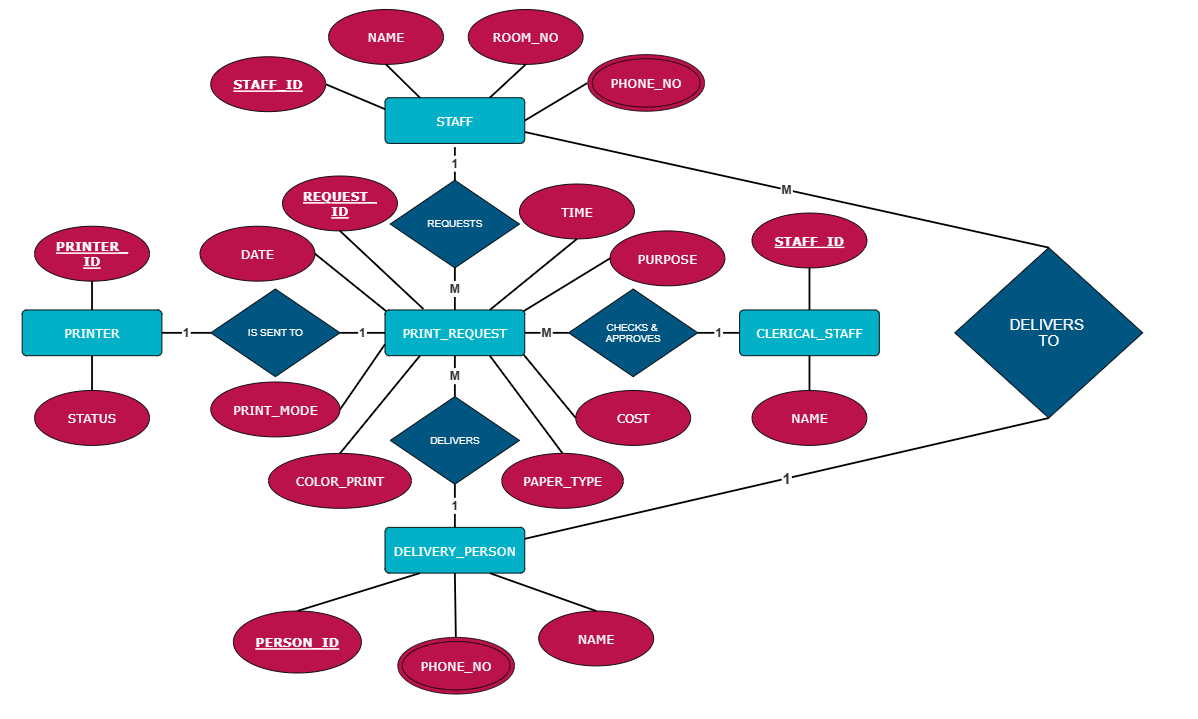
**22AIE303 – PROJECT PHASE 2**

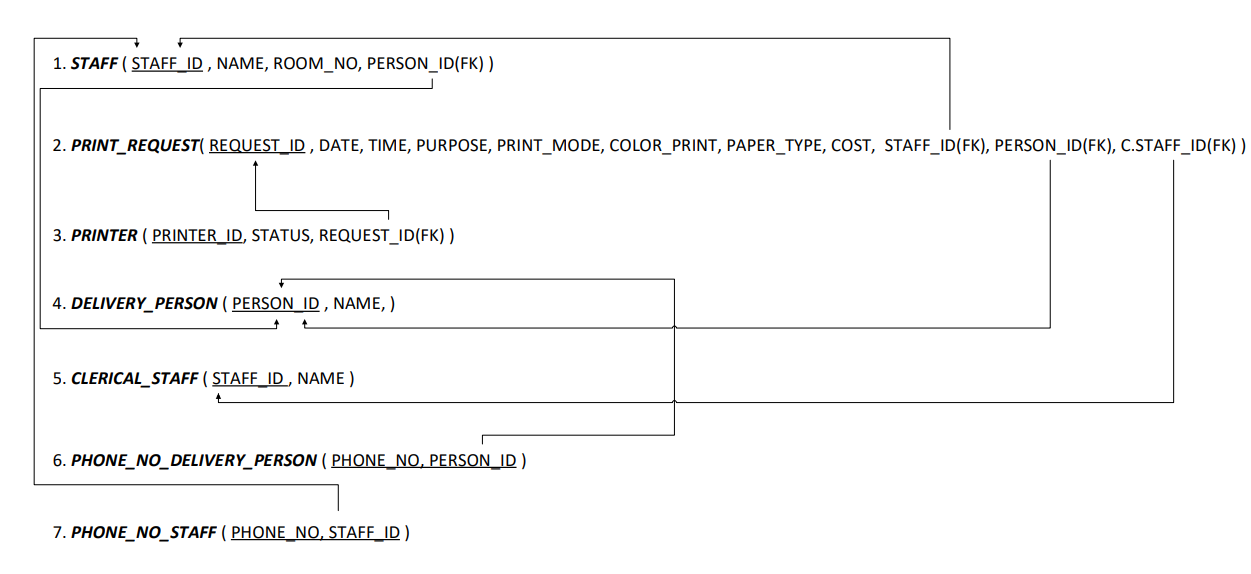
**RELATIONAL MAPPING**

**GROUP 5**

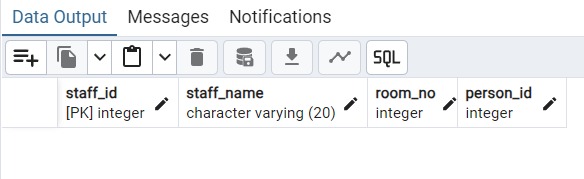
|  |  |
| --- | --- |
| **Name** | **Roll number** |
| Aparna Balaji | AM.EN.U4AIE22005 |
| Anuvind M P | AM.EN.U4AIE22010 |
| R S Harish Kumar | AM.EN.U4AIE22042 |
| Siddharth Menon | AM.EN.U4AIE22048 |

**ER-DIAGRAM :**



**RELATIONAL MAPPING :**

**CREATE TABLE QUERIES :**

****

CREATE TABLE staff(

staff\_id int PRIMARY KEY,

staff\_name varchar(20),

room\_no int,

person\_id int REFERENCES delivery\_person(person\_id)

);

