

Cinema database

Done by Group 4
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class : 3

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Description

Golden screen for movie theaters has many **BRANCHES** in **saudi Arabia**. Each branch has a number of halls and address. Address contain information of the city, street and mall name.

Golden screen employs many **EMPLOYEES** to work in each cinema, and assign one of them to manage the cinema. Every employee has name, ID, Email, salary, phone number and gender.

there are **MAINTENANCE** section which managed by one of the employee, each section has a type of the maintenance, price, date and company name.

A **CLIENT** should buy a **TICKET** before going to the cinema. Each client has a name, phone number and Email. Each ticket must contain ID, price, date, seat number, hall number and movie name.

Every cinema has a lot of **HALLS**. Each hall has type, ID and number of chairs.

Halls are there to shows **MOVIES** in great environment. Each movie has a name, ID, start time, end time, language and date.

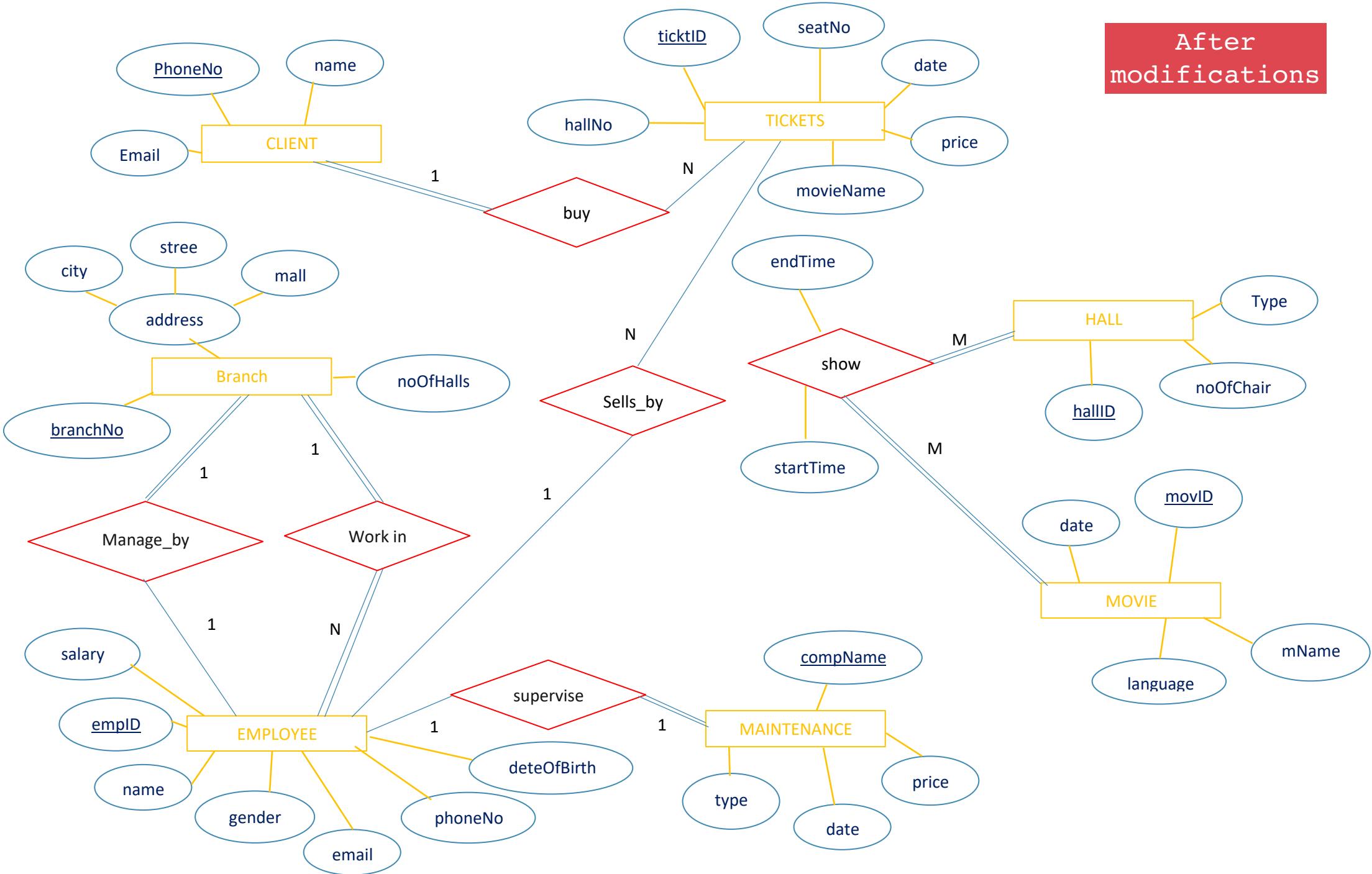


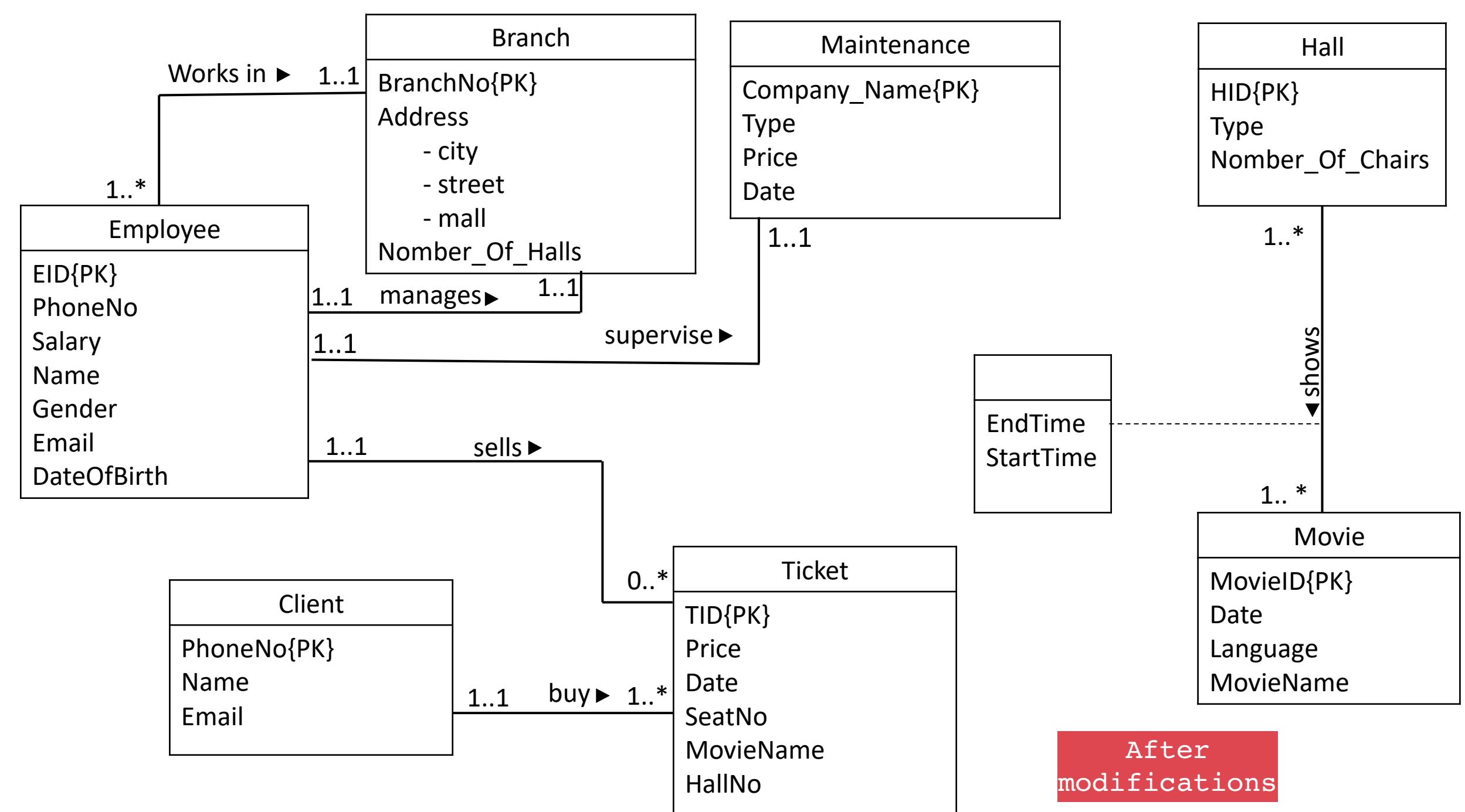
- 1-BRANCH
- 2-EMPLOYEE
- 3-MAINTENANCE
- 4-CLIENT
- 5-TICKET
- 6-HALL
- 7-MOVIE



- 1-EMPLOYEE manages BRANCH
- 2-EMPLOYEES work in BRANCH
- 3-EMPLOYEE sells TICKET
- 4-EMPLOYEE manage MAINTENANCE
- 5-CLIENT buy TICKET
- 6-TICKET shows HALL & MOVIE

After modifications





STEP 1 : Mapping of Regular Entity Types

Beginning of phase 2

CLIENT

<u>PhoneNo</u>	name	Email
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No modifications
needed

TICKET

<u>TicktID</u>	hallNo	movieName	seatNo	date	price
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MOVIE

<u>movID</u>	date	language	movieName
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HALL

<u>hallID</u>	Type	noOfChairs
---------------	------	------------

MAINTENANCE

<u>compName</u>	type	date	price
-----------------	------	------	-------

BRANCH

<u>branchNo</u>	street	city	mall	noOfHalls
-----------------	--------	------	------	-----------

