Database Fundamental

Project 2023

Denys Rudenko

Task One

Within my hospital database there will be 11 tables. Appointments, Contact, Department, Employee, EmployeeDaysOffs, Hospitalisations, Medical History, Patient, Position, Staff Records and Treatment.

The Appointments table is designed to store and manage information related to appointments, featuring columns such as idAppointments, idPatient, idEmployee, idTreatment, and dateTime.

The Contact table is structured to store and manage contact information, encompassing columns such as idContact, idPatient, phoneNum, email, postalCode, city, and address.

The Department table is designed to store and manage information related to departments within an organization, featuring columns such as idDepartment, name, and phoneNum.

The Employee table is structured to store and manage employee information, including columns such as idEmployee, firstName, lastName, birthday, phoneNum, gender, and email.

The table for employee days off includes columns for the unique identifier of days off (idEmployeeDaysOffs), the employee's identifier (idEmployee), and the date.

The hospitalizations table contains columns for the unique hospitalization identifier (idHospitalizations), patient identifier (idPatient), department identifier (idDepartment), and the associated disease.

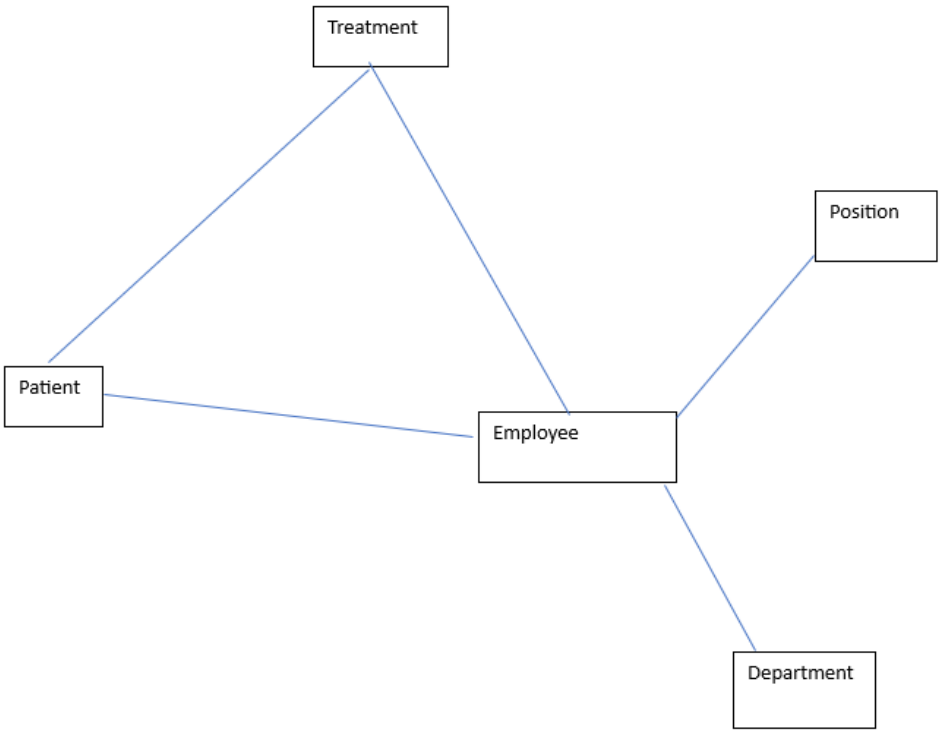
The MedicalHistory table is designed to store and manage records of medical histories, containing columns such as idMedicalHistory, idPatient, idEmployee, idTreatment, date, and disease.

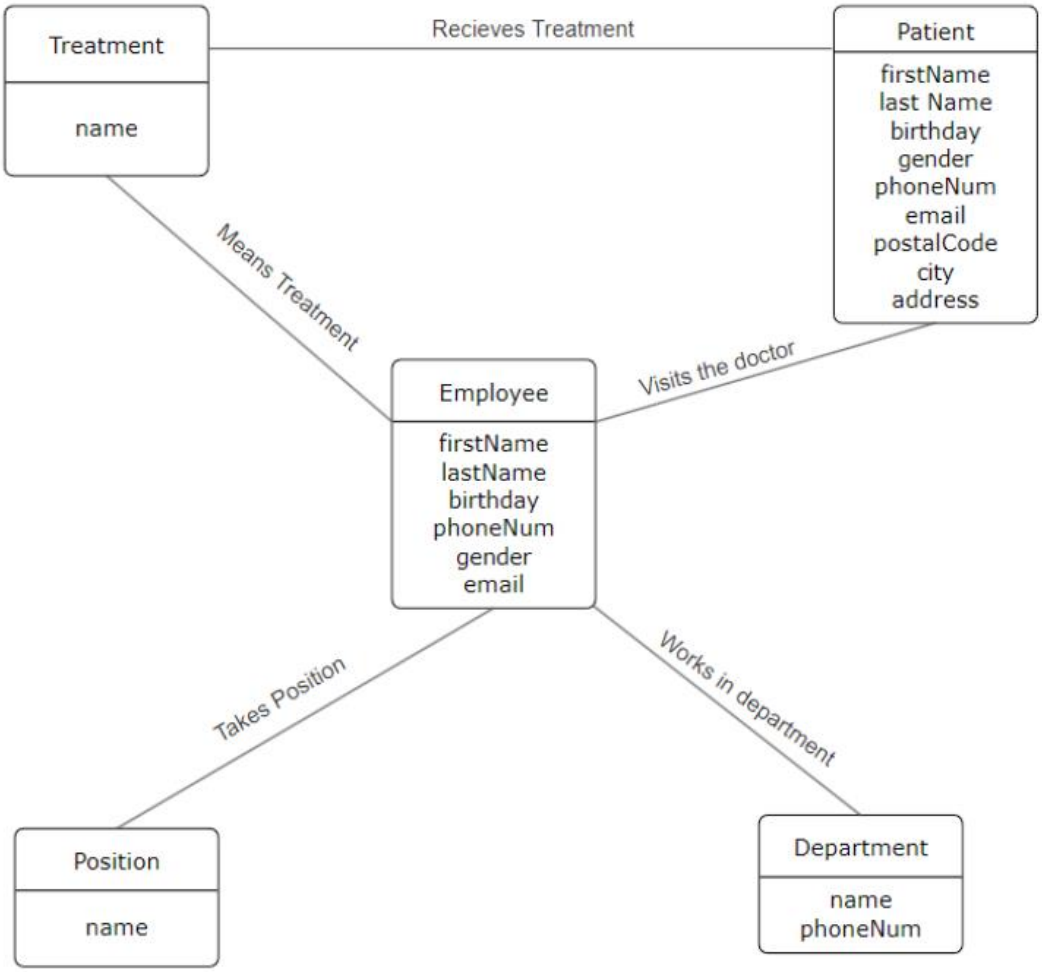
The Patient table is designed to store and manage patients' personal information, including columns such as idPatient, firstName, lastName, birthday and gender.