CREATE TABLE print\_request(

request\_id int PRIMARY KEY,

req\_date date,

req\_time time,

purpose varchar(50),

print\_mode varchar(20),

color\_print boolean,

paper\_type varchar(10),

cost numeric(10,2),

staff\_id int REFERENCES staff(staff\_id),

person\_id int REFERENCES delivery\_person(person\_id),

cstaff\_id int REFERENCES clerical\_staff(cstaff\_id)

);

****

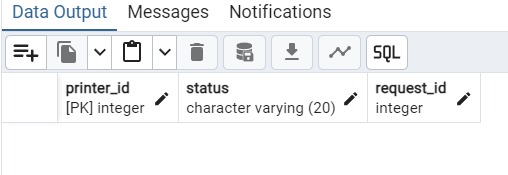
CREATE TABLE printer(

printer\_id int PRIMARY KEY,

status varchar(20),

request\_id int REFERENCES print\_request(request\_id)

);

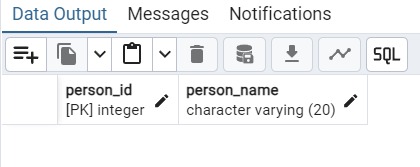
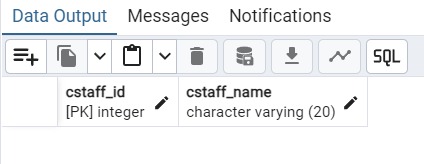
****