EMPLOYEE

<u>emplD</u>	email	salary	gender	name	phoneNo	dateOfBirth
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Step 2 : Mapping of weak entity into relation

NONE

Step 3 : Mapping of one to one relationship

Relationship: MANAGE (EMPLOYEE & BRANCH)

BRANCH

<u>branchNo</u>	ManagerID	street	city	mall	noOfHalls
-----------------	-----------	--------	------	------	-----------

Relationship: SUPERVIS (EMPLOYEE & MAINTENANCE)

MAINTENANCE

<u>compName</u>	ManagerID	type	date	price
-----------------	-----------	------	------	-------

Step 4 : Mapping of binary 1:N

Relationship: WORK_IN (EMPLOYEE & BRANCH)

BRANCH

branchNo	ManagerID	street	city	mall	noOfHalls
----------	-----------	--------	------	------	-----------

EMPLOYEE

empID	email	salary	gender	name	phoneNo	dateOfBirth	branchNo
-------	-------	--------	--------	------	---------	-------------	----------

Relationship: BUY (TICKET & CLIENT)

CLIENT

PhoneNo	name	Email
---------	------	-------

TICKET

TicketID	hallNo	movieName	seatNo	date	price	PhoneNo
----------	--------	-----------	--------	------	-------	---------

Relationship: SELLS (TICKET & EMPLOYEE)

EMPLOYEE

empID	email	salary	gender	name	phoneNo	dateOfBirth	branchNo
-------	-------	--------	--------	------	---------	-------------	----------

TICKET

TicketID	hallNo	movieName	seatNo	date	price	PhoneNo	empID
----------	--------	-----------	--------	------	-------	---------	-------

Step 5 : Mapping of Binary M:N Relationship types

SHOW (MOVIE & HALL)

MOVIE

<u>movID</u>	date	language	movieName
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HALL

<u>hallID</u>	Type	noOfChairs
---------------	------	------------

SHOW

<u>hallID</u>	<u>movID</u>	startTime	endTime
---------------	--------------	-----------	---------

Step 6 : Mapping of Multivalued attributes

NONE

Step 7 : Mapping of N-ary Relationship Types

NONE

FINAL Mapping

HALL

<u>hallID</u>	Type	noOfChairs
---------------	------	------------

EMPLOYEE

<u>emplID</u>	email	salary	gender	name	phoneNo	dateOfBirth	branchNo
---------------	-------	--------	--------	------	---------	-------------	----------

CLIENT

<u>PhoneNo</u>	name	Email
----------------	------	-------

TICKET

<u>TicketID</u>	movieName	seatNo	Date	Price	PhoneNo	emplID	hallID
-----------------	-----------	--------	------	-------	---------	--------	--------

MOVIE

<u>movID</u>	date	language	movieName
--------------	------	----------	-----------

BRANCH

<u>branchNo</u>	ManagerID	street	city	mall	noOfHalls
-----------------	-----------	--------	------	------	-----------

MAINTENANCE

<u>compName</u>	ManagerID	type	date	price
-----------------	-----------	------	------	-------

SHOW

<u>hallID</u>	<u>movID</u>	startTime	endTime
---------------	--------------	-----------	---------

Normalization

HALL

<u>hallID</u>	Type	noOfChairs
---------------	------	------------

EMPLOYEE

*No repeating groups - no partial dependency - no transitive dependency

<u>empID</u>	email	salary	gender	name	phoneNo	dateOfBirth	branchNo
--------------	-------	--------	--------	------	---------	-------------	----------

CLIENT

*No repeating groups - no partial dependency - no transitive dependency

<u>PhoneNo</u>	name	Email
----------------	------	-------

TICKET

*No repeating groups - no partial dependency - no transitive dependency

<u>TicktID</u>	movieName	seatNo	Date	Price	PhoneNo	empID	hallID
----------------	-----------	--------	------	-------	---------	-------	--------

MOVIE

*No repeating groups - no partial dependency - no transitive dependency

<u>movID</u>	date	language	movieName
--------------	------	----------	-----------

BRANCH

*No repeating groups - no partial dependency - no transitive dependency

<u>branchNo</u>	ManagerID	street	city	mall	noOfHalls
-----------------	-----------	--------	------	------	-----------

MAINTENANCE

*No repeating groups - no partial dependency - no transitive dependency

<u>compName</u>	ManagerID	type	date	price
-----------------	-----------	------	------	-------

SHOW

*No repeating groups - no partial dependency - no transitive dependency

<u>hallID</u>	<u>movID</u>	startTime	endTime
---------------	--------------	-----------	---------