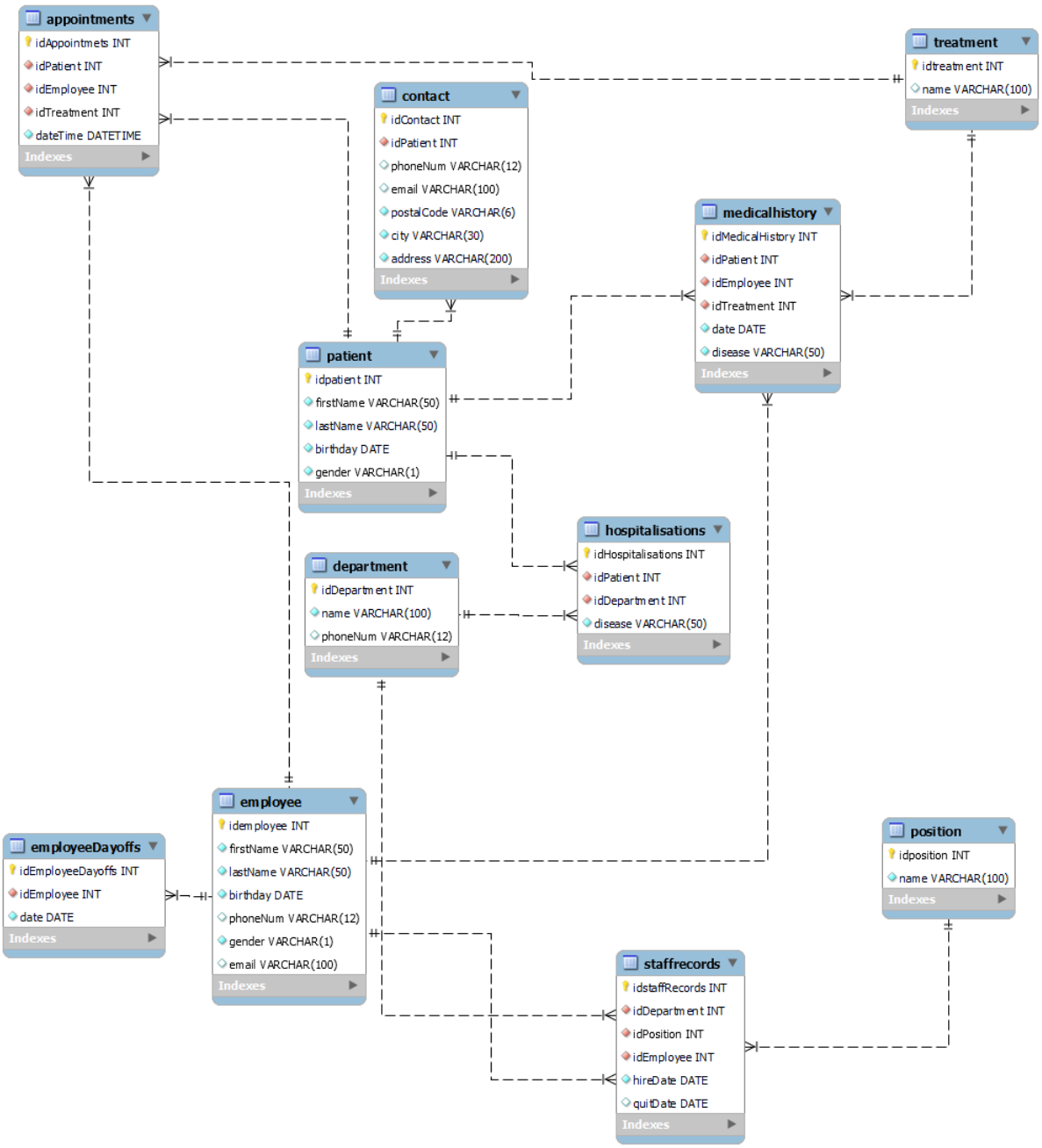
The Position table is structured to store and manage information related to positions within a system or organization, featuring columns such as idPosition and name.

The StaffRecords table is designed to store and manage comprehensive information about staff members, incorporating columns such as idStaffRecords, idDepartment, idPosition, idEmployee, hireDate, and quitDate.

The Treatment table is structured to store and manage information pertaining to various treatments, encompassing columns such as idTreatment and name.


