1. CREATE DATABASE University;

```
mysql> CREATE DATABASE University;
Query OK, 1 row affected (0.01 sec)
```

CREATE TABLE IF NOT EXISTS Course (

courseNo   CHAR(5) NOT NULL PRIMARY KEY UNIQUE,

title   VARCHAR(50) UNIQUE,

instructor   VARCHAR(50) ,

instr_phoneNo VARCHAR(20) UNIQUE,

instr_email   VARCHAR(50) UNIQUE,

instr_roomNo   VARCHAR(50) ,

department   VARCHAR(50)

) ENGINE=InnoDB DEFAULT CHARSET=latin1;

```
l> CREATE TABLE IF NOT EXISTS  Course  (
-> courseNo            CHAR(5) NOT NULL PRIMARY KEY UNIQUE,
-> title                      VARCHAR(50) UNIQUE,
-> instructor             VARCHAR(50) ,
-> instr_phoneNo  VARCHAR(20) UNIQUE,
-> instr_email           VARCHAR(50) UNIQUE,
-> instr_roomNo   VARCHAR(50) ,
-> department         VARCHAR(50)
-> ) ENGINE=InnoDB DEFAULT CHARSET=latin1;
 OK, 0 rows affected (0.05 sec)
```

CREATE TABLE IF NOT EXISTS Student (

id   INT(11) NOT NULL PRIMARY KEY UNIQUE,

fname   VARCHAR(25) ,

lname   VARCHAR(25) ,

phoneNo   CHAR(20) UNIQUE,

email   VARCHAR(50) UNIQUE,

street   VARCHAR(25) ,

city   VARCHAR(25) ,

pcode   CHAR(8) ,

dateOfBirth   DATE ,

sex   VARCHAR(6) ,

nationality   VARCHAR(20) ,

category   VARCHAR(50) ,

spatialNeeds VARCHAR(50) ,

comments   TEXT ,

status   VARCHAR(7) ,

courseNo   VARCHAR(5) ,

) ENGINE=InnoDB DEFAULT CHARSET=latin1;

```
mysql> CREATE TABLE IF NOT EXISTS  Student  (
    -> id            INT(11) NOT NULL PRIMARY KEY UNIQUE,
    -> fname         VARCHAR(25) ,
    -> lname         VARCHAR(25) ,
    -> phoneNo       CHAR(20) UNIQUE,
    -> email         VARCHAR(50) UNIQUE,
    -> street        VARCHAR(25) ,
    -> city          VARCHAR(25) ,
    -> pcode         CHAR(8) ,
    -> dateOfBirth   DATE ,
    -> sex           VARCHAR(6) ,
    -> nationality   VARCHAR(20) ,
    -> category      VARCHAR(50) ,
    -> spatialNeeds  VARCHAR(50) ,
    -> comments      TEXT ,
    -> status        VARCHAR(7) ,
    -> courseNo      VARCHAR(5)
    -> ) ENGINE=InnoDB DEFAULT CHARSET=latin1;
Query OK, 0 rows affected, 1 warning (0.05 sec)
```

CREATE TABLE IF NOT EXISTS Next_of_Kin (

id   INT(11) NOT NULL PRIMARY KEY UNIQUE,

name   VARCHAR(50) ,

relationship VARCHAR(25) ,

phoneNo   VARCHAR(20) UNIQUE,

street   VARCHAR(25),

city   VARCHAR(25),

pcode   CHAR(8),

studentID   INT(11),

FOREIGN KEY (studentID) REFERENCES Student(id)

) ENGINE=InnoDB DEFAULT CHARSET=latin1;

```
ql> CREATE TABLE IF NOT EXISTS  Next_of_Kin  (
 -> id              INT(11) NOT NULL PRIMARY KEY UNIQUE,
 -> name            VARCHAR(50) ,
 -> relationship VARCHAR(25) ,
 -> phoneNo         VARCHAR(20) UNIQUE,
 -> street          VARCHAR(25),
 -> city            VARCHAR(25),
 -> pcode           CHAR(8),
 -> studentID       INT(11)
 -> ) ENGINE=InnoDB DEFAULT CHARSET=latin1;
y OK, 0 rows affected, 2 warnings (0.04 sec)
```

CREATE TABLE IF NOT EXISTS Flat (

flatNo   CHAR(5) NOT NULL PRIMARY KEY UNIQUE,

noOfRooms INT(5) ,

fAddress VARCHAR(50)

) ENGINE=InnoDB DEFAULT CHARSET=latin1;

```
mysql> CREATE TABLE IF NOT EXISTS  Flat  (
    -> flatNo     CHAR(5) NOT NULL PRIMARY KEY UNIQUE,
    -> noOfRooms INT(5) ,
    -> fAddress  VARCHAR(50)
    -> ) ENGINE=InnoDB DEFAULT CHARSET=latin1;
Query OK, 0 rows affected, 1 warning (0.04 sec)
```

CREATE TABLE IF NOT EXISTS Hall (

hallNo   CHAR(5) NOT NULL PRIMARY KEY UNIQUE,

name   VARCHAR(50) ,

hAddress VARCHAR(50) ,

phoneNo VARCHAR(20) UNIQUE,

staffID INT(11)

) ENGINE=InnoDB DEFAULT CHARSET=latin1;

```
mysql> CREATE TABLE IF NOT EXISTS  Hall  (
    -> hallNo   CHAR(5) NOT NULL PRIMARY KEY UNIQUE,
    -> name      VARCHAR(50) ,
    -> hAddress VARCHAR(50) ,
    -> phoneNo  VARCHAR(20) UNIQUE,
    -> staffID  INT(11)
    -> ) ENGINE=InnoDB DEFAULT CHARSET=latin1;
Query OK, 0 rows affected, 1 warning (0.04 sec)
```

CREATE TABLE IF NOT EXISTS Staff(

id   INT(11) NOT NULL PRIMARY KEY UNIQUE,

fname   VARCHAR(25),

lname   VARCHAR(25) ,

phoneNo   CHAR(20) UNIQUE,

email   VARCHAR(50) UNIQUE,

street   VARCHAR(25) ,

city   VARCHAR(25) ,

pcode   CHAR(8),

dateOfBirth DATE,

sex   VARCHAR(6) ,

position   VARCHAR(25) ,

comments   TEXT,

hallNo   CHAR(5)

