees in the database who live in the same cities as the banks for which they work.
   4. Find all the employees in the database who live in the same cities and on the same streets as do their managers.
   5. Find all the employees in the database who do not work in State Bank of India.
   6. Find all the employees in the database who earn more than every employee of Indian Bank.
   7. Find all employees who earn more than the average salary of all employees of their bank.
   8. Find the bank that has the most employees.
   9. Find the bank that has the smallest payroll.
   10. Find those banks whose employees earn a higher salary, on average, than the average salary at State Bank of India
   11. Find the number of employees working in each bank.

2. Consider the following relations:

Student(sno: integer, sname: string, major: string, level: string, age:integer)

Class (cname: string, room: integer, fid: integer)

Enrolled (sno: integer, cname: string)

Faculty (fid: integer, fname: string, deptid: integer)

The meaning of these relations is straightforward; for example,

Enrolled has one record per student-class pair such that the student is enrolled in the class.

Write the following queries in SQL. No duplicates should be printed in any of the answers.

1. Find the names of all students (Level=Third Year) who are enrolled in a class taught by fname='aaa'.
2. Find the age of the oldest student who is either a CSE major or is enrolled in a course taught by 'aaa'.
3. Find the names of all classes that either meet in room R128 or have five or more students enrolled.
4. Find the names of faculty members who teach in every room in which some class is taught.
5. Find the names of faculty members for whom the combined enrollment of the courses that they teach is less than two.
6. Print the level and the average age of students for that level, for each level.
7. Print the level and the average age of students for that level, for all levels except Third Year.
8. Find the names of students who are enrolled in the maximum number of classes.
9. Find the names of students who are not enrolled in any class.
10. Find the number of students who are enrolled for classes whose age is less than 20,for each level.