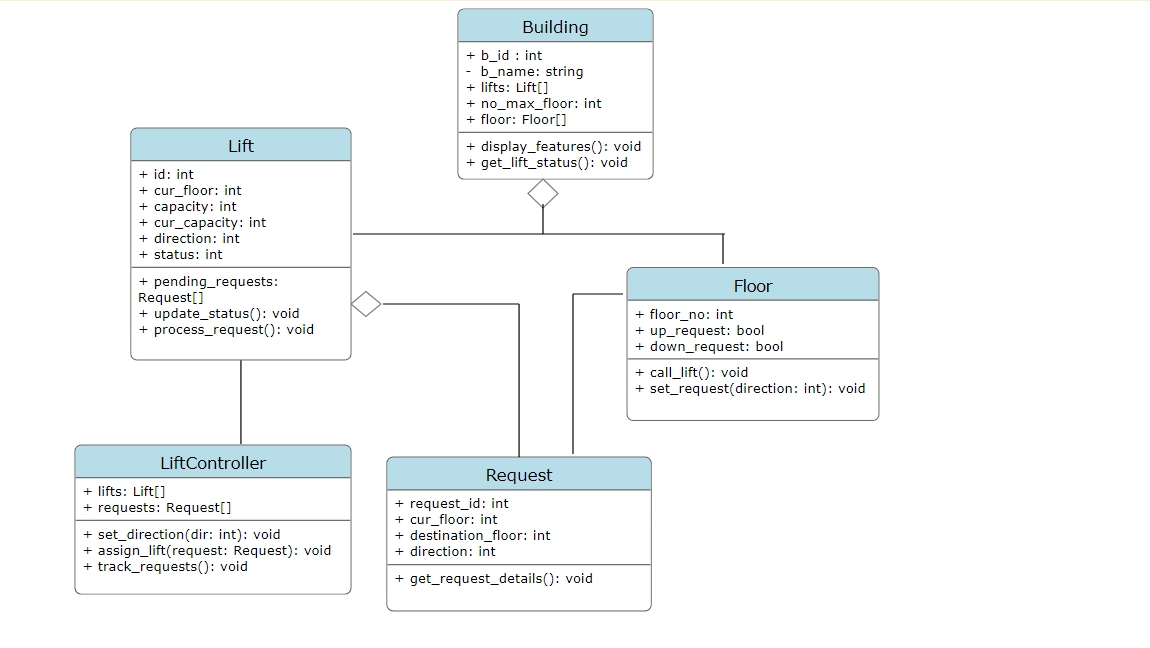
**Assignment: Creating Database for Lift Management System**