) ENGINE=INNODB DEFAULT CHARSET=latin1;

```
mysql> CREATE TABLE IF NOT EXISTS Staff(
    -> id              INT(11) NOT NULL PRIMARY KEY UNIQUE,
    -> fname           VARCHAR(25),
    -> lname           VARCHAR(25) ,
    -> phoneNo         CHAR(20) UNIQUE,
    -> email           VARCHAR(50) UNIQUE,
    -> street          VARCHAR(25) ,
    -> city            VARCHAR(25) ,
    -> pcode           CHAR(8),
    -> dateOfBirth     DATE,
    -> sex             VARCHAR(6) ,
    -> position        VARCHAR(25) ,
    -> comments        TEXT,
    -> hallNo          CHAR(5)
    -> ) ENGINE=INNODB DEFAULT CHARSET=latin1;
Query OK, 0 rows affected, 1 warning (0.03 sec)
```

CREATE TABLE IF NOT EXISTS Room (

placeNo   CHAR(5) NOT NULL PRIMARY KEY UNIQUE,

roomNo   INT(5) ,

monthlyRent VARCHAR(10) ,

hallNo   VARCHAR(5) ,

flatNo   VARCHAR(5)

) ENGINE=InnoDB DEFAULT CHARSET=latin1;

```
mysql> CREATE TABLE IF NOT EXISTS Room (
    -> placeNo      CHAR(5) NOT NULL PRIMARY KEY UNIQUE,
    -> roomNo       INT(5) ,
    -> monthlyRent VARCHAR(10) ,
    -> hallNo       VARCHAR(5) ,
    -> flatNo       VARCHAR(5)
    -> ) ENGINE=InnoDB DEFAULT CHARSET=latin1;
Query OK, 0 rows affected, 1 warning (0.05 sec)
```

CREATE TABLE IF NOT EXISTS Inspection (

iDate   DATE NOT NULL PRIMARY KEY UNIQUE,

monthlyRent varchar(10) ,

Comments   TEXT,

staffNo   INT(11),

flatNo   CHAR(5)

) ENGINE=InnoDB DEFAULT CHARSET=latin1;

```
mysql> CREATE TABLE IF NOT EXISTS  Inspection  (
    -> iDate        DATE NOT NULL PRIMARY KEY UNIQUE,
    -> monthlyRent varchar(10) ,
    -> Comments     TEXT,
    -> staffNo      INT(11),
    -> flatNo       CHAR(5)
    -> ) ENGINE=InnoDB DEFAULT CHARSET=latin1;
Query OK, 0 rows affected, 1 warning (0.04 sec)
```

CREATE TABLE IF NOT EXISTS Lease (

leaseNo   INT(5) NOT NULL PRIMARY KEY UNIQUE,

duration   VARCHAR(20) ,

entreDate   DATE UNIQUE,

leaveDate   DATE UNIQUE,

placeNo   CHAR(5) ,

studentID   INT(11)

) ENGINE=InnoDB DEFAULT CHARSET=latin1;

```
mysql> CREATE TABLE IF NOT EXISTS  Lease  (
    -> leaseNo       INT(5) NOT NULL PRIMARY KEY UNIQUE,
    -> duration      VARCHAR(20) ,
    -> entreDate     DATE UNIQUE,
    -> leaveDate     DATE UNIQUE,
    -> placeNo       CHAR(5) ,
    -> studentID     INT(11)
    -> ) ENGINE=InnoDB DEFAULT CHARSET=latin1;
Query OK, 0 rows affected, 2 warnings (0.05 sec)
```

CREATE TABLE IF NOT EXISTS Adviser(

adviserNo   INT (11) NOT NULL PRIMARY KEY UNIQUE,

fullName   VARCHAR(50),

phoneNo   CHAR(20) UNIQUE,

email   VARCHAR(50) UNIQUE,

position   VARCHAR(25),

department   VARCHAR(50),

placeNo   CHAR(5),

studentID   INT(11),

FOREIGN KEY (placeNo) REFERENCES Room(placeNo),

FOREIGN KEY (studentID) REFERENCES Student(id)

) ENGINE=InnoDB DEFAULT CHARSET=latin1;

```
mysql> CREATE TABLE IF NOT EXISTS  Adviser(
    -> adviserNo     INT (11) NOT NULL PRIMARY KEY UNIQUE,
    -> fullName       VARCHAR(50),
    -> phoneNo        CHAR(20) UNIQUE,
    -> email         VARCHAR(50) UNIQUE,
    -> position      VARCHAR(25),
    -> department    VARCHAR(50),
    -> placeNo       CHAR(5),
    -> studentID     INT(11),
    ->
    -> FOREIGN KEY (placeNo) REFERENCES Room(placeNo),
    -> FOREIGN KEY (studentID) REFERENCES Student(id)
    -> ) ENGINE=InnoDB DEFAULT CHARSET=latin1;
Query OK, 0 rows affected, 2 warnings (0.05 sec)
```

```
CREATE TABLE IF NOT EXISTS  Invoice  (

invoiceNo       INT(5) NOT NULL PRIMARY KEY UNIQUE,

stdName          VARCHAR(50) ,

paymentMethod    VARCHAR(10),

paymentDue       DATE UNIQUE,

reminderDate1    DATE UNIQUE,

reminderDate2    DATE UNIQUE,

address          VARCHAR(50),

studentID        INT(11),

leaseNo          INT(5) ,

placeNo          CHAR(5)

) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

```
mysql> CREATE TABLE IF NOT EXISTS  Invoice  (
    -> invoiceNo           INT(5) NOT NULL PRIMARY KEY UNIQUE,
    -> stdName             VARCHAR(50) ,
    -> paymentMethod       VARCHAR(10),
    -> paymentDue          DATE UNIQUE,
    -> reminderDate1       DATE UNIQUE,
    -> reminderDate2       DATE UNIQUE,
    -> address             VARCHAR(50),
    -> studentID           INT(11),
    -> leaseNo             INT(5) ,
    -> placeNo             CHAR(5)
    -> ) ENGINE=InnoDB DEFAULT CHARSET=latin1;
Query OK, 0 rows affected, 3 warnings (0.04 sec)
```