*No repeating groups - no partial dependency - no transitive dependency

Screenshot of commands

```
1 • CREATE SCHEMA `cinemaDB` ;  
2  
3     -- create HALL table  
4 • CREATE TABLE Hall  
5     (hallID    INT(3) NOT NULL,  
6      hallType   VARCHAR(10),  
7      noOfChairs  INT(3),  
8      CONSTRAINT Hall_PK PRIMARY KEY (hallID)  
9 );  
10  
11    -- create BRANCH table  
12 • CREATE TABLE BRANCH  
13     (branchNo   INT(3) NOT NULL,  
14      ManagerID  INT(8),  
15      street     VARCHAR(20),  
16      city       VARCHAR(15),  
17      mall       VARCHAR(20),  
18      noOfHalls  INT(3),  
19      CONSTRAINT BRANCH_PK PRIMARY KEY (branchNo)  
20 );  
21  
22    -- create EMPLOYEE table  
23 • CREATE TABLE Employee  
24     (empID    INT(8) NOT NULL,  
25      email     VARCHAR(30),  
26      salary    INT(8),  
27      gender    VARCHAR(1) ,  
28      empName   VARCHAR(30),  
29      phoneNo   INT(12),  
30      dateOfBirth VARCHAR(20),  
31      branchNo  INT(3),
```