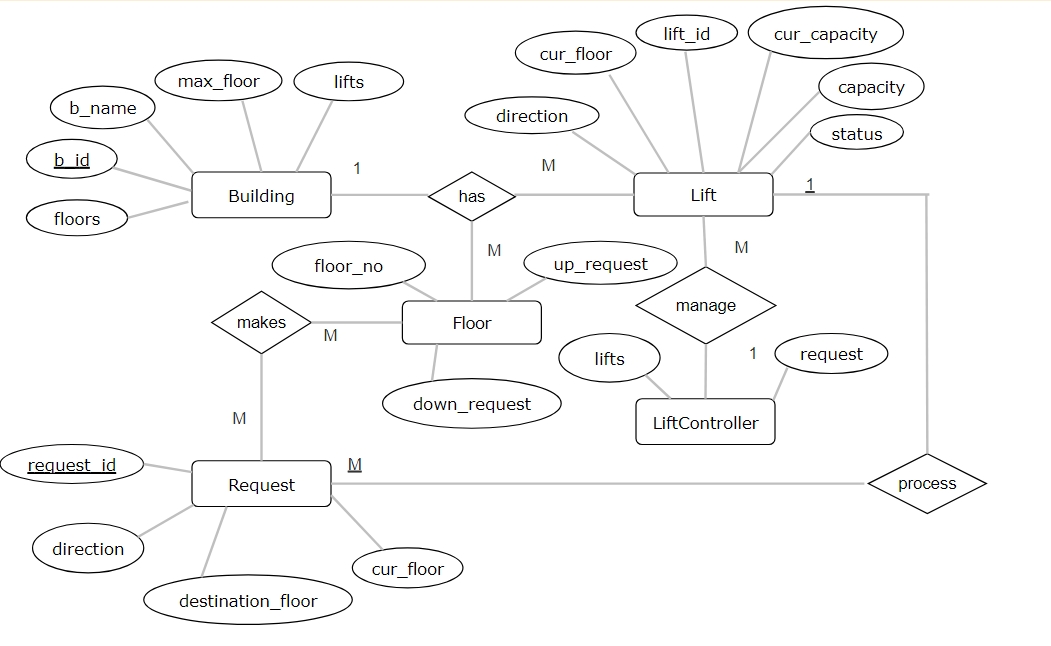
**Asgnmt Coordinator: Suresh Burde**

**Submitted By: Arjun Ghule**

**Class Diagram For the Lift Management System**



Entity Realtionship Diagram



**Database :** Postgres

**Tables count :** 4

**Tables :** floor, building, lift, request

**----------------------------------------------------------------------------------------------**

**#Creating building Table**

CREATE TABLE Building(b\_id int primary key, b\_name varchar(50) NOT NULL, mar\_floor int NOT NULL);

insert into building values(1, 10, 'B1');

insert into building values(2, 20, 'B2');

insert into building values(3, 15, 'B3');

select \* from building;

**output:**

b\_id | max\_floor | b\_name

------+-----------+--------

1 | 10 | B1

2 | 20 | B2

3 | 15 | B3

**----------------------------------------------------------------------------------------------**

**#Creating floor Table**

create table floor(b\_id int ,CONSTRAINT fk\_building FOREIGN KEY (b\_id) REFERENCES building(b\_id),up\_request bool, down\_request bool, cur\_floor int not null);

insert into floor values(1, False, False, 1);

insert into floor values(1, False, False, 2);

insert into floor values(1, False, False, 3);

select \* from floor;

**Output:**

b\_id | up\_request | down\_request | cur\_floor

------+------------+--------------+-----------

1 | f | f | 1

1 | f | f | 2

1 | f | f | 3

**----------------------------------------------------------------------------------------------**

**#Creating floor lift**

create table lift(b\_id int ,CONSTRAINT fk\_building FOREIGN KEY (b\_id) REFERENCES building(b\_id), lift\_no int not null, cur\_floor int not null, capacity int not null, cur\_capacity int not null, status bool not null, direction varchar(10) not null);

insert into lift values(1, 1, 2, 10, 0, False, 'Default');

insert into lift values(1, 3, 5, 10, 3, True, 'Up');

insert into lift values(1, 2, 6, 10, 1, True, 'Down');

select \* from lift;

**output:**

b\_id | lift\_no | cur\_floor | capacity | cur\_capacity | status | direction

------+---------+-----------+----------+--------------+--------+-----------

1 | 1 | 2 | 10 | 0 | f | Default

1 | 3 | 5 | 10 | 3 | t | Up

1 | 2 | 6 | 10 | 1 | t | Down

**----------------------------------------------------------------------------------------------**

**#Creating request Table**

create table request(b\_id int ,CONSTRAINT fk\_building FOREIGN KEY (b\_id) REFERENCES building(b\_id), request\_id int primary key, cur\_floor int not null, destination\_floor int not null, direction varchar(10) not null);

insert into request values(1, 1, 0, 4, 'Up');

insert into request values(2, 2, 2, 6, 'Up');

insert into request values(1, 3, 6, 0, 'Down');

select \* from request;

**output:**

b\_id | request\_id | cur\_floor | destination\_floor | direction

------+------------+-----------+-------------------+-----------

1 | 1 | 0 | 4 | Up

2 | 2 | 2 | 6 | Up

1 | 3 | 6 | 0 | Down

**----------------------------------------------------------------------------------------------**

select b\_name, lift\_no, capacity, status from building left join lift on lift.b\_id = lift.b\_id where b\_name = 'B1';

**output:**

b\_name | lift\_no | capacity | status

--------+---------+----------+--------

B1 | 1 | 10 | f

B1 | 3 | 10 | t

B1 | 2 | 10 | t

**-------------------------------------------------------------------------------------------**

select lift.lift\_no, lift.cur\_floor from request left join lift on lift.cur\_floor = request.cur\_floor where lift.b\_id = 1;

**output:**

lift\_no | cur\_floor

---------+-----------

1 | 2

2 | 6

**----------------------------------------------------------------------------------------------**

select \* from request where b\_id = (select b\_id from building where b\_name = 'B1');

**output:**

b\_id | request\_id | cur\_floor | destination\_floor | direction

------+------------+-----------+-------------------+-----------

1 | 1 | 0 | 4 | Up

1 | 3 | 6 | 0 | Down

**----------------------------------------------------------------------------------------------**

select building.b\_name, lift.lift\_no, lift.cur\_floor, lift.direction from building left join lift on building.b\_id = lift.b\_id where lift.direction = 'Default';

**output:**

b\_name | lift\_no | cur\_floor | direction

--------+---------+-----------+-----------

B1 | 1 | 2 | Default