```
ALTER TABLE Staff ADD
FOREIGN KEY (hallNo) REFERENCES Hall(hallNo);
```

```
mysql> ALTER TABLE Staff ADD
    -> FOREIGN KEY (hallNo) REFERENCES Hall(hallNo);
Query OK, 0 rows affected (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESCRIBE Staff;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| id          | int         | NO   | PRI | NULL    |       |
| fname       | varchar(25) | YES  |     | NULL    |       |
| lname       | varchar(25) | YES  |     | NULL    |       |
| phoneNo     | char(20)    | YES  | UNI | NULL    |       |
| email       | varchar(50) | YES  | UNI | NULL    |       |
| street      | varchar(25) | YES  |     | NULL    |       |
| city        | varchar(25) | YES  |     | NULL    |       |
| pcode       | char(8)     | YES  |     | NULL    |       |
| dateOfBirth | date        | YES  |     | NULL    |       |
| sex         | varchar(6)  | YES  |     | NULL    |       |
| position    | varchar(25) | YES  |     | NULL    |       |
| comments    | text        | YES  |     | NULL    |       |
| hallNo      | char(5)     | YES  | MUL | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
13 rows in set (0.01 sec)
```

ALTER TABLE Hall ADD

FOREIGN KEY (staffID) REFERENCES Staff(id);

```
mysql> DESCRIBE Hall;
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| hallNo   | char(5)     | NO   | PRI | NULL    |       |
| name     | varchar(50) | YES  |     | NULL    |       |
| hAddress | varchar(50) | YES  |     | NULL    |       |
| phoneNo  | varchar(20) | YES  | UNI | NULL    |       |
| staffID  | int         | YES  | MUL | NULL    |       |
+----------+-------------+------+-----+---------+-------+
5 rows in set (0.02 sec)
```

ALTER TABLE Room ADD

FOREIGN KEY (hallNo) REFERENCES Hall(hallNo);

ALTER TABLE Room ADD

FOREIGN KEY (flatNo) REFERENCES Flat(flatNo);

```
mysql> DESCRIBE Room;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| placeNo     | char(5)     | NO   | PRI | NULL    |       |
| roomNo      | int         | YES  |     | NULL    |       |
| monthlyRent | varchar(10) | YES  |     | NULL    |       |
| hallNo      | varchar(5)  | YES  | MUL | NULL    |       |
| flatNo      | varchar(5)  | YES  | MUL | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```

ALTER TABLE Inspection ADD

FOREIGN KEY (staffNo) REFERENCES Staff(id);

ALTER TABLE Inspection ADD

FOREIGN KEY (flatNo) REFERENCES Flat(flatNo);

DESCRIBE Inspection;

```
mysql>
mysql> DESCRIBE Inspection;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| iDate       | date        | NO   | PRI | NULL    |       |
| monthlyRent | varchar(10) | YES  |     | NULL    |       |
| Comments    | text        | YES  |     | NULL    |       |
| staffNo     | int         | YES  | MUL | NULL    |       |
| flatNo      | char(5)     | YES  | MUL | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
5 rows in set (0.01 sec)
```

ALTER TABLE Invoice ADD
FOREIGN KEY (leaseNo) REFERENCES Lease(leaseNo);

ALTER TABLE Invoice ADD
FOREIGN KEY (placeNo) REFERENCES Room(placeNo);

ALTER TABLE Invoice ADD
FOREIGN KEY (studentID) REFERENCES Student(id);

SHOW COLUMNS IN Invoice;

```
mysql> ALTER TABLE Invoice ADD
    -> FOREIGN KEY (leaseNo) REFERENCES Lease(leaseNo);
Query OK, 0 rows affected (0.08 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> ALTER TABLE Invoice ADD
    -> FOREIGN KEY (placeNo) REFERENCES Room(placeNo);
Query OK, 0 rows affected (0.07 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql>
mysql> ALTER TABLE Invoice ADD
    -> FOREIGN KEY (studentID) REFERENCES Student(id);
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql>
mysql> SHOW COLUMNS IN Invoice;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| invoiceNo     | int         | NO   | PRI | NULL    |       |
| stdName       | varchar(50) | YES  |     | NULL    |       |
| paymentMethod | varchar(10) | YES  |     | NULL    |       |
| paymentDue    | date        | YES  | UNI | NULL    |       |
| reminderDate1 | date        | YES  | UNI | NULL    |       |
| reminderDate2 | date        | YES  | UNI | NULL    |       |
| address       | varchar(50) | YES  |     | NULL    |       |
| studentID     | int         | YES  | MUL | NULL    |       |
| leaseNo       | int         | YES  | MUL | NULL    |       |
| placeNo       | char(5)     | YES  | MUL | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
10 rows in set (0.00 sec)
```
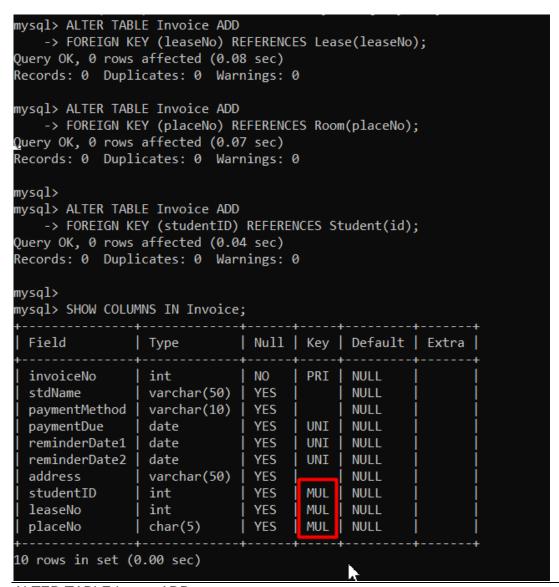
ALTER TABLE Lease ADD
FOREIGN KEY (placeNo) REFERENCES Room(placeNo);

ALTER TABLE Lease ADD
FOREIGN KEY (studentID) REFERENCES Student(id);

SHOW COLUMNS IN Lease;

```
mysql> ALTER TABLE Lease ADD
    -> FOREIGN KEY (placeNo) REFERENCES Room(placeNo);
Query OK, 0 rows affected (0.03 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql>
mysql> ALTER TABLE Lease ADD
    -> FOREIGN KEY (studentID) REFERENCES Student(id);
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql>
mysql> SHOW COLUMNS IN Lease;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| leaseNo   | int         | NO   | PRI | NULL    |       |
| duration  | varchar(20) | YES  |     | NULL    |       |
| entreDate | date        | YES  | UNI | NULL    |       |
| leaveDate | date        | YES  | UNI | NULL    |       |
| placeNo   | char(5)     | YES  | MUL | NULL    |       |
| studentID | int         | YES  | MUL | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
6 rows in set (0.00 sec)
```

INSERT IGNORE INTO Course

(courseNo,title,instructor,instr_phoneNo,instr_email,instr_roomNo,department) VALUES

('BM457', 'Business Management', 'Mr.Tan','+20178546132','t@t.com','R0145','Faculty Of Business'),

('ITCN0', 'Computer Networking', 'Dr. Diego Costa','+20890546132', 'd@d.com','R0001','Faculty of Information System'),

