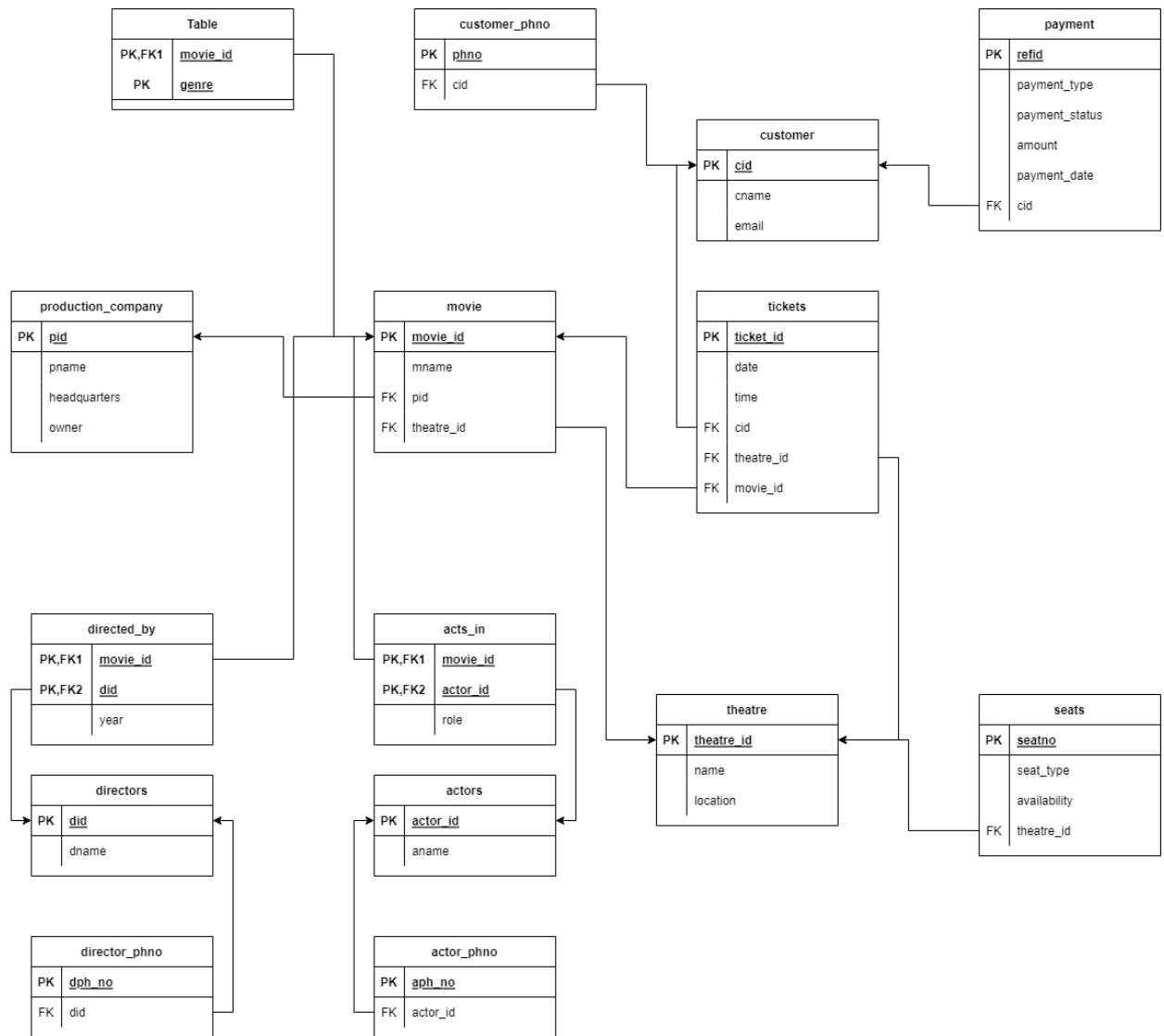


# DBMS LAB ASSIGNMENT 3

## 1. Relational Model.



## 2. Creating tables in the database based on Relational Mapping

- Customer

Run SQL query/queries on database productioncompany: ?

```
1 CREATE TABLE customer(  
2     cid INT NOT NULL AUTO_INCREMENT,  
3     cname VARCHAR(20),  
4     email VARCHAR(30),  
5     PRIMARY KEY(cid));
```