Treatment
Position
Patient
Employee
Department


Treatment
name
Recieves Treatment
Patient
firstName
last Name
birthday
gender
phoneNum
email
postalCode
city
address
Means Treatment
Employee
firstName
lastName
birthday
phoneNum
gender
email
Visits the doctor
Takes Position
Works in department
Position
name
Department
name
phoneNum



Entity dictionaries: Department, employee, position, treatment, patient.

The Contact information is stored in a separate directory that is linked through a FK to the Patients table with an N:1 relationship. (Patient's contact information)

Staff Records describe an N:N relationship between departments, positions, and employees. (Who held which position, when, and in which department.)

DaysOff describes a 1:N relationship between employees and non-working dates. (When a doctor was on leave.)

Appointments describe an N:N relationship between doctors (employees), patients, treatment procedures, and specific time dates. (At what time a patient under a specific doctor undergoes treatment procedures.)

Medical History describes an N:N relationship between doctors, patients, treatments, and dates (when a patient, under which doctor, was prescribed treatment and with what diagnosis).

Hospitalizations describe an N:N relationship between patients and departments (where the patient is located).

UNF

StaffRecords (department_positions, employees)

Appointments (department_doctors, date, patients)

Hospitalisations (department, patient, disease)

MedicalHistory (department , doctor, disease, date, treatment, patient)

1NF

StaffRecords (departament, position, employee, birthday, phoneNum, gender, email, hireDate, quitDate)

Appointments (patient , patientPhoneNum, doctor, departament, departamentPhoneNum, treatment, dateTime)

Hospitalisations (department, firstName, lastName, birthday, gender, phoneNum, email, postalCode, city, address, disease)

MedicalHistory (department , doctor, disease, date, treatment, patient)

EmployeeDaysOffs (firstName, lastName, date)

Department (name, phoneNum)

Employee (firstName, lastName, birthday, phoneNum, gender, email)

Patient (firstName, lastName, birthday, gender)

2NF

StaffRecords (idStaffRecords(PK), departament, position, employee, birthday, phoneNum, gender, email, hireDate, quitDate)

Appointments (idAppointments(PK), patient , patientPhoneNum, doctor, departament, departamentPhoneNum, treatment, dateTime)

Hospitalisations (idHospitalisations(PK), department, firstName, lastName, birthday, gender, phoneNum, email, postalCode, city, address, disease)

MedicalHistory (idMedicalHistory(PK), department , doctor, disease, date, treatment, patient)

EmployeeDaysOffs (idEmployeeDayOffs(PK), firstName, lastName, date)

Department (idDepartment(PK), name, phoneNum)

Employee (idEmployee(PK), firstName, lastName, birthday, phoneNum, gender, email)

Patient (idPatient(PK), firstName, lastName, birthday, gender)

3NF

Department (idDepartment(PK), name, phoneNum)

Employee (idEmployee(PK), firstName, lastName, birthday, phoneNum, gender, email)

Position (idPosition(PK), name)

StaffRecords (idStaffRecords(PK), idDepartment(FK), idPosition(FK), idEmployee(FK), hireDate, quitDate)

EmployeeDaysOffs (idEmployeeDayOffs(PK), idEmployee(FK), date)

Treatment (idTreatment(PK), name)

Patient (idPatient(PK), firstName, lastName, birthday, gender)

Contact (idContact(PK), idPatient(FK), phoneNum, email, postalCode, city, address)

Appointments (idAppointments(PK), idPatient(FK), idEmployee(FK), idTreatment(FK),dateTime)

Hospitalisations (idHospitalisations(PK), idPatient(FK), idDepartment(FK), disease)

MedicalHistory (idMedicalHistory(PK), idPatient(FK), idEmployee(FK), idTreatment(FK), date, disease)

Task Two

```sql
CREATE DATABASE `hospital`;

USE `hospital`;

DROP TABLE IF EXISTS `department`;

CREATE TABLE `department` (
  `idDepartment` int NOT NULL AUTO_INCREMENT,
  `name` varchar(100) NOT NULL,
  `phoneNum` varchar(12) DEFAULT NULL,
  PRIMARY KEY (`idDepartment`),
  UNIQUE KEY `idDepartment_UNIQUE` (`idDepartment`)
) ENGINE=InnoDB AUTO_INCREMENT=11;


DROP TABLE IF EXISTS `employee`;

CREATE TABLE `employee` (
  `idemployee` int NOT NULL AUTO_INCREMENT,
  `firstName` varchar(50) NOT NULL,
  `lastName` varchar(50) NOT NULL,
  `birthday` date NOT NULL,
  `phoneNum` varchar(12) DEFAULT NULL,
  `gender` varchar(1) NOT NULL,
  `email` varchar(100) DEFAULT NULL,
  PRIMARY KEY (`idemployee`),
  UNIQUE KEY `idemployee_UNIQUE` (`idemployee`)
) ENGINE=InnoDB AUTO_INCREMENT=21;


```

```sql
DROP TABLE IF EXISTS `position`;

CREATE TABLE `position` (
  `idposition` int NOT NULL AUTO_INCREMENT,
  `name` varchar(100) NOT NULL,
  PRIMARY KEY (`idposition`),
  UNIQUE KEY `idposition_UNIQUE` (`idposition`)
) ENGINE=InnoDB AUTO_INCREMENT=11;


DROP TABLE IF EXISTS `treatment`;

CREATE TABLE `treatment` (
  `idtreatment` int NOT NULL AUTO_INCREMENT,
  `name` varchar(100) DEFAULT NULL,
  PRIMARY KEY (`idtreatment`),
  UNIQUE KEY `idtreatment_UNIQUE` (`idtreatment`)
) ENGINE=InnoDB AUTO_INCREMENT=11;