('IT4SC', 'Security Technology', 'DR. Lim Eng Huat','+20191547139','l@l.com','R4571', "Faculty of Information Science & Technology");

```
mysql> INSERT IGNORE INTO Course
    -> (courseNo,title,instructor,instr_phoneNo,instr_email,instr_roomNo,department) VALUES
    -> ('BM457', 'Business Management', 'Mr.Tan','+20178546132','t@t.com','R0145','Faculty Of Business'),
    -> ('ITCN0', 'Computer Networking', 'Dr. Diego Costa','+20890546132', 'd@d.com','R0001','Faculty of Information System'),
    -> ('IT4SC', 'Security Technology', 'DR. Lim Eng Huat','+20191547139','l@l.com','R4571', "Faculty of Information Science & Technology");
Query OK, 3 rows affected (0.02 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM Course;
+----------+---------------------+------------------+---------------+------------+--------------+-------------------------------------------+
| courseNo | title               | instructor       | instr_phoneNo | instr_email | instr_roomNo | department                                |
+----------+---------------------+------------------+---------------+------------+--------------+-------------------------------------------+
| BM457    | Business Management  | Mr.Tan           | +20178546132  | t@t.com    | R0145        | Faculty Of Business                       |
| IT4SC    | Security Technology  | DR. Lim Eng Huat | +20191547139  | l@l.com    | R4571        | Faculty of Information Science & Technology |
| ITCN0    | Computer Networking  | Dr. Diego Costa  | +20890546132  | d@d.com    | R0001        | Faculty of Information System              |
+----------+---------------------+------------------+---------------+------------+--------------+-------------------------------------------+
3 rows in set (0.00 sec)
```

INSERT IGNORE INTO Student (id, fname, lname, phoneNo,

email, street, city, pcode, dateOfBirth, sex,

nationality, category, spatialNeeds, comments,

status, courseNo) VALUES

(1400504, 'Heba', 'Mohamed Abd-Elmonam','+2014546132','h@h.com', '123 Main Street','Chicago','IL 12345','1998-14-10', 'Female','Algerian','postgraduate','-','nothing','placed','IT4SC'),

(1780504, 'mohamed', 'Salah Abd-Elgany','+2014547874','m@m.com','78 mohamed Ali Street','Cairo','Io 78964','2000-09-10', 'male','Albanian','First-year ungraduate','-','nothing','waiting','ITCN0'),

(1098504, 'Ahmed', 'Mahamed Galal','+20141546132','a@a.com',

'14 Eltahreer Street','Cairo','PL 14578','2002-05-07', 'male','Canadian','Third-year ungraduate','-','nothing','placed','BM457');

```
mysql> INSERT IGNORE INTO Student (id, fname, lname, phoneNo,
    -> email, street, city, pcode, dateOfBirth, sex,
    -> nationality, category, spatialNeeds, comments,
    -> status, courseNo)  VALUES
    -> (1400504, 'Heba', 'Mohamed Abd-Elmonam','+2014546132','h@h.com', '123 Main Street','Chicago','IL 12345','1998-14-10', 'Female','Algerian','postgraduate','-','nothing','placed','IT4SC'),
    -> (1780504, 'mohamed', 'Salah Abd-Elgany','+2014547874','m@m.com','78 mohamed Ali Street','Cairo','Io 78964','2000-09-10', 'male','Albanian','First-year ungraduate','-','nothing','waiting','ITCN0'),
    -> (1098504, 'Ahmed', 'Mahamed Galal','+20141546132','a@a.com',
    -> '14 Eltahreer Street','Cairo','PL 14578','2002-05-07', 'male','Canadian','Third-year ungraduate','-','nothing','placed','BM457');
Query OK, 3 rows affected, 1 warning (0.02 sec)
Records: 3  Duplicates: 0  Warnings: 1

mysql> SELECT * FROM Student;
```

id	fname	lname	phoneNo	email	street	city	pcode	dateOfBirth	sex	nationality	category	spatialNeeds	comments	status	courseNo
1098504	Ahmed	Mahamed Galal	+20141546132	a@a.com	14 Eltahreer Street	Cairo	PL 14578	2002-05-07	male	Canadian	Third-year ungraduate	-	nothing	placed	BM457
1400504	Heba	Mohamed Abd-Elmonam	+2014546132	h@h.com	123 Main Street	Chicago	IL 12345	0000-00-00	Female	Algerian	postgraduate	-	nothing	placed	IT4SC
1780504	mohamed	Salah Abd-Elgany	+2014547874	m@m.com	78 mohamed Ali Street	Cairo	Io 78964	2000-09-10	male	Albanian	First-year ungraduate	-	nothing	waiting	ITCN0

```
3 rows in set (0.00 sec)
```

INSERT IGNORE INTO Adviser(adviserNo,fullName ,phoneNo,email)
VALUES
(124587639, 'Heba Mohamed','+2014546132','h@h.com'),
(748950265, 'Mohamed Ahmed','+2145587530','m@m.com'),
(786541030, 'Eman Alkhidiwy','+2455877456','e@e.com'),
(785465278, 'Abd-Elgany Salah','+201445113','a@a.com');

```
mysql> INSERT IGNORE INTO  Adviser(adviserNo,fullName ,phoneNo,email)
    -> VALUES
    -> (124587639, 'Heba Mohamed','+2014546132','h@h.com'),
    -> (748950265, 'Mohamed Ahmed','+2145587530','m@m.com'),
    -> (786541030, 'Eman Alkhidiwy','+2455877456','e@e.com'),
    -> (785465278, 'Abd-Elgany Salah','+201445113','a@a.com');
Query OK, 4 rows affected (0.01 sec)
Records: 4  Duplicates: 0  Warnings: 0

mysql> _
```

INSERT IGNORE INTO Next_of_Kin(id, name, relationship, phoneNo,street,city,pcode,studentID)

VALUES

(7898504, 'Mohamed Ahmed', 'Father', '+201158796143','14 elkdawy','Banha','LM 12546',1098504),

(7898504, 'Abd-Elgany Salah', 'Brother', '+201257975643','555 Beverly Hills','Los Angeles','CA 55555',1780504),