- Customer\_phno

Run SQL query/queries on database productioncompany: ?

```
1 CREATE TABLE customer_phno(  
2     cid INT NOT NULL,  
3     phno BIGINT NOT NULL,  
4     PRIMARY KEY(phno));
```

- Payment

Run SQL query/queries on database productioncompany: ?

```
1 CREATE TABLE payment(  
2     refid INT,  
3     payment_type VARCHAR(15),  
4     payment_status VARCHAR(15),  
5     amount INT,  
6     payment_date DATE,  
7     cid INT,  
8     PRIMARY KEY(refid));
```

- Tickets

Run SQL query/queries on database productioncompany: ?

```
1 CREATE TABLE Tickets(  
2     ticket_id INT ,  
3     date DATE,  
4     time TIME,  
5     theatre_id INT,  
6     cid INT,  
7     movie_id INT,  
8     PRIMARY KEY(ticket_id));
```

- Movies

Run SQL query/queries on database productioncompany: ?

```
1 CREATE TABLE Movies(  
2     movie_id INT,  
3     mname VARCHAR(50),  
4     pid INT,  
5     theatre_id INT,  
6     PRIMARY KEY(movie_id));
```

- Genre

Run SQL query/queries on database productioncompany: ?

```
1 CREATE TABLE genre(  
2     movie_id INT,  
3     genre VARCHAR(25),  
4     PRIMARY KEY(movie_id,genre));
```

- Production Company

Run SQL query/queries on database productioncompany: ?

```
1 CREATE TABLE production_company(  
2     pid INT,  
3     pname VARCHAR(25),  
4     headquarters VARCHAR(25),  
5     owner VARCHAR(25),  
6     PRIMARY KEY(pid));
```

- Directors

Run SQL query/queries on database productioncompany: ?

```
1 CREATE TABLE directors(  
2     did INT,  
3     dname VARCHAR(50),  
4     PRIMARY KEY(did));
```

- Director\_phno

Run SQL query/queries on database productioncompany: ?

```
1 CREATE TABLE director_phno(  
2     did INT,  
3     phno BIGINT,  
4     PRIMARY KEY(phno));
```

- Directed by

Run SQL query/queries on database productioncompany: ?

```
1 CREATE TABLE directed_by(  
2     did INT,  
3     year YEAR,  
4     movie_id INT,  
5     PRIMARY KEY(did,movie_id));
```

- Actors

Run SQL query/queries on database productioncompany: ?

```
1 CREATE TABLE actors(  
2     actor_id INT,  
3     aname VARCHAR(20),  
4     PRIMARY KEY(actor_id));
```

- Actor\_phno

Run SQL query/queries on database productioncompany: ?

```
1 CREATE TABLE actor_phno(  
2     actor_id INT,  
3     phno BIGINT,  
4     PRIMARY KEY(phno));
```

- Acts in

Run SQL query/queries on database productioncompany: ?

```
1 CREATE TABLE acts_in(  
2     actor_id INT,  
3     role VARCHAR(20),  
4     movie_id INT,  
5     PRIMARY KEY(actor_id,movie_id));
```

- Theatre

Run SQL query/queries on database productioncompany: ?

```
1 CREATE TABLE theatre(  
2     theatre_id INT,  
3     name VARCHAR(20),  
4     location VARCHAR(20),  
5     PRIMARY KEY(theatre_id));
```

- Seats

Run SQL query/queries on database productioncompany: 

```
1 CREATE TABLE seats(  
2     seatno INT,  
3     seat_type VARCHAR(20),  
4     availability VARCHAR(20),  
5     theatre_id INT,  
6     PRIMARY KEY(seatno,theatre_id));
```

### 3. Altering table to set FOREIGN KEYS

- cid

Run SQL query/queries on database productioncompany: ?

```
1 ALTER TABLE customer_phno
2 ADD FOREIGN KEY(cid)
3 REFERENCES customer(cid);
4
5 ALTER TABLE tickets
6 ADD FOREIGN KEY(cid)
7 REFERENCES customer(cid);
8
9 ALTER TABLE payment
10 ADD FOREIGN KEY(cid)
11 REFERENCES customer(cid);
```

- movie\_id

Run SQL query/queries on database productioncompany: ?

```
1 ALTER TABLE tickets
2 ADD FOREIGN KEY(movie_id)
3 REFERENCES movies(movie_id);
4
5 ALTER TABLE genre
6 ADD FOREIGN KEY(movie_id)
7 REFERENCES movies(movie_id);
8
9 ALTER TABLE directed_by
10 ADD FOREIGN KEY(movie_id)
11 REFERENCES movies(movie_id);
12
13 ALTER TABLE acts_in
14 ADD FOREIGN KEY(movie_id)
15 REFERENCES movies(movie_id);
```

