



**PES UNIVERSITY**  
(Established under Karnataka Act No.16 of 2013)  
100-ft Ring Road, BSK III Stage, Bangalore – 560 085  
**Department of CSE**  
**Semester : 5      Section C**

**DBMS MINI PROJECT REVIEW – 1**  
**HOSTEL MANAGEMENT SYSTEM**  
**ER DIAGRAM**

**Member – 1 NAME: B B Varun Kumar**

**Member – 1 SRN: PES1UG23CS131**

**Member – 2 NAME: Chaitanya Gera**

**Member – 2 Name: PES1UG23CS156**

## USER SPECIFICATION

# Entities and Their Attributes

## 1. Student (Strong Entity)

Attributes:

- **s\_id (Primary Key)**
- **name (Composite → f\_name, m\_name, l\_name)**
- **p\_no (Phone Number)**

## 2. Local Guardian

(Weak Entity –

depends on

Student).

Attributes:

- **name**
- **p\_no (Primary Key with partial key dependency)**.

Relationship:

- **has → Every student has exactly one local guardian (1:1).**

## 3. Room (Entity)

Attributes:

- **r\_no (Primary Key)**
- **no\_of\_people**

#### **4. Fees (Entity) ◦**

**Attributes:**

- **p\_id (Primary Key)**
- **p\_date**
- **p\_method**

#### **5. Laundry (Entity) ◦**

**Attributes:**

- **l\_no (Primary Key)**
- **days\_of\_laundry**

#### **6. Mess (Entity) ◦**

**Attributes:**

- **m\_no (Primary Key)**
- **m\_name**

#### **7. Warden (Entity) ◦**

**Attributes:**

- **name**
- **p\_no**
- **w\_id(Primary Key)**

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## **Relationships**

#### **1. Student – Local Guardian ◦ Relationship: has ◦**

**Cardinality: 1 student ↔ 1 local guardian (1:1)**

## **2. Student – Room – Fees (Ternary Relationship) .**

**Relationships:**

- **choose** → A student chooses a room. (N:1)
- **based on** → Room assignment can depend on fees. (1:1)
- **pays** → A student pays fees. (1:1)

## **3. Student – Mess . Relationship: books**

- **Cardinality:** A student can book exactly one mess (N:1).

## **4. Student – Laundry . Relationship: gives . Cardinality:**

**A student gives laundry (N:1).**

## **5. Warden – Student . Relationship: monitors .**

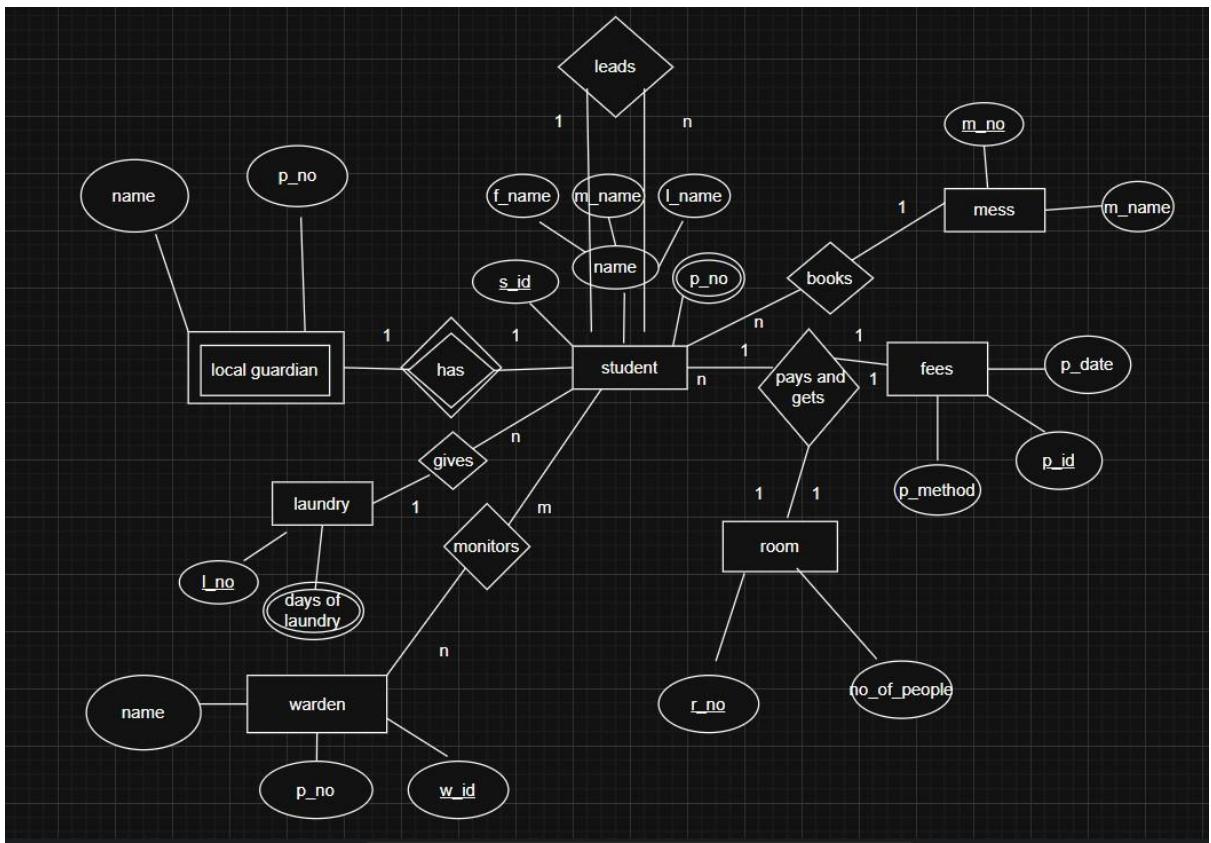
**Cardinality: different warden monitors many student(m:n)**

## **6. Student – Student (Recursive Relationship) .**

**Relationship: leads**

- **Cardinality:** One student can lead many students, but a student is led by only one leader.

## **ER DIAGRAM**



## SCHEMA