(7898504, 'Eman Alkhidiwy', 'Mother', '+201154868043','Reyhanli','Cairo','IL 17446',1400504);

```
mysql> INSERT IGNORE INTO Next_of_Kin(id, name, relationship, phoneNo,street,city,pcode,studentID)
    -> VALUES
    -> (7898504, 'Mohamed Ahmed', 'Father', '+201158796143','14 elkdawy','Banha','LM 12546',1098504),
    -> (7898504, 'Abd-Elgany Salah', 'Brother', '+201257975643','555 Beverly Hills','Los Angeles','CA 55555',1780504),
    -> (7898504, 'Eman Alkhidiwy', 'Mother', '+201154868043','Reyhanli','Cairo','IL 17446',1400504);
Query OK, 1 row affected, 2 warnings (0.01 sec)
Records: 3  Duplicates: 2  Warnings: 2

mysql>  SELECT * FROM Next_of_Kin;
+---------+---------------+--------------+---------------+------------+-------+----------+-----------+
| id      | name          | relationship | phoneNo       | street     | city  | pcode    | studentID |
+---------+---------------+--------------+---------------+------------+-------+----------+-----------+
| 7898504 | Mohamed Ahmed | Father       | +201158796143 | 14 elkdawy | Banha | LM 12546 |   1098504 |
+---------+---------------+--------------+---------------+------------+-------+----------+-----------+
1 row in set (0.00 sec)

mysql> INSERT IGNORE INTO Next_of_Kin(id, name, relationship, phoneNo,street,city,pcode,studentID)
    -> VALUES
    -> (7847804, 'Abd-Elgany Salah', 'Brother', '+201257975643','555 Beverly Hills','Los Angeles','CA 55555',1780504),
    -> (9078014, 'Eman Alkhidiwy', 'Mother', '+201154868043','Reyhanli','Cairo','IL 17446',1400504);
Query OK, 2 rows affected (0.01 sec)
Records: 2  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM Next_of_Kin;
+---------+------------------+--------------+---------------+-------------------+-------------+----------+-----------+
| id      | name             | relationship | phoneNo       | street            | city        | pcode    | studentID |
+---------+------------------+--------------+---------------+-------------------+-------------+----------+-----------+
| 7847804 | Abd-Elgany Salah | Brother      | +201257975643 | 555 Beverly Hills | Los Angeles | CA 55555 |   1780504 |
| 7898504 | Mohamed Ahmed    | Father       | +201158796143 | 14 elkdawy        | Banha       | LM 12546 |   1098504 |
| 9078014 | Eman Alkhidiwy   | Mother       | +201154868043 | Reyhanli          | Cairo       | IL 17446 |   1400504 |
+---------+------------------+--------------+---------------+-------------------+-------------+----------+-----------+
3 rows in set (0.00 sec)
```

INSERT IGNORE INTO Flat(flatNo, noOfRooms, fAddress)

VALUES

('F0001', 5, '1, jalan , taman 17'),

('F0002', 20, '2, jalan , taman 114'),

('F0003', 17, '8, jalan , taman 101');

```
mysql> INSERT IGNORE INTO Flat(flatNo, noOfRooms, fAddress)
    -> VALUES
    -> ('F0001', 5,  '1, jalan , taman 17'),
    -> ('F0002', 20, '2, jalan , taman 114'),
    -> ('F0003', 17, '8, jalan , taman 101');
Query OK, 3 rows affected (0.02 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM Flat;
+--------+-----------+---------------------+
| flatNo | noOfRooms | fAddress            |
+--------+-----------+---------------------+
| F0001  |         5 | 1, jalan , taman 17 |
| F0002  |        20 | 2, jalan , taman 114 |
| F0003  |        17 | 8, jalan , taman 101 |
+--------+-----------+---------------------+
3 rows in set (0.00 sec)
```

INSERT INTO Hall(hallNo, name, hAddress, phoneNo)

VALUES

('H0005', 'Hall A', '1, Venus , taman 114','+201547824397'),

('H0072', 'Hall B', '2, Venus , taman 114','+201458796354'),

('H0013', 'Hall c', '3, Venus , taman 101','+201478324298');

```
mysql> INSERT INTO Hall(hallNo, name, hAddress, phoneNo, staffID)
    -> VALUES
    -> ('H0005', 'Hall A', '1, Venus , taman 114','+201547824397',1475329),
    -> ('H0072', 'Hall B', '2, Venus , taman 114','+201458796354',7896354),
    -> ('H0013', 'Hall c', '3, Venus , taman 101','+201478324298',1459873);
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM Hall;
+--------+--------+----------------------+---------------+---------+
| hallNo | name   | hAddress             | phoneNo       | staffID |
+--------+--------+----------------------+---------------+---------+
| H0005  | Hall A | 1, Venus , taman 114 | +201547824397 | 1475329 |
| H0013  | Hall c | 3, Venus , taman 101 | +201478324298 | 1459873 |
| H0072  | Hall B | 2, Venus , taman 114 | +201458796354 | 7896354 |
+--------+--------+----------------------+---------------+---------+
3 rows in set (0.00 sec)
```

INSERT INTO Staff(id, fname, lname, phoneNo, email, street, city, pcode,sex,position,comments)

VALUES

(1475329, 'Ali', 'Mohamed','+201547824000','a@a.com', '2 Venus' , 'nzm 45','IL 14527','Male','Hall Manager','nothing'),

(7896354, 'Huda', 'Mahmoud','+207488324298','hh@h.com', '6 Venus', 'asd 101','GB 14527','Female', 'Cleaner','nothing');

```
mysql> INSERT INTO Staff(id, fname, lname, phoneNo, email, street, city, pcode,sex,position,comments)
    -> VALUES
    -> (1475329, 'Ali', 'Mohamed','+201547824000','a@a.com', '2 Venus' , 'nzm 45','IL 14527','Male','Hall Manager','nothing'),
    -> (1459873, 'Basem', 'Ahmed', '+201748796354','b@b.com' '4 Venus' , 'mn 114','DF 14587','Male','Administrative Assistant','nothing'),
    -> (7896354, 'Huda', 'Mahmoud','+207488324298','hh@h.com', '6 Venus', 'asd 101','GB 14527','Female', 'Cleaner','nothing');
ERROR 1136 (21S01): Column count doesn't match value count at row 2
mysql> INSERT INTO Staff(id, fname, lname, phoneNo, email, street, city, pcode,sex,position,comments)
    -> VALUES
    -> (1475329, 'Ali', 'Mohamed','+201547824000','a@a.com', '2 Venus' , 'nzm 45','IL 14527','Male','Hall Manager','nothing');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Staff(id, fname, lname, phoneNo, email, street, city, pcode,sex,position,comments)
    -> VALUES
    -> (1459873, 'Basem', 'Ahmed', '+201748796354','b@b.com' '4 Venus' , 'mn 114','DF 14587','Male','Administrative Assistant','nothing');
ERROR 1136 (21S01): Column count doesn't match value count at row 1
mysql> INSERT INTO Staff(id, fname, lname, phoneNo, email, street, city, pcode,sex,position,comments)
    -> VALUES
    -> (7896354, 'Huda', 'Mahmoud','+207488324298','hh@h.com', '6 Venus', 'asd 101','GB 14527','Female', 'Cleaner','nothing');
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM Staff;
+---------+-------+---------+----------------+---------+---------+---------+----------+-------------+--------+--------------+----------+--------+
| id      | fname | lname   | phoneNo        | email   | street  | city    | pcode    | dateOfBirth | sex    | position     | comments | hallNo |
+---------+-------+---------+----------------+---------+---------+---------+----------+-------------+--------+--------------+----------+--------+
| 1475329 | Ali   | Mohamed | +201547824000  | a@a.com | 2 Venus | nzm 45  | IL 14527 | NULL        | Male   | Hall Manager | nothing  | NULL   |
| 7896354 | Huda  | Mahmoud | +207488324298  | hh@h.com| 6 Venus | asd 101 | GB 14527 | NULL        | Female | Cleaner      | nothing  | NULL   |
+---------+-------+---------+----------------+---------+---------+---------+----------+-------------+--------+--------------+----------+--------+
2 rows in set (0.01 sec)
```