- theatre\_id

Run SQL query/queries on database productioncompany: ?

```
1 ALTER TABLE tickets
2 ADD FOREIGN KEY(theatre_id)
3 REFERENCES theatre(theatre_id);
4
5 ALTER TABLE movies
6 ADD FOREIGN KEY(theatre_id)
7 REFERENCES theatre(theatre_id);
8
9 ALTER TABLE seats
10 ADD FOREIGN KEY(theatre_id)
11 REFERENCES theatre(theatre_id);
```

- pid

Run SQL query/queries on database productioncompany: ?

```
1 ALTER TABLE movies
2 ADD FOREIGN KEY(pid)
3 REFERENCES production_company(pid);
```

- did

Run SQL query/queries on database productioncompany: ?

```
1 ALTER TABLE director_phno
2 ADD FOREIGN KEY(did)
3 REFERENCES directors(did);
4
5 ALTER TABLE directed_by
6 ADD FOREIGN KEY(did)
7 REFERENCES directors(did);
```



- actor\_id

Run SQL query/queries on database productioncompany: 

```
1 ALTER TABLE acts_in
2 ADD FOREIGN KEY(actor_id)
3 REFERENCES actors(actor_id);
4
5 ALTER TABLE actor_phno
6 ADD FOREIGN KEY(actor_id)
7 REFERENCES actors(actor_id);
```

#### 4. Inserting entries

- Customer  
INSERT INTO `customer`(`cname`, `email`) VALUES  
('Himalay','himalay@gmail.com'),  
('Ishan','ishan@gmail.com'),  
('Dikshit','dikshit@gmail.com'),  
('Anjali','anjali@gmail.com'),  
('Juby','juby@gmail.com');
- Customer\_phno  
INSERT INTO `customer\_phno`(`cid`, `phno`) VALUES  
('1','9586247'),  
('2','8459698'),  
('3','5589974'),  
('4','8788999'),  
('5','7889987');
- Payment  
INSERT INTO `payment`(`refid`, `cid`, `payment\_type`, `payment\_status`,  
`payment\_date`, `amount`) VALUES  
('9','1','Cash','Completed','2019-03-02','220'),  
('8','2','Cash','Completed','1995-03-02','50'),  
('7','3','Net Banking','Failed','2017-03-02','110'),  
('6','4','EWallet','Processing','2022-03-02','330'),  
('5','5','Cash','Completed','2017-03-02','110');
- Actors  
INSERT INTO `actors`(`actor\_id`, `aname`) VALUES  
('1','Ameer Khan'),  
('6543','Amitabh B'),  
('453','Kriti Sanon'),  
('4657','Robert Downey'),  
('653','Lokesh Patel');
- Directors  
INSERT INTO `directors`(`did`, `dname`) VALUES  
('432','Anurag Kashyap'),  
('5467','Imtiaz Ali'),  
('4657','Farhan Akhtar'),  
('345','Rohit Shetty'),  
('4365','Karan Johar');

- Theatre  
INSERT INTO `theatre`(`theatre\_id`, `name`, `location`) VALUES  
( '2354','PVR','Kochi'),  
( '875','PVR','Calicut'),  
( '654','Crown','Thrissur'),  
( '8675','IMAX','Kochi'),  
( '8657','PVR','Trivandrum');
- Production Company  
INSERT INTO `production\_company`(`pid`, `pname`, `headquarters`, `owner`) VALUES  
( '486','Yash Raj Films','Mumbai','Yash Chopra'),  
( '385272','Eros International','Mumbai','Kishore Lulla'),  
( '7857','Bhadrakali Pictures','Vishakpatnam','Pranay Reddy Vanga'),  
( '657','Raaj Kamal Films','Calicut','Kamal Hasan'),  
( '75','Amal Neerad Productions','Kochi','Amal Neerad');
- Actor Phone Number  
INSERT INTO `actor\_phno`(`actor\_id`, `phno`) VALUES  
( '1','9422334455'),  
( '453','9422332455'),  
( '653','8222334458'),  
( '453','6742334455'),  
( '1','8322233455'),  
( '453','9522434455');
- Director Phone Number  
INSERT INTO `director\_phno`(`did`, `phno`) VALUES  
( '432','9944334422'),  
( '345','9942234422'),  
( '5467','9945634422'),  
( '4657','9945434422'),  
( '4365','9944343422');
- Directed by  
INSERT INTO `directed\_by`(`did`, `year`, `movie\_id`) VALUES  
( '432','2019','23'),  
( '5467','1995','523'),  
( '4657','2017','346'),  
( '345','2022','3645'),  
( '4365','2017','634');