Beginning of phase 3

```
32     CONSTRAINT Employee_PK PRIMARY KEY (empID)
33 );
34 • ALTER TABLE BRANCH
35     ADD CONSTRAINT BRANCH_FK1 FOREIGN KEY (ManagerID) REFERENCES EMPLOYEE(empID) ON DELETE SET NULL ON UPDATE CASCADE ;
36
37 • ALTER TABLE Employee
38     ADD CONSTRAINT Ticket_FK FOREIGN KEY (branchNo) REFERENCES BRANCH(branchNo) ON DELETE SET NULL ON UPDATE CASCADE;
39
40     -- create CLIENT table
41 • CREATE TABLE Client
42     (
43         PhoneNo INT(12) NOT NULL,
44         name VARCHAR (20),
45         email VARCHAR (30),
46         CONSTRAINT Client_PK PRIMARY KEY (phoneNo )
47     );
48
49     -- create TICKET table
50 • CREATE TABLE Ticket
51     (
52         TicketID      INT(10)NOT NULL,
53         movieName    VARCHAR(30),
54         seatNo        INT(5),
55         Tdate         VARCHAR(20),
56         price         INT(5),
57         PhoneNo       INT(12),
58         empID         INT(8),
59         hallID        INT(2),
60         CONSTRAINT Ticket_PK PRIMARY KEY (TicketID),
61         CONSTRAINT Ticket_FK0 FOREIGN KEY (PhoneNo) REFERENCES Client (PhoneNo) ON DELETE SET NULL  ON UPDATE CASCADE ,
62         CONSTRAINT Ticket_FK1 FOREIGN KEY (empID) REFERENCES Employee(empID) ON DELETE SET NULL  ON UPDATE CASCADE ,
63         CONSTRAINT Ticket_FK2 FOREIGN KEY (hallID) REFERENCES Hall(hallID) ON DELETE SET NULL  ON UPDATE CASCADE
64     );
```

```
63
64      -- create MOVIE table
65 •   CREATE TABLE Movie
66     ( movieID INT(6) NOT NULL,
67      mdate      VARCHAR(20),
68      mlanguage  VARCHAR(15),
69      movieName  VARCHAR(30),
70      CONSTRAINT Movie_PK PRIMARY KEY (movieID) );
71
72      -- create MAINTENENCE table
73 •   CREATE TABLE Maintenance
74     ( compName    VARCHAR(30) NOT NULL,
75      managerID   INT(8),
76      mType       VARCHAR(30),
77      mDate       VARCHAR(15),
78      price        INT(8),
79      CONSTRAINT Maintenance_PK PRIMARY KEY (compName),
80      CONSTRAINT Maintenance_FK FOREIGN KEY (managerID) REFERENCES Employee(empID) ON DELETE SET NULL ON UPDATE CASCADE
81 );
82
83      -- create SHOW tables
84 •   CREATE TABLE Show_table
85     ( hallid INT(2)NOT NULL,
86      movid INT(6)NOT NULL,
87      startTime VARCHAR(15),
88      endTime  VARCHAR(15),
89      CONSTRAINT Show_table_PK PRIMARY KEY (movid, hallid),
90      CONSTRAINT Show_table_FK1 FOREIGN KEY (hallid) REFERENCES Hall(hallID)  ON UPDATE CASCADE ON DELETE CASCADE,
91      CONSTRAINT Show_table_FK2 FOREIGN KEY (movid) REFERENCES MOVIE(movieID)  ON UPDATE CASCADE ON DELETE CASCADE
92 );
93      =====
```

```
94
95      -- insert 5 rows to HALL table
96 •  INSERT INTO cinemadb.HALL VALUES (1, 'vip', 60);
97 •  INSERT INTO cinemadb.HALL VALUES (2, 'vip', 75);
98 •  INSERT INTO cinemadb.HALL VALUES (3, 'Economy', 120);
99 •  INSERT INTO cinemadb.HALL VALUES (4, 'Economy', 150);
100 • INSERT INTO cinemadb.HALL VALUES (5, 'Kids', 150);
101
102      -- insert 5 rows to BRANCH table
103      -- we need to set managerID to null since we have not insert any data to employee table yet
104 •  INSERT INTO cinemadb.BRANCH VALUES (111,NULL,'Riyady 12791','Riyady','AL Qasr Mall',15);
105 •  INSERT INTO cinemadb.BRANCH VALUES (112,NULL,'Al Yarmuk 13243', 'Riyady','Atyaf Mall',11);
106 •  INSERT INTO cinemadb.BRANCH VALUES (113,NULL,'King Fahd 12272','Riyady','Sahara Mall',11);
107 •  INSERT INTO cinemadb.BRANCH VALUES (011,NULL,'King Abd Aziz', 'Jeddah','Red Sea Mall',20);
108 •  INSERT INTO cinemadb.BRANCH VALUES (001,NULL,'Prince Turki', 'Jubail','Jubail Galleria',17);
109
110      -- insert 5 rows to EMPLOYEE table
111 •  INSERT INTO cinemadb.EMPLOYEE VALUES (12345,'razan1@hotmail.com',5000,'F','razan sami',0552232213,'10/5/1999',111);
112 •  INSERT INTO cinemadb.EMPLOYEE VALUES (12236,'heba5@gmail.com',5400,'F','heba jan',0584526255,'11/9/2000',112);
113 •  INSERT INTO cinemadb.EMPLOYEE VALUES (12588,'shahadalm@gmail.com',6000,'F','shahad almatrafi',0584759521,'6/9/2000',111);
114 •  INSERT INTO cinemadb.EMPLOYEE VALUES (12233,'asmshomrany@hotmail.com',15000,'F','asmaa alshomrani',0585478512,'15/8/2000',011);
115 •  INSERT INTO cinemadb.EMPLOYEE VALUES (11152,'emtinan501@outlook.com',7500,'F','emtinan maji',0854756987,'3/1/2001',113);
116 •  INSERT INTO cinemadb.EMPLOYEE VALUES (11153,'yara11@outlook.com',7500,'F','yara alharthi',0558744512,'9/10/1999',001);
117 •  INSERT INTO cinemadb.EMPLOYEE VALUES (11100,'samiayed@outlock.com',12000,'M','sami ayed',0550004874,'5/9/1985',001);
118
119      -- after insert data in employee table we can set values to branch tables with esurance of integrity (FK has same values of PK)
120 •  UPDATE cinemadb.BRANCH SET ManagerID = 12345 WHERE branchNo = 111 ;
121 •  UPDATE cinemadb.BRANCH SET ManagerID = 12236 WHERE branchNo = 112 ;
122 •  UPDATE cinemadb.BRANCH SET ManagerID = 12588 WHERE branchNo = 113 ;
123 •  UPDATE cinemadb.BRANCH SET ManagerID = 12233 WHERE branchNo = 011 ;
124 •  UPDATE cinemadb.BRANCH SET ManagerID = 11152 WHERE branchNo = 001 ;
```

```
125  
126  
127      -- insert 5 rows to  CLIENT table  
