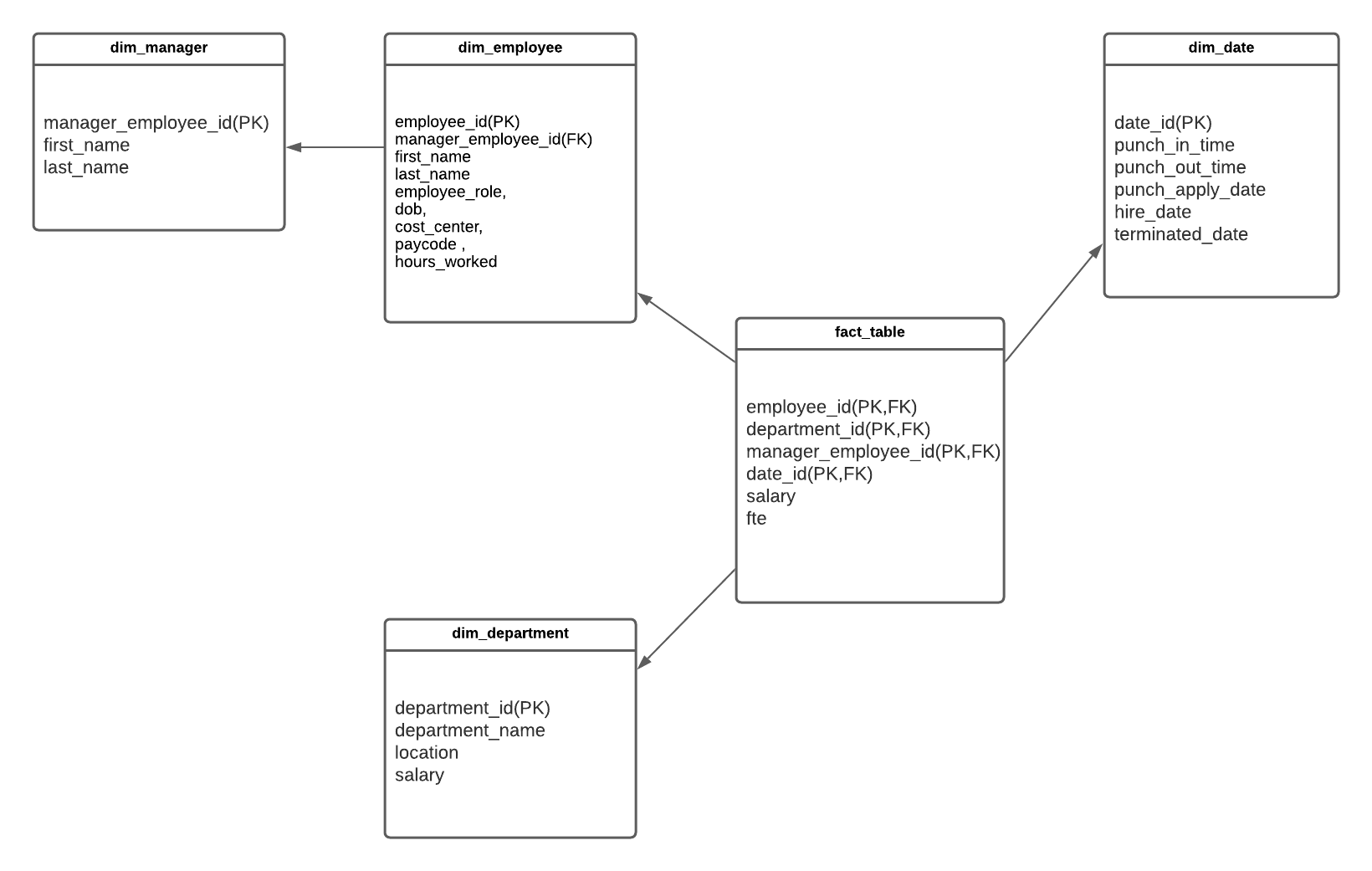
**Fact Table –**

fact\_table: employee\_id, department\_id, manager\_employee\_id,date\_id, salary,fte

**Dimension tables -**

1. dim\_employee: employee\_id , manager\_employee\_id, first\_name, last\_name, employee\_role, dob, cost\_center, paycode , hours\_worked
2. dim\_manager: manager\_employee\_id, first\_name, last\_name
3. dim\_department: department\_id, department\_name, location,salary
4. dim\_date : date\_id,punch\_in\_time, punch\_out\_time, punch\_apply\_date, hire\_date, terminated\_date

Logical model for the above fact and dimension:



**Figure 1.0- Fact and dimension tables**

**Physical Model:**

    CREATE TABLE dim\_date(

        date\_id INT  NOT NULL PRIMARY KEY,

        punch\_in\_time TIMESTAMP,

        punch\_out\_time TIMESTAMP,

        punch\_apply\_date DATE,

        hire\_date DATE,

        terminated\_date DATE

    )

    CREATE TABLE dim\_department(

        department\_id INT NOT NULL PRIMARY KEY,

        department\_name VARCHAR(100),

        location TEXT,

        salary INT

    )

    CREATE TABLE dim\_department(

        department\_id INT NOT NULL PRIMARY KEY,

        department\_name VARCHAR(100),

        location TEXT,

        salary INT

    )

    CREATE TABLE dim\_manager(

        manager\_employee\_id INT NOT NULL PRIMARY KEY,

        first\_name,

        last\_name TEXT

    )

    CREATE TABLE dim\_employee(

        employee\_id INT NOT NULL PRIMARY KEY,

        manager\_employee\_id INT,

        first\_name TEXT,

        last\_name TEXT,

        employee\_role VARCHAR(100),

        dob DATE,

        cost\_centre INT,

        paycode VARCHAR(50),

        hours\_worked FLOAT

    )

    ALTER TABLE dim\_employee

    ADD FOREIGN KEY (manager\_employee\_id) REFERENCES dim\_manager(manager\_employee\_id);

    CREATE TABLE fact\_table(

        employee\_id INT NOT NULL,

        department\_id INT NOT NULL,

        manager\_employee\_id INT NOT NULL,

        date\_id INT NOT NULL,

        salary INT,

        fte FLOAT

    )

    ALTER TABLE fact\_table

    ADD FOREIGN KEY (employee\_id ) REFERENCES dim\_employee(employee\_id);

    ALTER TABLE fact\_table

    ADD FOREIGN KEY (department\_id ) REFERENCES dim\_department(department\_id);

    ALTER TABLE fact\_table

    ADD FOREIGN KEY (manager\_employee\_id ) REFERENCES dim\_manager(manager\_employee\_id);

    ALTER TABLE fact\_table

    ADD FOREIGN KEY (date\_id ) REFERENCES dim\_date(date\_id);