```

```sql
DROP TABLE IF EXISTS `patient`;

CREATE TABLE `patient` (
  `idpatient` int NOT NULL AUTO_INCREMENT,
  `firstName` varchar(50) NOT NULL,
  `lastName` varchar(50) NOT NULL,
  `birthday` date NOT NULL,
  `gender` varchar(1) NOT NULL,
  PRIMARY KEY (`idpatient`),
  UNIQUE KEY `idpatient_UNIQUE` (`idpatient`)
) ENGINE=InnoDB AUTO_INCREMENT=17;


DROP TABLE IF EXISTS `contact`;

CREATE TABLE `contact` (
  `idContact` int NOT NULL AUTO_INCREMENT,
  `idPatient` int NOT NULL,
  `phoneNum` varchar(12) DEFAULT NULL,
  `email` varchar(100) DEFAULT NULL,
  `postalCode` varchar(6) NOT NULL,
  `city` varchar(30) NOT NULL,
  `address` varchar(200) NOT NULL,
  PRIMARY KEY (`idContact`),
  UNIQUE KEY `idContact_UNIQUE` (`idContact`),
  KEY `contactPatient_idx` (`idPatient`),
  CONSTRAINT `contactPatient` FOREIGN KEY (`idPatient`) REFERENCES `patient` (`idpatient`)
) ENGINE=InnoDB AUTO_INCREMENT=17;

DROP TABLE IF EXISTS `staffrecords`;

CREATE TABLE `staffrecords` (
  `idstaffRecords` int NOT NULL AUTO_INCREMENT,
  `idDepartment` int NOT NULL,
  `idPosition` int NOT NULL,
  `idEmployee` int NOT NULL,
  `hireDate` date NOT NULL,
  `quitDate` date DEFAULT NULL,
  PRIMARY KEY (`idstaffRecords`),
  UNIQUE KEY `idstaffRecords_UNIQUE` (`idstaffRecords`),
  KEY `staffRecordsDepartment_idx` (`idDepartment`),
  KEY `staffRecordsPosition_idx` (`idPosition`),
  KEY `staffRecordsEmployee_idx` (`idEmployee`),
  CONSTRAINT `staffRecordsDepartment` FOREIGN KEY (`idDepartment`) REFERENCES `department` (`idDepartment`),
  CONSTRAINT `staffRecordsEmployee` FOREIGN KEY (`idEmployee`) REFERENCES `employee` (`idemployee`),
  CONSTRAINT `staffRecordsPosition` FOREIGN KEY (`idPosition`) REFERENCES `position` (`idposition`)
) ENGINE=InnoDB AUTO_INCREMENT=29;