128 •  INSERT INTO cinemadb.Client VALUES (0569383966, "yara", "yaro.1@gmail.com");  
129 •  INSERT INTO cinemadb.Client VALUES (0567887912, "rawan", "ror07@gmail.com");  
130 •  INSERT INTO cinemadb.Client VALUES (0511234598, "sara", "sara2002@gmail.com");  
131 •  INSERT INTO cinemadb.Client VALUES (0511200008, "nada", "nada.omar@gmail.com");  
132 •  INSERT INTO cinemadb.Client VALUES (0511231111, "lamia", "loloOoOo@gmail.com");  
133  
134      -- insert 5 rows to  TICKET table  
135 •  INSERT INTO cinemadb.Ticket VALUES (10001,'Lion king',114,'25/3/2022',79,0569383966,12345,4);  
136 •  INSERT INTO cinemadb.Ticket VALUES (10002,'Lion king',115,'25/3/2022',79,0569383966,12345,4);  
137 •  INSERT INTO cinemadb.Ticket VALUES (20012,'Mulan',26,'19/6/2022',65,0567887912,12588,1);  
138 •  INSERT INTO cinemadb.Ticket VALUES (10013,'Peter Pan',73,'22/5/2022',80,0511200008,12236,3);  
139 •  INSERT INTO cinemadb.Ticket VALUES (10014,'Toy story',75,'13/12/2021',50,0511231111,11152,2);  
140  
141      -- insert 5 rows to  MOVIE table  
142 •  INSERT INTO cinemadb.MOVIE VALUES (133878,'25/3/2022','English','Lion king');  
143 •  INSERT INTO cinemadb.MOVIE VALUES (154434,'13/12/2021','English','Toy story');  
144 •  INSERT INTO cinemadb.MOVIE VALUES (255453,'5/1/2022','Arabic','Ratatouille');  
145 •  INSERT INTO cinemadb.MOVIE VALUES (283356,'22/5/2022','Arabic','Peter Pan');  
146 •  INSERT INTO cinemadb.MOVIE VALUES (266784,'19/6/2022','Arabic','Mulan');  
147  
148      -- insert 5 rows to  MAINTENENCE table  
149 •  INSERT INTO cinemadb.Maintenance VALUES ('Furniture', 12345, 'FR', '15-3-2021', 10000);  
150 •  INSERT INTO cinemadb.Maintenance VALUES ('Electricity', 12236, 'EC', '9-11-2022', 12000);  
151 •  INSERT INTO cinemadb.Maintenance VALUES ('Cleaners', 12588, 'CL', '2-3-2022', 11000);  
152 •  INSERT INTO cinemadb.Maintenance VALUES ('Sewage', 11152, 'SE', '1-12-2021', 10500);  
153 •  INSERT INTO cinemadb.Maintenance VALUES ('Routine', 11153, 'RO', '3-12-2021', 10486);  
154
```

```
155      -- insert 5 rows to SHOW table
156 •    INSERT INTO cinemadb.Show_table VALUES (1, 133878 , '2:00 PM' , '4:00PM') ;
157 •    INSERT INTO cinemadb.Show_table VALUES (2, 154434 , '7:45 PM' , '9:00 PM') ;
158 •    INSERT INTO cinemadb.Show_table VALUES (3, 255453 , '1:00 AM' , '2:00 AM') ;
159 •    INSERT INTO cinemadb.Show_table VALUES (4, 283356 , '6:00 PM' , '8:00 PM') ;
160 •    INSERT INTO cinemadb.Show_table VALUES (5, 266784 , '10:30 PM' , '12:00 AM') ;
161
162      =====
163
164      -- DELETE row from any table
165 •    DELETE FROM BRANCH WHERE (noOfHalls <= 012) ;
166
167      -- UPDATE row from any table
168 •    UPDATE Ticket SET price = 55 WHERE movieName= 'Mulan';
169
170      -- DELETE row from any table
171 •    DELETE FROM Movie WHERE (movieName = 'Lion King') ;
172
173      -- UPDATE row from any table
174 •    UPDATE EMPLOYEE SET email = 'hebajan2@gmail.com' WHERE empName = 'heba jan' ;
175
176      =====
177      -- WHERE
178      -- show some tickets information about peter pan movie
179 •    SELECT seatNo, Tdate, price FROM Ticket WHERE movieName IN ('Peter Pan');
180
181      -- SUBQUERY
182      -- View information of employees who work in Jubail Galleria
183 •    SELECT * FROM EMPLOYEE WHERE branchNo IN (SELECT branchNo FROM BRANCH WHERE mall='Jubail Galleria');
184
```

```
185      -- GROUP BY
186      -- show how many halls we have of each type
187 •   SELECT COUNT(hallID) AS nuberOfHalls,hallType FROM HALL GROUP BY hallType ORDER BY nuberOfHalls;
188
189      -- HAVING
190      -- show only cities have more than 2 branches
191 •   SELECT COUNT(branchNo) AS countOfBranches,city FROM Branch GROUP BY (city) HAVING COUNT(branchNo) > 2;
192
193      -- ORDER BY
194      -- show some information of all employees
195 •   SELECT empID,empName,salary,branchNo
196      FROM Employee
197      ORDER BY empID DESC;
198
199      -- JOIN
200      -- from(Show table) display hallID and movID for movies with Arabic language
201 •   SELECT hallID, movID FROM cinemadb.Show_table WHERE 'Arabic'IN ( SELECT mlanguage FROM MOVIE);
202
203      -- WHERE - GROUP BY - ORDER BY
204      -- show wmployee ID who has salary > 5000
205 •   SELECT empID, salary FROM cinemadb.EMPLOYEE WHERE salary > 5000.00;
206
207      -- show the sum of females and males
208 •   SELECT gender, COUNT(empID) AS count, SUM(salary) AS sum
209      FROM cinemadb.EMPLOYEE
210      GROUP BY gender
211      ORDER BY gender;
212
```

```
213    -- JOIN
214    -- show the name of the reserved movie with client data
215 •   SELECT name , c.phoneNo , movieName FROM Client c, Ticket t
216      WHERE c.PhoneNo=t.PhoneNo ;
217
218    -- SUBQUERY
219    -- show client data who reserved a toy story movie
220 •   SELECT * FROM CLIENT WHERE PhoneNo IN (SELECT PhoneNo FROM Ticket WHERE movieName ='Toy story') ORDER BY name DESC;
221
222    -- JOIN
223    -- show the names af all managers in Maintenance section
224 •   SELECT e.empName FROM Employee e , Maintenance m WHERE e.empID = m.managerID ;
225
```