INSERT INTO Lease(leaseNo, duration, entreDate, leaveDate)

VALUES

(124, '1 semester', '2021-02-01','2021-08-15'),

(20, '2 semester', '2018-02-01','2019-02-04'),

(178, '1 semesters', '2021-01-07','2021-07-04');

SELECT * FROM Lease

```
mysql> INSERT INTO Lease(leaseNo, duration, entreDate, leaveDate)
    -> VALUES
    -> (124, '1 semester', '2021-02-01','2021-08-15'),
    -> (20, '2 semester', '2018-02-01','2019-02-04'),
    -> (178, '1 semesters', '2021-01-07','2021-07-04');
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql>
mysql> SELECT * FROM Lease
    -> ;
+---------+-------------+------------+------------+---------+-----------+
| leaseNo | duration    | entreDate  | leaveDate  | placeNo | studentID |
+---------+-------------+------------+------------+---------+-----------+
|      20 | 2 semester  | 2018-02-01 | 2019-02-04 | NULL    |      NULL |
|     124 | 1 semester  | 2021-02-01 | 2021-08-15 | NULL    |      NULL |
|     178 | 1 semesters | 2021-01-07 | 2021-07-04 | NULL    |      NULL |
+---------+-------------+------------+------------+---------+-----------+
3 rows in set (0.00 sec)
```

INSERT IGNORE INTO Inspection(iDate,monthlyRent)

VALUES

('2021-02-01','200$'),

('2019-12-01','190$'),

('2020-07-01','205$');

SELECT * FROM Inspection;

```
mysql> INSERT IGNORE INTO Inspection(iDate,monthlyRent)
    -> VALUES
    -> ('2021-02-01','200$'),
    -> ('2019-12-01','190$'),
    -> ('2020-07-01','205$');
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM Inspection;
+------------+-------------+----------+---------+--------+
| iDate      | monthlyRent | Comments | staffNo | flatNo |
+------------+-------------+----------+---------+--------+
| 2019-12-01 | 190$        | NULL     |    NULL | NULL   |
| 2020-07-01 | 205$        | NULL     |    NULL | NULL   |
| 2021-02-01 | 200$        | NULL     |    NULL | NULL   |
+------------+-------------+----------+---------+--------+
3 rows in set (0.00 sec)
```

INSERT IGNORE INTO Invoice(invoiceNo,stdName, paymentMethod)

VALUES

(12456378,'Ahmed Gamal','visa'),

(12416378,'Huda Ibrahim','Cash'),

(02145648,'Mohalmed Hatem','visa');

SELECT * FROM Invoice;

```
mysql> INSERT IGNORE INTO Invoice(invoiceNo,stdName, paymentMethod)
    -> VALUES
    -> (12456378,'Ahmed Gamal','visa'),
    -> (12416378,'Huda Ibrahim','Cash'),
    -> (02145648,'Mohalmed Hatem','visa');
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql>
mysql> SELECT * FROM Invoice;
+-----------+----------------+---------------+------------+--------------+--------------+---------+-----------+---------+---------+
| invoiceNo | stdName        | paymentMethod | paymentDue | reminderDate1 | reminderDate2 | address | studentID | leaseNo | placeNo |
+-----------+----------------+---------------+------------+--------------+--------------+---------+-----------+---------+---------+
|   2145648 | Mohalmed Hatem | visa          | NULL       | NULL         | NULL         | NULL    | NULL      | NULL    | NULL    |
|  12416378 | Huda Ibrahim   | Cash          | NULL       | NULL         | NULL         | NULL    | NULL      | NULL    | NULL    |
|  12456378 | Ahmed Gamal    | visa          | NULL       | NULL         | NULL         | NULL    | NULL      | NULL    | NULL    |
+-----------+----------------+---------------+------------+--------------+--------------+---------+-----------+---------+---------+
3 rows in set (0.00 sec)
```

Requirements:

1- Use ER modelling technique for design of a data model for your relational database. Include with your ER diagram a separate document containing all entities, attributes of entities and primary key/s of each entity.

course
- 🔑 courseNo CHAR(5)
- ◇ title VARCHAR(50)
- ◇ instructor VARCHAR(50)
- ◇ instr_phoneNo VARCHAR(20)
- ◇ instr_email VARCHAR(50)
- ◇ instr_roomNo VARCHAR(20)
- ◇ department VARCHAR(50)
- Indexes ▶

student
- 🔑 id INT
- ◇ fname VARCHAR(25)
- ◇ lname VARCHAR(25)
- ◇ phoneNo CHAR(20)
- ◇ email VARCHAR(50)
- ◇ street VARCHAR(25)
- ◇ city VARCHAR(25)
- ◇ pcode CHAR(8)
- ◇ dateOfBirth DATE
- ◇ sex VARCHAR(6)
- ◇ nationality VARCHAR(20)
- ◇ category VARCHAR(50)
- ◇ spatialNeeds VARCHAR(50)
- ◇ comments TEXT
- ◇ status VARCHAR(7)
- ◇ courseNo VARCHAR(5)
- Indexes ▶

next_of_kin
- 🔑 id INT
- ◇ name VARCHAR(50)
- ◇ relationship VARCHAR(25)
- ◇ phoneNo VARCHAR(20)
- ◇ street VARCHAR(25)
- ◇ city VARCHAR(25)
- ◇ pcode CHAR(8)
- ◇ studentID INT
- Indexes ▶