```

```sql
DROP TABLE IF EXISTS `medicalhistory`;

CREATE TABLE `medicalhistory` (
  `idMedicalHistory` int NOT NULL AUTO_INCREMENT,
  `idPatient` int NOT NULL,
  `idEmployee` int NOT NULL,
  `idTreatment` int NOT NULL,
  `date` date NOT NULL,
  `disease` varchar(50) NOT NULL,
  PRIMARY KEY (`idMedicalHistory`),
  UNIQUE KEY `idMedicalHistory_UNIQUE` (`idMedicalHistory`),
  KEY `idPatient_idx` (`idPatient`),
  KEY `idEmployee_idx` (`idEmployee`),
  KEY `idTreatment_idx` (`idTreatment`),
  KEY `medicalHistoryPatient_idx` (`idPatient`),
  KEY `meficalHistoryEmployee_idx` (`idEmployee`),
  KEY `medicalHistoryTreatment_idx` (`idTreatment`),
  CONSTRAINT `medicalHistoryEmployee` FOREIGN KEY (`idEmployee`) REFERENCES `employee` (`idemployee`),
  CONSTRAINT `medicalHistoryPatient` FOREIGN KEY (`idPatient`) REFERENCES `patient` (`idpatient`),
  CONSTRAINT `medicalHistoryTreatment` FOREIGN KEY (`idTreatment`) REFERENCES `treatment` (`idtreatment`)
) ENGINE=InnoDB AUTO_INCREMENT=23;


DROP TABLE IF EXISTS `appointments`;

CREATE TABLE `appointments` (
  `idAppointmets` int NOT NULL AUTO_INCREMENT,
  `idPatient` int NOT NULL,
  `idEmployee` int NOT NULL,
  `idTreatment` int NOT NULL,
  `dateTime` datetime NOT NULL,
  PRIMARY KEY (`idAppointmets`),
  UNIQUE KEY `idAppointmets_UNIQUE` (`idAppointmets`),
  KEY `appointmentsPatient_idx` (`idPatient`),
  KEY `appointmentsEmployee_idx` (`idEmployee`),
  KEY `appointmentsTreatment_idx` (`idTreatment`),
  CONSTRAINT `appointmentsEmployee` FOREIGN KEY (`idEmployee`) REFERENCES `employee` (`idemployee`),
  CONSTRAINT `appointmentsPatient` FOREIGN KEY (`idPatient`) REFERENCES `patient` (`idpatient`),
  CONSTRAINT `appointmentsTreatment` FOREIGN KEY (`idTreatment`) REFERENCES `treatment` (`idtreatment`)
) ENGINE=InnoDB AUTO_INCREMENT=11;
```

```sql
DROP TABLE IF EXISTS `hospitalisations`;

CREATE TABLE `hospitalisations` (
  `idHospitalisations` int NOT NULL AUTO_INCREMENT,
  `idPatient` int NOT NULL,
  `idDepartment` int NOT NULL,
  `disease` varchar(50) NOT NULL,
  PRIMARY KEY (`idHospitalisations`),
  UNIQUE KEY `idHospitalisationss_UNIQUE` (`idHospitalisations`),
  KEY `hospitalisationsPatient_idx` (`idPatient`),
  KEY `hospitalisationsDepartment_idx` (`idDepartment`),
  CONSTRAINT `hospitalisationsPatient` FOREIGN KEY (`idPatient`) REFERENCES `patient` (`idpatient`),
  CONSTRAINT `hospitalisationsDepartment` FOREIGN KEY (`idDepartment`) REFERENCES `department` (`idDepartment`)
) ENGINE=InnoDB AUTO_INCREMENT=11;

DROP TABLE IF EXISTS `employeeDayoffs`;

CREATE TABLE `employeeDayoffs` (
  `idEmployeeDayoffs` int NOT NULL AUTO_INCREMENT,
  `idEmployee` int NOT NULL,
  `date` date NOT NULL,
  PRIMARY KEY (`idEmployeeDayoffs`),
  UNIQUE KEY `idEmployeeDayoffs_UNIQUE` (`idEmployeeDayoffs`),
  KEY `employeeDayoffsEmployee_idx` (`idEmployee`),
  CONSTRAINT `employeeDayoffsEmployee` FOREIGN KEY (`idEmployee`) REFERENCES `employee` (`idemployee`)
) ENGINE=InnoDB AUTO_INCREMENT=11;

LOCK TABLES `department` WRITE;

INSERT INTO `department` VALUES
    (1,'Cardiology',NULL),
    (2,'Orthopedics ',NULL),
    (3,'Pediatrics',NULL),
    (4,'Orthopedic Surgery',NULL),
    (5,'Oncology',NULL),
    (6,'Neurology',NULL),
    (7,'Psychiatry',NULL),
    (8,'Pathology',NULL),
    (9,'Laboratory Services',NULL),
    (10,'Physical Therapy',NULL),
    (11,'Administration',NULL);
```

```
LOCK TABLES `employee` WRITE;

INSERT INTO `employee` VALUES
    (1,'Carmella','Yakobovitz','1980-06-04','','F','cyakobovitz0@studiopress.com'),
    (2,'Pancho','Node','1981-08-09','100-922-7560','M',''),
    (3,'Corinna','Broadfield','1962-06-09','391-967-9756','F','cbroadfield2@seattletimes.com'),
    (5,'Petey','Patesel','1970-05-25','388-241-1610','M','ppatesel4@tumblr.com'),
    (6,'Shawna','Dulake','1972-08-06','453-402-2865','F','sdulake5@bandcamp.com'),
    (7,'Rand','Vina','1991-09-05','844-290-1455','M',''),
    (8,'Evie','Farrey','1987-11-08','','F','efarrey7@bbb.org'),
    (9,'Orbadiah','Newport','1973-03-10','542-576-8983','M','onewport8@a8.net'),
    (10,'Leonid','Nason','1972-04-23','344-276-9721','M','lnason9@youtube.com'),
    (11,'Evangeline','Espinheira','1966-03-01','265-215-3429','F','eespinheiraa@nationalgeographic.com'),
    (12,'Colby','Moroney','1986-08-13','233-630-4162','M','cmoroneyb@pinterest.com'),
    (13,'Renado','Atwood','1972-08-24','448-260-1698','M','ratwoodc@usgs.gov'),
    (14,'Cristionna','McFfaden','1987-09-26','534-567-6068','F','cmcffadend@yolasite.com'),
    (15,'Barty','Albrighton','1963-01-15','732-293-3060','M','balbrightone@google.co.jp'),
    (16,'Veronika','Sprionghall','1991-03-24','265-689-5925','F','vsprionghallf@admin.ch'),
    (17,'Sibbie','Upson','1988-03-27','','F',''),
    (19,'Dulci','Magor','1985-03-24','898-927-8442','F','dmagori@sourceforge.net'),
    (20,'Tobye','Cheak','1991-11-13','941-597-9342','F',''),
    (21,'Kavin','Smith','1975-10-01','278-327-3242','M',''),
    (22,'Keith','Sneaky','1995-10-14','921-532-1242','F',''),
    (23,'Sara','Conor','1993-12-05','312-543-3943','F','');
```

```
LOCK TABLES `position` WRITE;

INSERT INTO `position` VALUES
    (1,'Physical Therapist'),
    (2,'Clinical Labaratory Scientist'),
    (3,'Physician'),
    (4,'Nurse'),
    (5,'Medical Assistant'),
    (6,'Head of Department'),
    (7,'Receptionist'),
    (8,'Hospitalist'),
    (9,'Infection Control Specialist'),
    (10,'Hospital Administrator'),