Results

Creating schema :

1 18:33:36 CREATE SCHEMA `cinemaDB`	1 row(s) affected	0.015 sec
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Creating tables :

2 18:38:20 CREATE TABLE Hall (hallID INT(3) NOT NULL, hallType VARCHAR(10), noOfChairs INT(3), CONSTRAINT ...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.063 sec
3 18:39:51 CREATE TABLE BRANCH (branchNo INT(3) NOT NULL, ManagerID INT(8), street VARCHAR(20), city ...	0 row(s) affected, 3 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.047 sec
4 18:45:03 CREATE TABLE Employee (empID INT(8) NOT NULL, email VARCHAR(30), salary INT(8), gender VARCHAR(...	0 row(s) affected, 4 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.062 sec
5 18:46:05 ALTER TABLE BRANCH ADD CONSTRAINT BRANCH_FK1 FOREIGN KEY (ManagerID) REFERENCES EMPL...	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.156 sec
6 18:46:10 ALTER TABLE Employee ADD CONSTRAINT Ticket_FK FOREIGN KEY (branchNo) REFERENCES BRANCH(b...	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.141 sec
7 19:00:18 CREATE TABLE Client (PhoneNo INT(12) NOT NULL, name VARCHAR (20), email VARCHAR (30), CONSTR...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.063 sec
8 19:00:23 CREATE TABLE Ticket (TicketID INT(10)NOT NULL, movieName VARCHAR(30), seatNo INT(5), Tda...	0 row(s) affected, 6 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.078 sec
9 19:00:32 CREATE TABLE Movie (movieIDINT(6) NOT NULL, mdateVARCHAR(20), mlanguageVARCHAR(15), movieNa...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.047 sec
10 19:00:36 CREATE TABLE Maintenance (compName VARCHAR(30) NOT NULL, managerID INT(8), mType VA...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.063 sec
11 19:00:44 CREATE TABLE Show_table (hallid INT(2)NOT NULL, movid INT(6)NOT NULL, startTime VARCHAR(15), endT...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 16...	0.063 sec

Insert :

hall

	hallID	hallType	noOfChairs
▶	1	vip	60
	2	vip	75
	3	Economy	120
	4	Economy	150
	5	Kids	150
*	NULL	NULL	NULL

client

	PhoneNo	name	email
▶	511200008	nada	nada.omar@gmail.com
	511231111	lamia	loloOoOo@gmail.com
	511234598	sara	sara2002@gmail.com
	567887912	rawan	ror07@gmail.com
	569383966	yara	yaro.1@gmail.com
*	NULL	NULL	NULL

branch

	branchNo	ManagerID	street	city	mall	noOfHalls
►	1	11152	Prince Turki	Jubail	Jubail Galleria	17
	11	12233	King Abd Aziz	Jeddah	Red Sea Mall	20
	111	12345	Riyady 12791	Riyady	AL Qasr Mall	15
	112	12236	Al Yarmuk 13243	Riyady	Atyaf Mall	11
	113	12588	King Fahd 12272	Riyady	Sahara Mall	11
*	NULL	NULL	NULL	NULL	NULL	NULL

Employee

Insert :

ticket

	TicketID	movieName	seatNo	Tdate	price	PhoneNo	empID	hallID
▶	10001	Lion king	114	25/3/2022	79	569383966	12345	4
	10002	Lion king	115	25/3/2022	79	569383966	12345	4
	10013	Peter Pan	73	22/5/2022	80	511200008	12236	3
	10014	Toy story	75	13/12/2021	50	511231111	11152	2
	20012	Mulan	26	19/6/2022	65	567887912	12588	1
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

movie

	movieID	mdate	mlanguage	movieName
▶	133878	25/3/2022	English	Lion king
	154434	13/12/2021	English	Toy story
	255453	5/1/2022	Arabic	Ratatouille
	266784	19/6/2022	Arabic	Mulan
	283356	22/5/2022	Arabic	Peter Pan
*	NULL	NULL	NULL	NULL

maintenance

	compName	managerID	mType	mDate	price
▶	Cleaners	12588	CL	2-3-2022	11000
	Electricity	12236	EC	9-11-2022	12000
	Furniture	12345	FR	15-3-2021	10000
	Routine	11153	RO	3-12-2021	10486
	Sewage	11152	SE	1-12-2021	10500
*	NULL	NULL	NULL	NULL	NULL

show

	hallid	movid	startTime	endTime
▶	1	133878	2:00 PM	4:00PM
	2	154434	7:45 PM	9:00 PM
	3	255453	1:00 AM	2:00 AM
	5	266784	10:30 PM	12:00 AM
	4	283356	6:00 PM	8:00 PM
*	NULL	NULL	NULL	NULL

