Name= Krish Porwal

Registration Number= 231080910

Entities and Relationships=

Entities and their Attributes=

1. Hostel Branch = (INTEGER hostel_id Primary key,
   VARCHAR name,
   VARCHAR address,
   INTEGER number_of_rooms,
   INTEGER number_of_students)

2. Rooms = (INTEGER room_number Primary key,
   INTEGER capacity,
   INTEGER student_id Foreign Key,
   INTEGER hostel_id Foreign Key)

3. Employees = (INTEGER employee_id Primary key,
   VARCHAR name,
   VARCHAR gender,
   BIGINT phone_number,
   INTEGER hostel_id Foreign Key,
   BIGINT salary,
   DATE date_of_join,
   DATE date_of_leave)

4. Students = (INTEGER student_id Primary key,
   VARCHAR name,
   VARCHAR address,
   INTEGER age,
   VARCHAR course,
   BIGINT student_phone_number,

BIGINT dependent_phone_number,
DATE date_of_join,
DATE date_of_leave)

5. Dependents = (INTEGER student_id Foreign Key,
   BIGINT dependent_phone_number,
   VARCHAR name,
   INTEGER age,
   VARCHAR relation)

6. Fees = (INTEGER student_id,
   DATE date,
   DECIMAL amount,
   DATE paid_till_date,
   DECIMAL pending,
   VARCHAR mode_of_payment)

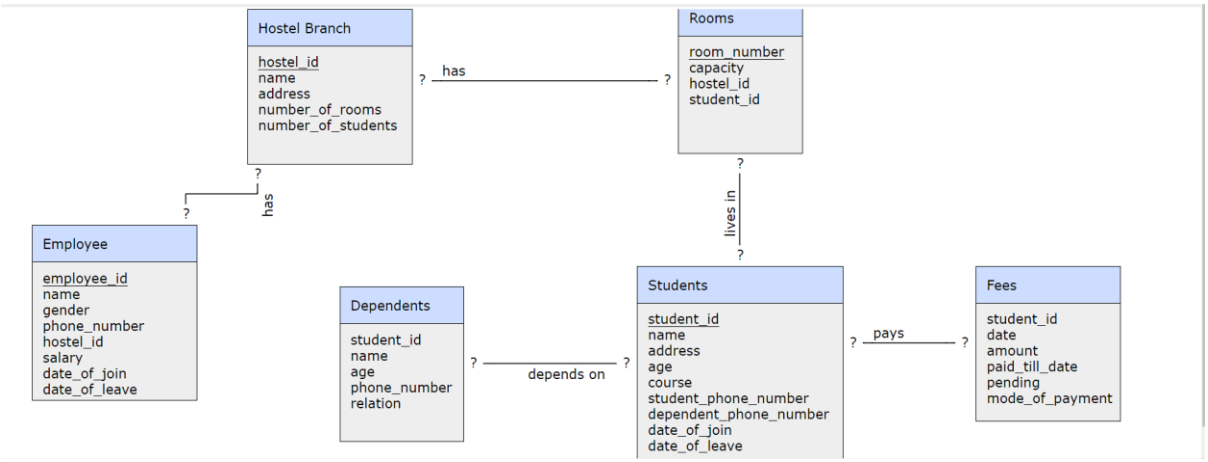

Fig- UML Diagram

Relationships=

1. `Hostel Branch` has `Rooms` = One-to-Many Relationship
2. `Students` live in `Rooms` = Many-to-One Relationship
3. `Students` depend on `Dependents` = One-to-One Relationship
4. `Students` pays `Fees` = One-to-One Relationship
5. `Hostel Branch` has `Employees` = One-to-Many Relationship