    (11,'Office Worker'),
    (12,'Administrator');
```

```sql
LOCK TABLES `treatment` WRITE;

INSERT INTO `treatment` VALUES
    (1,'Heart Surgary'),
    (2,'Spinal Surgary'),
    (3,'Hand Surgary'),
    (4,'Foot Surgary'),
    (5,'Sports Medicine Procedures'),
    (6,'Fracture Care'),
    (7,'Cardiac Rehabilitation'),
    (8,'Interventional Cardiology'),
    (9,'Electrophysiology Procedures'),
    (10,'Diagnostic Testing');



LOCK TABLES `patient` WRITE;

INSERT INTO `patient` VALUES
    (1,'Julio','Dwire','1976-09-05','M'),
    (2,'Lucretia','Bucktharp','2012-06-22','F'),
    (3,'Magnum','Doding','2005-10-02','M'),
    (4,'Jessy','Andreotti','1988-11-29','F'),
    (6,'August','Summers','2006-07-18','M'),
    (7,'Braden','Wharby','1981-06-20','M'),
    (8,'Charin','Gary','2015-09-14','F'),
    (9,'Gertie','Carayol','1985-03-11','F'),
    (10,'Marni','Voice','2014-11-29','F'),
    (11,'Fidela','Gruszecki','2013-07-26','F'),
    (12,'Bea','Hume','1979-03-20','F'),
    (13,'Ailbert','Basford','1972-04-23','M'),
    (14,'Elisabet','Kleiner','1980-09-22','F'),
    (15,'Joannes','O\'Glessane','1961-01-30','F'),
    (16,'Lauritz','Trehearne','1966-04-21','M'),
    (5612,'John','Bob','1970-03-14','M'),
    (3456,'Andy','Smith','1988-01-11','M');
```

```
LOCK TABLES `contact` WRITE;

INSERT INTO `contact` VALUES
    (1,1,'179-686-0200','','341 42','Klatovy','5 Westerfield Circle'),
    (2,2,'785-593-0070','rbertie2@theglobeandmail.com','8324','Cipolletti','76 Kings Point'),
    (3,3,'201-310-7461','amarzelle3@economist.com','3350','Tigre','99 Bonner Trail'),
    (4,4,'546-866-4404','gslayny4@amazon.co.jp','6311','Guatrache','07331 Eggendart Way'),
    (6,6,'145-464-8209','fborres6@telegraph.co.uk','','Tugu','215 Graceland Pass'),
    (8,8,'741-406-4848','apickaver8@bravesites.com','','Kolomyya','21 Gina Junction'),
    (9,9,'861-551-0981','hroll9@mac.com','','Maxiao','4422 Ludington Place'),
    (10,10,'417-396-2552','jcrawfortha@nih.gov','','BÄ«r Nabala','09790 Brickson Park Avenue'),
    (11,11,'720-609-1195','','','Horki','1206 Northfield Hill'),
    (12,12,'102-543-5316','mposthillc@instagram.com','87-220','Radzyn Chelminski','254 Coleman Road'),
    (13,13,'752-102-6391','adwellyd@icq.com','','Fuyong','22110 Sloan Way'),
    (14,14,'443-275-4796','lcomolettie@senate.gov','','Ampelokipoi','5524 Bluejay Center'),
    (15,15,'983-405-7525','dmcloneyf@yolasite.com','','Liebu','3161 Eastwood Lane'),
    (16,16,'331-663-3904','mcapperg@pen.io','','Watubura','2201 Sherman Avenue'),
    (17,5612,'983-405-7525','johnBob@gmail.com','','Kiev','31 Semirenko'),
    (18,3456,'331-663-3904','smithAndy@yahoo.io','','Dublin','38 Croagh Patrick Road');



LOCK TABLES `staffrecords` WRITE;

INSERT INTO `staffrecords` VALUES
    (19,1,3,1,'2002-01-20',NULL),
    (20,1,4,7,'2015-07-20',NULL),
    (21,2,3,5,'2010-10-20',NULL),
    (22,2,4,16,'2001-03-20',NULL),
    (23,2,4,20,'2003-12-20',NULL),
    (24,2,6,10,'2001-03-20',NULL),
    (25,1,6,3,'2005-09-20',NULL),
    (26,3,3,8,'2014-10-20','2003-07-20'),
    (27,3,3,2,'2001-07-20',NULL),
    (28,3,4,11,'2013-11-20',NULL),
    (29,11,11,22,'2013-11-20',NULL),
    (30,11,11,23,'2013-11-20',NULL);
```

```
LOCK TABLES `medicalhistory` WRITE;

INSERT INTO `medicalhistory` VALUES
    (12,1,5,6,'2003-01-20','Orthopedic Conditions'),
    (13,1,5,5,'2013-03-20','Orthopedic Conditions'),
    (14,2,5,3,'2017-02-20','Orthopedic Conditions'),
    (15,3,1,7,'2014-02-20','Cardiovascular Disease'),
    (16,3,1,8,'2015-03-20','Cardiovascular Disease'),
    (17,4,1,1,'2016-04-20','Cardiovascular Diseases'),
    (18,9,2,10,'2020-12-20','Diabetes'),
    (19,9,2,9,'2023-12-20','Infectious Diseases'),
    (20,6,2,10,'2012-01-20','Infectious Diseases'),
    (21,6,2,9,'2014-01-20','Cardiovascular Diseases'),
    (22,7,2,9,'2017-01-20','Diabetes');
```

```
334 •   LOCK TABLES `appointments` WRITE;
335
336 •   INSERT INTO `appointments` VALUES
337         (1,10,7,1,'2023-11-23 11:00:00'),
338         (2,11,7,9,'2023-11-23 12:00:00'),
339         (3,12,7,9,'2023-11-12 13:00:00'),
340         (4,14,16,5,'2023-11-23 11:00:00'),
341         (5,15,20,5,'2023-11-23 11:00:00'),
342         (6,16,16,5,'2023-11-23 12:00:00'),
343         (7,1,20,5,'2023-11-23 12:00:00'),
344         (8,2,16,5,'2023-11-23 13:00:00'),
345         (9,3,20,5,'2023-11-23 13:00:00'),
346         (10,4,7,9,'2023-11-23 14:00:00'),
347         (11,2,21,5,'2023-11-24 13:00:00'),
348         (12,3,21,5,'2023-11-24 14:00:00'),
349         (13,4,21,9,'2023-11-24 15:00:00');
350
351
352 •   LOCK TABLES `hospitalisations` WRITE;
353
354 •   INSERT INTO `hospitalisations` VALUES
355         (12,1,2,'Orthopedic Conditions'),
356         (14,2,2,'Orthopedic Conditions'),
357         (15,3,1,'Cardiovascular Disease'),
358         (17,4,1,'Cardiovascular Diseases'),
359         (18,9,3,'Diabetes'),
360         (20,6,3,'Infectious Diseases'),
361         (22,7,3,'Diabetes');
362
363
```

```
364 •  LOCK TABLES `employeeDayoffs` WRITE;
365
366 •  INSERT INTO `employeeDayoffs` VALUES
367        (1,7,'2023-01-07'),
368        (2,7,'2023-01-28'),
369        (3,7,'2023-01-29'),
370        (4,20,'2023-01-19'),
371        (5,20,'2023-01-20'),
372        (6,20,'2023-01-25'),
373        (7,20,'2023-02-27'),
374        (8,16,'2023-02-11'),
375        (9,16,'2023-03-13'),
376        (10,21,'2023-07-07');
377
378 •  UNLOCK TABLES;
```