CREATE TABLE delivery\_person(

person\_id int PRIMARY KEY,

person\_name varchar(20)

);

****

CREATE TABLE clerical\_staff(

cstaff\_id int PRIMARY KEY,

cstaff\_name varchar(20)

);

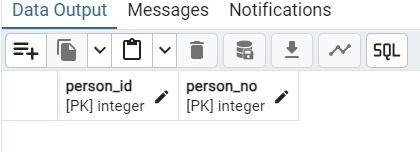
CREATE TABLE person\_number(

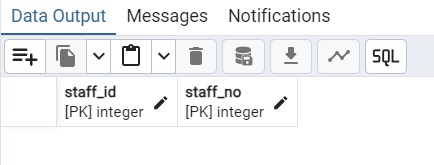
person\_id int REFERENCES delivery\_person(person\_id),

person\_no int,

PRIMARY KEY(person\_id, person\_no)

);

****

****

CREATE TABLE staff\_number(

staff\_id int REFERENCES staff(staff\_id),

staff\_no int,

PRIMARY KEY(staff\_id, staff\_no)

);

**RELATIONSHIPS AND CARDINALITIES :**

1. **Relationships:**
   * **Requests**: Links Staff with Print\_Request, indicating which staff member made a request.
   * **Is\_Sent\_To:** Links Print\_Request to Printer, indicating which printer is assigned to process the request.
   * **Delivers:** Links Print\_Request to Delivery\_Person, indicating the delivery assignment for each request.
   * **Checks & Approves:** Links Clerical\_Staff to Print\_Request, indicating the approval process for requests.
   * **Delivers\_To:** Links Delivery\_Person to Staff to show delivery completion.
2. **Cardinalities:**
   * **One** Staff can make **many** Print\_Requests.
   * **One** Print\_Request is sent to a **single** Printer.
   * **One** Delivery\_Person can deliver **many** print jobs, and **one** print request is delivered by a **single** person.
   * **One** Clerical\_Staff can approve **many** requests**.**

**RELATIONAL SCHEMA DESCRIPTION :**

1. **Staff Table**:
   * **Schema**: STAFF(STAFF\_ID(PK), NAME, ROOM\_NO)
   * Description: Contains details of employees requesting print jobs. The STAFF\_ID is the primary key and links to Print\_Request and Clerical\_Staff.
2. **Print\_Request Table**:
   * **Schema**: PRINT\_REQUEST(REQUEST\_ID(PK), DATE, TIME, PURPOSE, PRINT\_MODE, COLOR\_PRINT, PAPER\_TYPE, COST, STAFF\_ID(FK), PRINTER\_ID(FK), PERSON\_ID(FK))
   * Description: Stores information about print requests. It has foreign keys linking to the Staff, Printer, and Delivery\_Person tables.
3. **Printer Table**:
   * **Schema**: PRINTER(PRINTER\_ID(PK), STATUS)
   * Description: Contains details about printers. It has a foreign key REQUEST\_ID linking to the Print\_Request table.
4. **Delivery\_Person Table**:
   * **Schema**: DELIVERY\_PERSON(PERSON\_ID(PK), NAME)
   * Description: Represents delivery personnel assigned to print jobs.
5. **Clerical\_Staff Table**:
   * **Schema**: CLERICAL\_STAFF(STAFF\_ID(PK), NAME)
   * Description: Stores information about staff members responsible for approving print requests. It shares STAFF\_ID as a primary key.
6. **Phone\_No\_Delivery\_Person Table**:
   * **Schema**: PHONE\_NO\_DELIVERY\_PERSON(PHONE\_NO, PERSON\_ID(FK))
   * Description: Manages contact numbers for delivery personnel.
7. **Phone\_No\_Staff Table**:
   * **Schema**: PHONE\_NO\_STAFF(PHONE\_NO, STAFF\_ID(FK))
   * Description: Stores contact numbers for staff members.