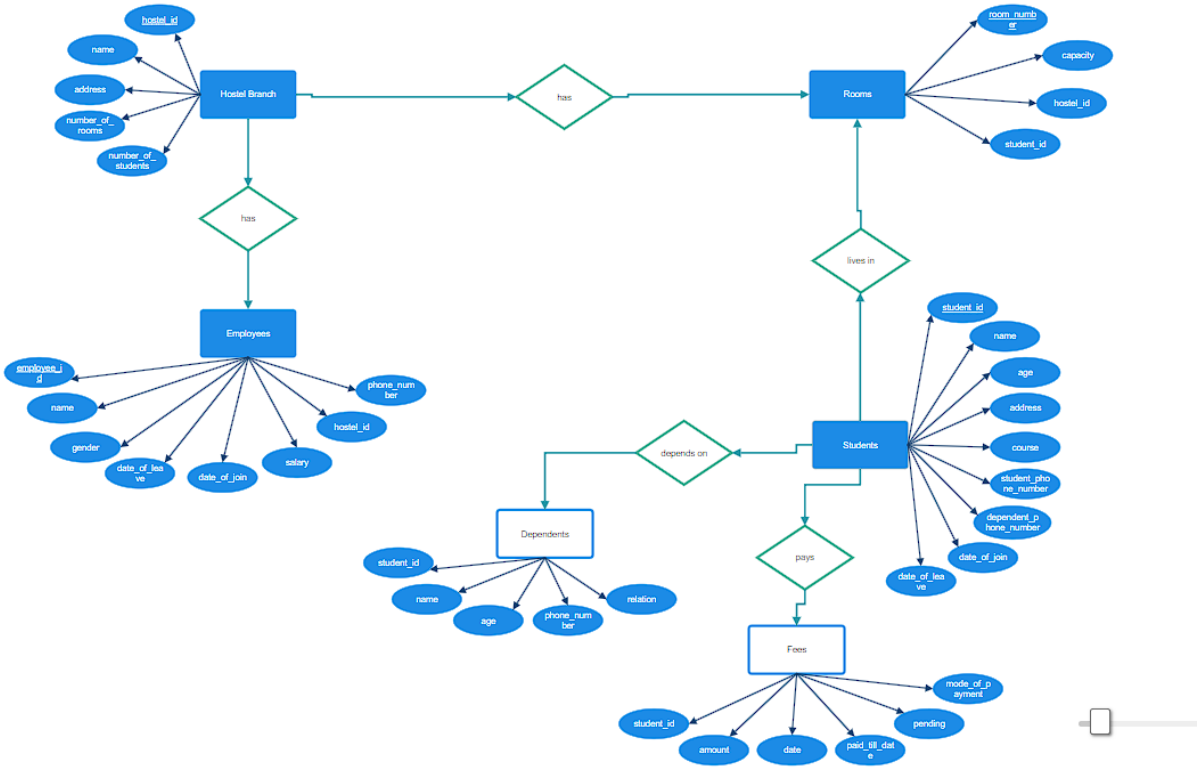

Fig- ER Diagram

Logical Schema for the Problem Statement=

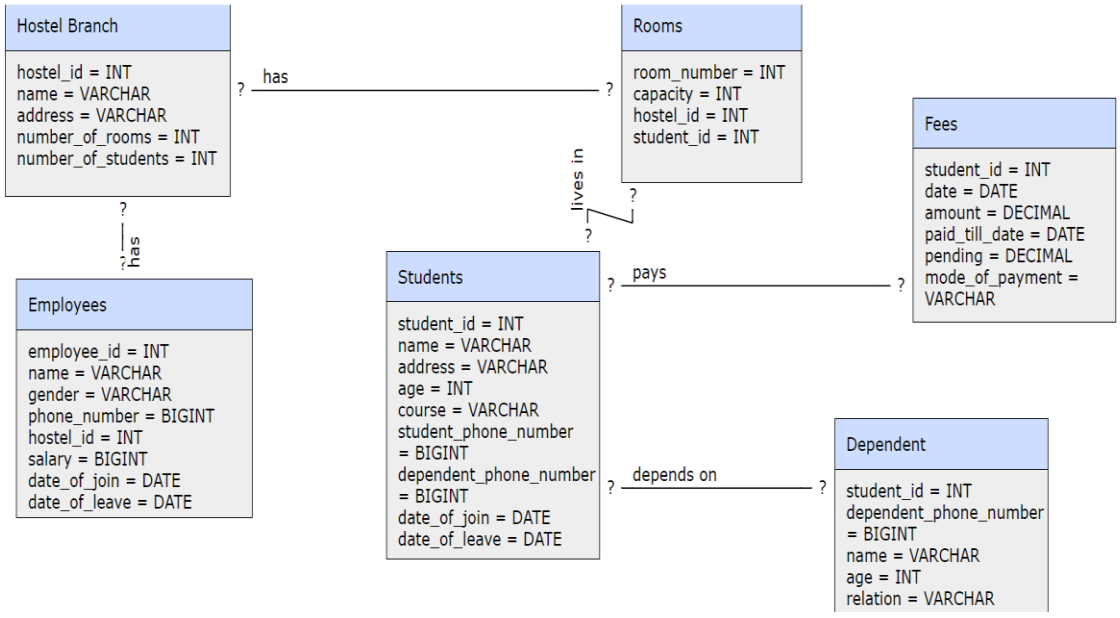

Fig – Logical Schema