



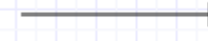

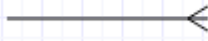



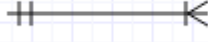
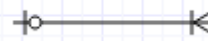

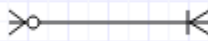
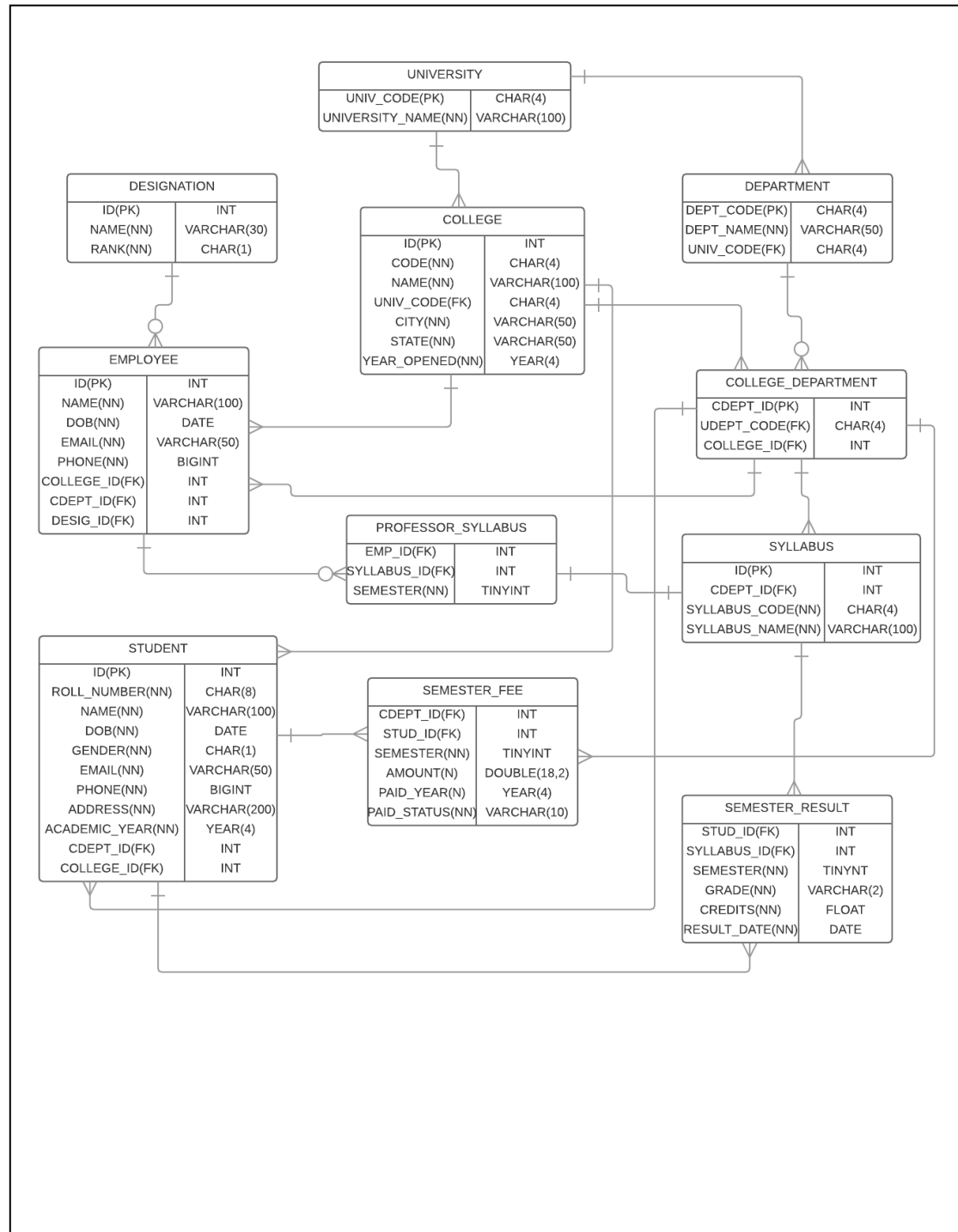


Symbols used in ER Diagram

S.No	Entity Connector Symbols	Description
1		Zero to Many
2		One to Many
3		One Mandatory
4		One to One
5		One
6		Zero to One
7		Many
8		Many to Many
9		One Optional to Many Optional
10		One Mandatory to Many Optional
11		One Mandatory to Many Mandatory
12		One Optional to Many Mandatory
13		Many Mandatory to Many Mandatory
14		Many Optional to Many Mandatory

ER Diagram



SQL Practices

1. Select College details which are having **IT / CSC** departments across all the universities. Result should have below details;(Assume that one of the Designation name is 'HOD' in Designation table)

*CODE, COLLEGE_NAME, UNIVERSITY_NAME, CITY, STATE,
YEAR_OPENED, DEPARTMENT_NAME, HOD_NAME*

2. Select **final year students**(Assume that universities has Engineering **Depts only**) details who are studying under a particular university and selected cities alone.

*ROLL_NUMBER, NAME, GENDER, DOB, EMAIL, PHONE, ADDRESS,
COLLEGE_NAME, DEPARTMENT_NAME*

3. Select students details who are studying under a particular university and selected cities alone. Fetch 20 records for every run.

*ROLL_NUMBER, NAME, GENDER, DOB, EMAIL, PHONE, ADDRESS,
COLLEGE_NAME, DEPARTMENT_NAME, HOD_NAME*

4. List Employees details from a particular university along with their college and department details. Details should be sorted by rank and college name

5. List Students details along with their GRADE,CREDIT and GPA details from all universities. Result should be sorted by college_name and semester. Apply paging also.

6. Create new entries in SEMESTER_FEE table for each student from all the colleges and across all the universities. These entries should be created whenever new semester starts.. Each entry should have below default values;

- a) AMOUNT - Semester fees
- b) PAID_YEAR - Null
- c) PAID_STATUS - Unpaid

7. Update PAID_STATUS and PAID_YEAR in SEMESTER_FEE table who has done the payment. Entries should be updated based on student ROLL_NUMBER.

- a) Single Update - Update one student entry
- b) Bulk Update - Update multiple students entries
- c) PAID_STATUS value as 'Paid'
- d) PAID_YEAR value as 'year format'

8. Find employee vacancy position in all the departments from all the colleges and across the universities. Result should be populated with following information.. Designation, rank, college, department and university details.

9. Show consolidated result for the following scenarios;

- a) collected and uncollected semester fees amount per semester for each college under an university. Result should be filtered based on given year.
- b) Collected semester fees amount for each university for the given year

10. Display below result in one SQL run

- a) Shows students details who scored above 8 GPA for the given semester
- b) Shows students details who scored above 5 GPA for the given semester