Task Three

1)

```
1      USE hospital;
2
3 •    SELECT * FROM department;
```

Result Grid | Filter Rows: | Edit: | Expor

idDepartment	name	phoneNum
1	Cardiology	NULL
2	Orthopedics	NULL
3	Pediatrics	NULL
4	Orthopedic Surgery	NULL
5	Oncology	NULL
6	Neurology	NULL
7	Psychiatry	NULL
8	Pathology	NULL
9	Laboratory Services	NULL
10	Physical Therapy	NULL
11	Administration	NULL
NULL	NULL	NULL

2)

```
1      USE hospital;
2
3 ●    SELECT * FROM contact
4      WHERE idPatient = 3456;
```

Result Grid | Filter Rows: | Edit: | Export

idContact	idPatient	phoneNum	email	postalCode	city	addres
18	3456	331-663-3904	smith...		Dublin	38 Croa
NULL	NULL	NULL	NULL	NULL	NULL	NULL

6	Neurology	NULL
7	Psychiatry	NULL
8	Pathology	NULL
9	Laboratory Services	NULL
10	Physical Therapy	NULL
11	Administration	NULL
NULL	NULL	NULL

3)

```
1      USE hospital;
2
3 ●    UPDATE contact
4      SET phoneNum = "235-972-9624", postalCode = "1720"
5      WHERE idPatient = 3456;
6
7 ●    SELECT phoneNum, postalCode FROM contact
8      WHERE idPatient = 3456;
9
```

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

phoneNum	postalCode
235-972-9624	1720

4)

```
1  USE hospital;
2
3  INSERT INTO appointmets VALUES
4      (11,14,7,9,'2023-11-23 15:00:00');
5
6  SELECT * FROM appointmets
7  WHERE idAppointmets = 11;
8
9
```

Result Grid | Filter Rows: | Edit: | Export

idAppointmets	idPatient	idEmployee	idTreatment	dateTime
11	14	7	9	2023-11-23 15:00:00
NULL	NULL	NULL	NULL	NULL

5)

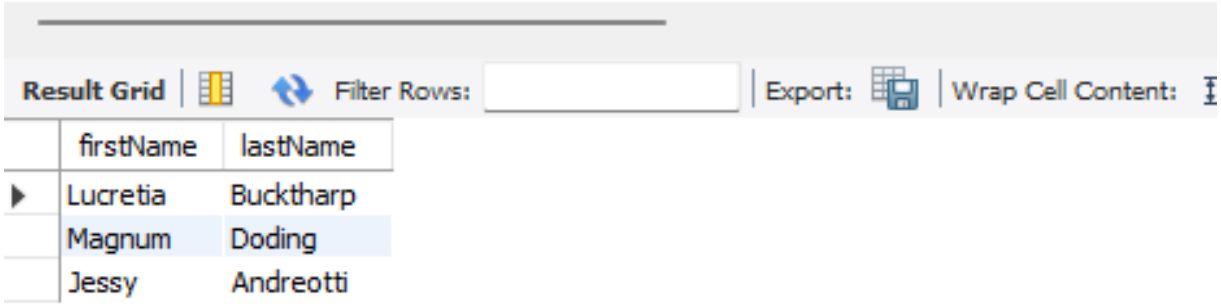
```
1  USE hospital;
2
3  SELECT
4  t2.firstName, t2.lastName, t2.birthday, t2.gender,
5  t3.phoneNum, t3.email, t3.postalCode, t3.city, t3.address
6  FROM hospitalisations AS t1
7  INNER JOIN patient AS t2 ON t1.idPatient = t2.idPatient
8  LEFT JOIN contact AS t3 ON t1.idPatient = t3.idPatient
9  WHERE t1.disease = 'Diabetes';
```

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

firstName	lastName	birthday	gender	phoneNum	email	postalCode	city	address
Gertie	Carayol	1985-03-11	F	861-551-0981	hroll9...		Maxiao	4422 Ludington Place
Braden	Wharby	1981-06-20	M	NULL	NULL	NULL	NULL	NULL

6)

```sql
USE hospital;

SELECT t2.firstName, t2.lastName FROM appointments AS t1
INNER JOIN patient AS t2 ON t1.idPatient = t2.idPatient
WHERE idEmployee = 21;
```



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

firstName	lastName
Lucretia	Bucktharp
Magnum	Doding
Jessy	Andreotti

7)

```sql
USE hospital;

UPDATE hospitalisations
SET idDepartment = 4
WHERE idDepartment = 2;
```