invoice
- 🔑 invoiceNo INT
- ◇ stdName VARCHAR(50)
- ◇ paymentMethod VARCHAR(10)
- ◇ paymentDue DATE
- ◇ reminderDate1 DATE
- ◇ reminderDate2 DATE
- ◇ address VARCHAR(50)
- ◇ studentID INT
- ◇ leaseNo INT
- ◇ placeNo CHAR(5)
- Indexes ▶

inspection
- 🔑 iDate DATE
- ◇ monthlyRent VARCHAR(10)
- ◇ Comments TEXT
- ◇ staffNo INT
- ◇ flatNo CHAR(5)
- Indexes ▶

adviser
- 🔑 adviserNo INT
- ◇ fullName VARCHAR(50)
- ◇ phoneNo CHAR(20)
- ◇ email VARCHAR(50)
- ◇ position VARCHAR(25)
- ◇ department VARCHAR(50)
- ◇ placeNo CHAR(5)
- ◇ studentID INT
- Indexes ▶

lease
- 🔑 leaseNo INT
- ◇ duration VARCHAR(20)
- ◇ entreDate DATE
- ◇ leaveDate DATE
- ◇ placeNo CHAR(5)
- ◇ studentID INT
- Indexes ▶

flat
- 🔑 flatNo CHAR(5)
- ◇ noOfRooms INT
- ◇ fAddress VARCHAR(50)
- Indexes ▶

staff
- 🔑 id INT
- ◇ fname VARCHAR(25)
- ◇ lname VARCHAR(25)
- ◇ phoneNo CHAR(20)
- ◇ email VARCHAR(50)
- ◇ street VARCHAR(25)
- ◇ city VARCHAR(25)
- ◇ pcode CHAR(8)
- ◇ dateOfBirth DATE
- ◇ sex VARCHAR(6)
- ◇ position VARCHAR(25)
- ◇ comments TEXT
- ◇ hallNo CHAR(5)
- Indexes ▶

room
- 🔑 placeNo CHAR(5)
- ◇ roomNo INT
- ◇ monthlyRent VARCHAR(10)
- ◇ hallNo VARCHAR(5)
- ◇ flatNo VARCHAR(5)
- Indexes ▶

hall
- 🔑 hallNo CHAR(5)
- ◇ name VARCHAR(50)
- ◇ hAddress VARCHAR(50)
- ◇ phoneNo VARCHAR(20)
- ◇ staffID INT
- Indexes ▶

2-a: Present a report listing the Manager's name and telephone number for each hall of residence.

SELECT staff.fname, staff.lname, hall.phoneNo

FROM Staff JOIN Hall ON

Hall.staffID = Staff.id;

```
mysql> SELECT staff.fname, staff.lname, hall.phoneNo
    -> FROM Staff JOIN Hall ON
    -> Hall.staffID = Staff.id;
+--------+---------+----------------+
| fname  | lname   | phoneNo        |
+--------+---------+----------------+
| Ali    | Mohamed | +201458796358  |
| Ali    | Mohamed | +201454786358  |
| Huda   | Mahmoud | +2078555698700 |
+--------+---------+----------------+
3 rows in set (0.00 sec)
```

2-b Present a report listing the names and banner numbers of students with the details of their lease agreements.

SELECT student.id, student.fname, student.lname, lease.leaseNo, lease.duration

FROM student JOIN Lease ON

Lease.studentID = Student.id;

```
mysql> SELECT student.id, student.fname, student.lname, lease.leaseNo, lease.duration
    -> FROM student JOIN Lease ON
    -> Lease.studentID = Student.id;
+---------+---------+--------------------+---------+------------+
| id      | fname   | lname              | leaseNo | duration   |
+---------+---------+--------------------+---------+------------+
| 1400504 | Heba    | Mohamed Abd-Elmonam |      4 | summer     |
| 1780504 | mohamed | Salah Abd-Elgany   |      78 | 2 semester |
+---------+---------+--------------------+---------+------------+
2 rows in set (0.00 sec)
```

2-c Display the details of lease agreements that include the summer semester.

SELECT * FROM Lease WHERE Lease.duration = 'summer';

```
mysql> SELECT * FROM Lease  WHERE Lease.duration = 'summer';
+---------+----------+------------+------------+---------+-----------+
| leaseNo | duration | entreDate  | leaveDate  | placeNo | studentID |
+---------+----------+------------+------------+---------+-----------+
|     478 | summer   | 2011-02-01 | 2011-08-15 | NULL    |      NULL |
|     598 | summer   | 2015-03-01 | 2021-02-04 | NULL    |      NULL |
+---------+----------+------------+------------+---------+-----------+
2 rows in set (0.00 sec)
```

2-d **Display the details of the total rent paid by a given student.**

SELECT SUM(Room.monthlyRent) AS 'Total Rent'

FROM room JOIN Lease JOIN Student

ON Lease.placeNo = Room.PlaceNo AND

Lease.studentID = Student.id

WHERE

Student.fname = 'Heba';

```
mysql> SELECT SUM(Room.monthlyRent) AS 'Total Rent'
    -> FROM room  JOIN Lease JOIN Student
    -> ON Lease.placeNo = Room.PlaceNo AND
    -> Lease.studentID = Student.id
    -> WHERE
    -> Student.fname = 'Heba';
+------------+
| Total Rent |
+------------+
|        430 |
+------------+
1 row in set (0.00 sec)
```

2-e **Present a report on students who have not paid their invoices by a given date.**

SELECT invoice.stdName

FROM invoice WHERE

Invoice. paymentDue < '2021-08-10';

```
mysql> SELECT invoice.stdName
    -> FROM invoice WHERE
    -> Invoice. paymentDue <  '2021-08-10';
+---------------------+
| stdName             |
+---------------------+
| Ahmed Mohamed Galal |
| Heba Mohamed        |
+---------------------+
2 rows in set (0.00 sec)

mysql>
```

2-f Display the details of apartment inspections where the property was found to be in an unsatisfactory condition.

SELECT *

FROM Inspection WHERE

Inspection. conditions = 'unsatisfactory';

```
mysql> SELECT *
    -> FROM Inspection WHERE
    -> Inspection. conditions = 'unsatisfactory';
+------------+-------------+----------+---------+--------+----------------+
| iDate      | monthlyRent | Comments | staffNo | flatNo | conditions     |
+------------+-------------+----------+---------+--------+----------------+
| 2020-09-01 | 205$        | NULL     | NULL    | NULL   | unsatisfactory |
| 2021-08-01 | 200$        | NULL     | NULL    | NULL   | unsatisfactory |
+------------+-------------+----------+---------+--------+----------------+
2 rows in set (0.00 sec)

mysql>
```

2-g Present a report of the names and banner numbers of students with their room number and number in a particular hall of residence.