Update & Delete :

```
164      -- DELETE row from any table
165 •   DELETE FROM BRANCH WHERE (noOfHalls <= 012) ;
166
167      -- UPDATE row from any table
168 •   UPDATE Ticket SET price = 55 WHERE movieName= 'Mulan';
169
170      -- DELETE row from any table
171 •   DELETE FROM Movie WHERE (movieName = 'Lion king') ;
172
173      -- UPDATE row from any table
174 •   UPDATE EMPLOYEE SET email = 'hebajan2@gmail.com' WHERE empName = 'heba jan' ;
```

67	19:57:11	DELETE FROM BRANCH WHERE (noOfHalls <= 012)	2 row(s) affected	0.000 sec
68	19:57:19	UPDATE Ticket SET price = 55 WHERE movieName= 'Mulan'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.000 sec
69	19:57:35	DELETE FROM Movie WHERE (movieName = 'Lion king')	1 row(s) affected	0.016 sec
70	19:57:38	UPDATE EMPLOYEE SET email = 'hebajan2@gmail.com' WHERE empName = 'heba jan'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.000 sec

Select :

```
179 • SELECT seatNo, Tdate, price FROM Ticket WHERE movieName IN ('Peter Pan');
```

seatNo	Tdate	price
73	22/5/2022	80

```
183 • SELECT * FROM EMPLOYEE WHERE branchNo IN (SELECT branchNo FROM BRANCH WHERE mall='Jubail Galleria');
```

empID	email	salary	gender	empName	phoneNo	dateOfBirth	branchNo
11100	samiayed@outlook.com	12000	M	sami ayed	550004874	5/9/1985	1
11153	yara11@outlook.com	7500	F	yara alharthi	558744512	9/10/1999	1
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

```
187 • SELECT COUNT(hallID) AS nuberOfHalls,hallType FROM HALL GROUP BY hallType ORDER BY nuberOfHalls;
```

nuberOfHalls	hallType
1	Kids
2	vip
2	Economy

Select :

```
195 •   SELECT empID,empName,salary,branchNo  
196     FROM Employee  
197     ORDER BY empID DESC;
```

	empID	empName	salary	branchNo
▶	12588	shahad almatrafi	6000	111
	12345	razan sami	5000	111
	12236	heba jan	5400	NULL
	12233	asmaa alshomrani	15000	11
	11153	yara alharthi	7500	1
	11152	emtinan maji	7500	NULL
	11100	sami ayed	12000	1
*	HULL	HULL	HULL	HULL

```
198 •   SELECT COUNT(branchNo) AS countOfBranches,city FROM Branch GROUP BY (city) HAVING COUNT(branchNo) > 2;
```

	countOfBranches	city
▶	3	Riyady

Select :

```
201 •      SELECT hallID, movID FROM cinemadb.Show_table WHERE 'Arabic' IN ( SELECT mlanguage FROM MOVIE)
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	hallID	movID
▶	2	154434
	3	255453
	4	283356
	5	266784

205 • `SELECT empID, salary FROM cinemadb.EMPLOYEE WHERE salary > 5000.00;`

Result Grid		Filter Rows:	Edit:	Export/Import:
	empID	salary		
▶	11100	12000		
	11152	7500		
	11153	7500		
	12233	15000		
	12236	5400		
	12588	6000		
*	HULL	HULL		

Select :

```
208 •   SELECT gender, COUNT(empID) AS count, SUM(salary) AS sum  
209     FROM cinemadb.EMPLOYEE  
210    GROUP BY gender  
211    ORDER BY gender;
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

	gender	count	sum
▶	F	6	46400
	M	1	12000

```
215 •   SELECT name , c.phoneNo , movieName FROM Client c, Ticket t  
216     WHERE c.PhoneNo=t.PhoneNo ;
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

	name	phoneNo	movieName
▶	Yara	569383966	Lion king
	yara	569383966	Lion king
	nada	511200008	Peter Pan
	lamia	511231111	Toy story
	rawan	567887912	Mulan

Select :

```
220 •   SELECT * FROM CLIENT WHERE PhoneNo IN (SELECT PhoneNo FROM Ticket WHERE movieName = 'Toy story') ORDER BY name DESC;
```

	PhoneNo	name	email
▶	511231111	lamia	loloOoO@gmail.com
●	NULL	NULL	NULL

```
224 •   SELECT e.empName FROM Employee e , Maintenance m WHERE e.empID = m.managerID ;
```

	empName
▶	emtinan maji
	yara alharthi
	heba jan
	razan sami
	shahad almatrafi

The difficulties

At the beginning of this project, we knew that we want to build a database for something simple and fun so we came up with a cinema database. In the first phase, we faced this issues about finding entities and the relationships between them and how to describe them well but since we know them and understand them everything else became easier.

There are no serious difficulties In phases two and three just some misunderstanding or syntax mistakes.

In the end, we learn a lot from our mistakes while we are doing this project and we are trying to do it as best as we can in all phases through this semester and we were helped by the instructions of our excellent doctor which make it even easier.