**Part-1- Data Modeling Design**

**Data Requirements:**

**Entities:**

1. Student
2. Administration
3. Academic department
4. Staff
5. Teaching staff
6. Non-teaching staff
7. Degree
8. Library
9. Issue
10. Renewal
11. Return
12. Hospital
13. Glearn
14. Section
15. Branch
16. Program
17. Cse
18. Ece
19. It
20. Civil
21. Eee
22. CR (weak entity)

**Relationships:**

1. Teaching staff can help students
2. Teaching staff teaches sections
3. Teaching staff works in academic department
4. Administration pays Teaching staff
5. Administration gives degree
6. Student can obtain degree
7. Administration pays Non-teaching staff
8. Administration enrolls student
9. Student can access library
10. Student can access glearn
11. Student can access hospital
12. Student can be in class
13. Student enrolls in program and branch
14. Section has a CR
15. Academic department instructs branch and program
16. Program offers branches
17. Academic department is managed by HOD
18. Section has a cr

**Attributes:**

1. Student - s\_id, s\_name, s\_age, s\_phone
2. Administration- adm\_id, adm\_name , adm\_gender, adm\_ssn
3. Academic department- dept\_id , dept\_name, no of programs
4. Staff- staff\_id, s\_name, s\_capacity
5. Teaching staff- t\_ssn , t\_sal , t\_age , t\_name , t\_id
6. Non teaching staff- nt\_id , nt\_name , nt\_ssn, nt\_sal , nt\_gender
7. Degree- degree\_id , grade , GPA ,degree\_name
8. Library- lib\_id , lib\_capacity, no of books
9. Issue- issue\_id, Book\_name
10. Renewal- Book\_name , renewal\_id
11. Return- return\_id , book\_name
12. Hospital- hosp\_id , capacity
13. Glearn- reg\_no , course, attendance
14. Section- section\_id , section\_name, capacity, Subject\_name
15. Branch- branch\_id , branch\_name
16. Program- prog\_id , prog\_name, no of courses
17. Cse- cse\_id , cse\_sec
18. Ece- ece\_id , ece\_sec
19. It- it\_id , it\_sec
20. Civil- civil\_id , civil\_sec
21. Eee- eee\_id , eee\_sec
22. Cr- cr\_id, cr\_name