SELECT student.id, student.fname, student.lname, room.roomNo, room.hallNo

FROM room JOIN Lease JOIN Student

ON Lease.placeNo = Room.PlaceNo AND

Lease.studentID = Student.id;

```
mysql> SELECT student.id, student.fname, student.lname, room.roomNo, room.hallNo
    -> FROM room  JOIN Lease JOIN Student
    ->  ON Lease.placeNo = Room.PlaceNo AND
    -> Lease.studentID = Student.id;
+---------+---------+-------------------+--------+--------+
| id      | fname   | lname             | roomNo | hallNo |
+---------+---------+-------------------+--------+--------+
| 1400504 | Heba    | Mohamed Abd-Elmonam |      5 | H0052  |
| 1780504 | mohamed | Salah Abd-Elgany  |        6 | H0205  |
+---------+---------+-------------------+--------+--------+
2 rows in set (0.00 sec)
```

2-h Present a report listing the details of all students currently on the waiting list for accommodation; that is; who were not placed.

SELECT student.id, student.fname, student.lname

FROM Student WHERE student.status = 'waiting';

```
mysql> SELECT student.id, student.fname, student.lname
    -> FROM Student WHERE student.status = 'waiting';
+---------+---------+-------------------+
| id      | fname   | lname             |
+---------+---------+-------------------+
| 1780504 | mohamed | Salah Abd-Elgany  |
+---------+---------+-------------------+
1 row in set (0.00 sec)
```

2-i Display the total number of students in each student category.

SELECT COUNT(*)

FROM Student GROUP BY student.category;

```
mysql> SELECT COUNT(*)
    -> FROM Student GROUP BY student.category;
+----------+
| COUNT(*) |
+----------+
|        1 |
|        1 |
|        1 |
+----------+
3 rows in set (0.01 sec)
```

2-j Present a report of the names and banner numbers for all students who have not supplied details of their next-of-kin.

SELECT student.id, student.fname, student.lname

FROM Student LEFT JOIN Next_of_kin

ON Next_of_kin.studentID = student.id

WHERE   Next_of_kin.studentID is NULL;

```
mysql> SELECT student.id, student.fname, student.lname
    -> FROM Student LEFT JOIN Next_of_kin
    -> ON  Next_of_kin.studentID = student.id
    -> WHERE    Next_of_kin.studentID is NULL;
+----------+---------+---------------+
| id       | fname   | lname         |
+----------+---------+---------------+
| 17412504 | Ibtesam | Mohamed Ahmed |
+----------+---------+---------------+
1 row in set (0.00 sec)
```

2-k Display the name and internal telephone number of the Adviser for a particular student.

SELECT phoneNo, fullname

FROM Adviser

WHERE   fullname = 'Mohamed Ahmed';

```
mysql> SELECT  phoneNo, fullname
    -> FROM Adviser
    -> WHERE    fullname = 'Mohamed Ahmed';
+-------------+---------------+
| phoneNo     | fullname      |
+-------------+---------------+
| +2145587530 | Mohamed Ahmed |
+-------------+---------------+
1 row in set (0.00 sec)
```

2-l Display the minimum, maximum, and average monthly rent for rooms in residence halls.

SELECT MIN(MonthlyRent) AS ' Minimum MonthlyRent' , MAX(MonthlyRent) AS ' Maximum MonthlyRent', AVG(MonthlyRent) AS ' Avarage MonthlyRent'

FROM Room

WHERE   hallNo IS NOT NULL;

```
mysql> SELECT  MIN(MonthlyRent) AS ' Minimum MonthlyRent' , MAX(MonthlyRent) AS ' Maximum MonthlyRent', AVG(MonthlyRent)
 AS ' Avarage MonthlyRent'
    -> FROM Room
    -> WHERE   hallNo IS NOT NULL;
+----------------------+----------------------+----------------------+
| Minimum MonthlyRent | Maximum MonthlyRent | Avarage MonthlyRent |
+----------------------+----------------------+----------------------+
|                 200 |                 350 |            260.0000 |
+----------------------+----------------------+----------------------+
1 row in set, 3 warnings (0.01 sec)
```

2-m Display the total number of places in each residence hall.

SELECT COUNT(Room.placeNo) AS 'Number of places'

FROM Room JOIN Hall

ON Room.hallNo = Hall.hallNo

WHERE Room.hallNo = Hall.hallNo;

```
mysql> SELECT  COUNT(Room.placeNo) AS 'Number of places'
    -> FROM Room JOIN Hall
    -> ON Room.hallNo = Hall.hallNo
    -> WHERE Room.hallNo = Hall.hallNo;
+------------------+
| Number of places |
+------------------+
|                6 |
+------------------+
1 row in set (0.00 sec)
```

2-n Display the staff number, name, age, and current location of all members of the residence staff who are over 60 years old today.

SELECT id,fname, lname, street, city, pcode, dateOfBirth, TIMESTAMPDIFF(YEAR, dateOfBirth, CURDATE()) AS age

FROM Staff

WHERE TIMESTAMPDIFF(YEAR, dateOfBirth, CURDATE()) > 60;

```
mysql> SELECT  id,fname, lname, street, city, pcode, dateOfBirth, TIMESTAMPDIFF(YEAR, dateOfBirth, CURDATE()) AS age
    -> FROM Staff
    -> WHERE TIMESTAMPDIFF(YEAR, dateOfBirth, CURDATE()) > 60;
+---------+-------+--------+---------+---------+---------+-------------+------+
| id      | fname | lname  | street  | city    | pcode   | dateOfBirth | age  |
+---------+-------+--------+---------+---------+---------+-------------+------+
| 1445872 | Ali   | Esmail | 2 ertf  | nzm 45  | CX 145  | 1940-05-05  | 81   |
| 1478572 | Osama | Ahmed  | 2 Venus | nzm 45  | IL 78540| 1940-12-14  | 80   |
| 7854226 | Manna | Taha   | 6 cvbj  | asd 101 | GB 14527| 1960-08-17  | 61   |
| 7896542 | Abdo  | Gbreel | 2 nmrv  | nzm 45  | AM 7854 | 1950-10-05  | 71   |
+---------+-------+--------+---------+---------+---------+-------------+------+
4 rows in set (0.00 sec)
```