- Tickets

```
INSERT INTO `tickets`(`ticket_id`, `date`, `time`, `movie_id`, `cid`, `theatre_id`)
VALUES
('1','2017-02-01','12:00:00','23','1','2354'),
('2','1995-02-01','21:00:00','523','2','875'),
('3','2019-02-01','16:00:00','346','3','654'),
('4','2022-02-01','14:30:00','3645','4','8675'),
('5','2017-08-06','12:00:00','634','5','8657');
```

- Seats

```
INSERT INTO `seats`(`seatno`, `seat_type`, `availability`, `theatre_id`) VALUES
('1','Recliner','available','2354'),
('5','Regular','booked','875'),
('2','Recliner','available','654'),
('3','Recliner','available','8675'),
('2','Recliner','available','8657');
```

- Movies

```
INSERT INTO `movies`(`movie_id`, `mname`, `pid`, `theatre_id`) VALUES
('23','TopGun','1','2354'),
('523','Airlift','1','875'),
('346','Lakshya','3','654'),
('3645','Mossad','4','8675'),
('634','Sanju','5','8657');
```

- Genre

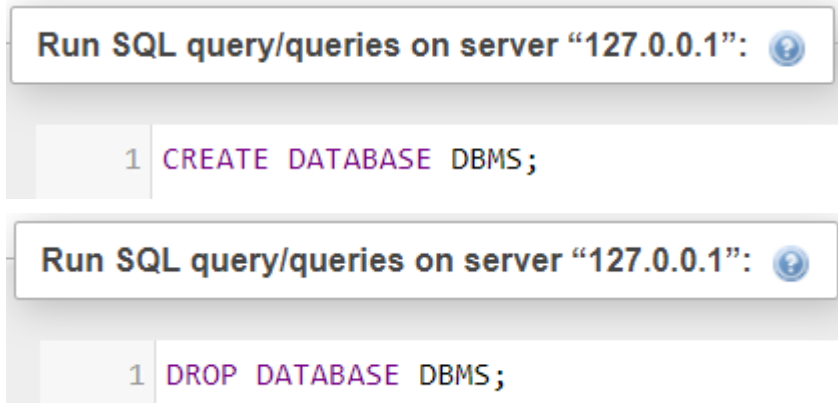
```
INSERT INTO `genre`(`movie_id`, `genre`) VALUES
('23','Action'),
('523','Crime'),
('523','Romance'),
('346','Drama'),
('3645','Romance'),
('634','Action'),
('634','Romance');
```

- Acts\_in

```
INSERT INTO `acts_in`(`actor_id`, `role`, `movie_id`) VALUES
(1,'Male lead','23'),
(6543,'Male lead','523'),
(453,'Female lead','346'),
(653,'Major Antagonist','3645'),
(4657,'Male lead','634');
```

## 5. SQL Commands

- CREATE/DROP DATABASE



- Update an entry  
UPDATE `movies` SET `mname`='AIRLIFT'  
WHERE movie\_id=523;

movie_id	mname	pid	theatre_id
23	TopGun	1	2354
346	Lakshya	3	654
523	AIRLIFT	1	875
634	Sanju	5	8657
3645	Mossad	4	8675

- Delete entry  
DELETE FROM `Actors` WHERE name = 'Ameer Khan';
- Exists clause  
SELECT movie\_name FROM Movies as M WHERE EXISTS (SELECT mname  
FROM Movies as M2 WHERE pid=75 && M.movie\_id=M2.movie\_id);
- View clause  
CREATE VIEW Movie\_year AS SELECT mname,year FROM Movies as M,  
Directed\_by AS D WHERE M.movie\_id=D.movie\_id;
- Group by and Having clause  
SELECT ALL mname FROM `movies` GROUP BY pid HAVING COUNT(\*)>1;
- Aggregate clauses  
SELECT AVG(amount) as AVERAGE,MAX(amount) AS MAXIMUM ,MIN(amount) AS  
MINIMUM FROM `Payment`;