8)

```
1  USE hospital;
2
3  SELECT employee.firstName, employee.lastName, position.name AS position, staffrecords.hireDate
4  FROM employee
5  INNER JOIN staffrecords ON employee.idemployee = staffrecords.idEmployee
6  INNER JOIN position ON staffrecords.idPosition = position.idPosition
7  WHERE staffrecords.idDepartment NOT IN (11) AND staffrecords.idPosition IN (3)
8  ORDER BY staffrecords.hireDate;
9
```

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

firstName	lastName	position	hireDate
Pancho	Node	Physician	2001-07-20
Carmella	Yakobovitz	Physician	2002-01-20
Petey	Patesel	Physician	2010-10-20
Evie	Farrey	Physician	2014-10-20

9)

```
1  USE hospital;
2
3  SELECT COUNT(*) FROM appointments
4  WHERE idTreatment = 1;
5
6
7
```

Result Grid | Filter Rows: | Exp

COUNT(*)
1

10)

```
USE hospital;

INSERT INTO `department` VALUES
    (100,'Test Department',NULL);

INSERT INTO `employee` VALUES
    (100,'testName','testLastName','2000-01-01','333-333-3333','F','');

INSERT INTO `position` VALUES
    (100,'Test position');

INSERT INTO `treatment` VALUES
    (100,'Test treatment');

INSERT INTO `patient` VALUES
    (100,'Test Name','Test Last Name','2000-01-01','M');

INSERT INTO `contact` VALUES
    (100,100,'333-333-3333','test@yahoo.io','','test city','test address road');

INSERT INTO `staffrecords` VALUES
    (100,100,100,100,'2023-01-01',NULL);

INSERT INTO `medicalhistory` VALUES
    (100,100,100,100,'2020-01-01','Test disaese');

INSERT INTO `appointments` VALUES
    (100,100,100,100,'2023-01-01 15:00:00');

INSERT INTO `hospitalisations` VALUES
    (100,100,100,'Test Disiase');
```

Output

Action Output

#	Time	Action	Message
359	12:14:40	INSERT INTO 'patient' VALUES (100,'Test Name','Test Last Name','2000-01-01','M')	1 row(s) affected
360	12:14:40	INSERT INTO 'contact' VALUES (100,100,'333-333-3333','test@yahoo.io','','test city','test address road')	1 row(s) affected
361	12:14:40	INSERT INTO 'staffrecords' VALUES (100,100,100,100,'2023-01-01',NULL)	1 row(s) affected
362	12:14:40	INSERT INTO 'medicalhistory' VALUES (100,100,100,100,'2020-01-01','Test disaese')	1 row(s) affected
363	12:14:40	INSERT INTO 'appointments' VALUES (100,100,100,100,'2023-01-01 15:00:00')	1 row(s) affected

11)

```sql
USE hospital;

DELETE FROM hospitalisations
WHERE idHospitalisations = 100;

DELETE FROM appointments
WHERE idAppointmets = 100;

DELETE FROM staffrecords
WHERE idstaffRecords = 100;

DELETE FROM medicalhistory
WHERE idMedicalHistory = 100;

DELETE FROM contact
WHERE idContact = 100;

DELETE FROM department
WHERE idDepartment = 100;

DELETE FROM employee
WHERE idemployee = 100;

DELETE FROM patient
WHERE idpatient = 100;

DELETE FROM position
WHERE idposition = 100;

DELETE FROM treatment
WHERE idtreatment = 100;
```

Output

Action Output

#	Time	Action	Message
370	12:17:08	DELETE FROM contact WHERE idContact = 100	1 row(s) affected
371	12:17:08	DELETE FROM department WHERE idDepartment = 100	1 row(s) affected

12)

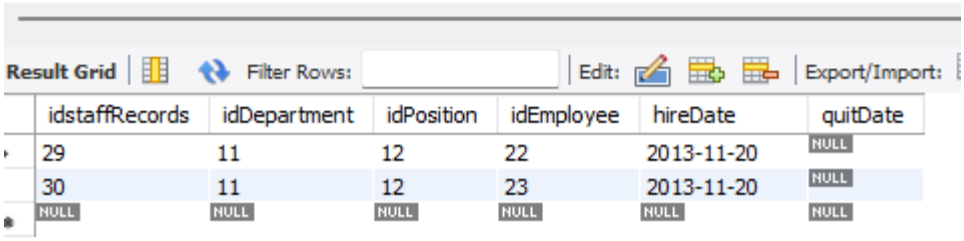
```sql
USE hospital;

SELECT t1.idEmployee, t2.firstName, t2.lastName, COUNT(*) AS cnt_dayOff
FROM employeedayoffs AS t1
INNER JOIN employee AS t2 ON t1.idEmployee = t2.idemployee
GROUP BY t1.idEmployee, t2.firstName, t2.lastName
ORDER BY cnt_dayOff DESC;
```

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

idEmployee	firstName	lastName	cnt_dayOff
20	Tobye	Cheak	4
7	Rand	Vina	3
16	Veronika	Sprionghall	2
21	Kavin	Smith	1

13)

```
1  USE hospital;
2
3  UPDATE staffrecords
4  SET idPosition = 12
5  WHERE idPosition = 11;
6
7
```



idstaffRecords	idDepartment	idPosition	idEmployee	hireDate	quitDate
29	11	12	22	2013-11-20	NULL
30	11	12	23	2013-11-20	NULL
NULL	NULL	NULL	NULL	NULL	NULL

14)

```sql
USE hospital;

UPDATE department
SET phoneNum = '01-7654321'
WHERE idDepartment = 4;
```

Result Grid | Filter Rows: | Edit:

idDepartment	name	phoneNum
1	Cardiology	NULL
2	Orthopedics	NULL
3	Pediatrics	NULL
4	Orthopedic Surgery	01-7654321
5	Oncology	NULL
6	Neurology	NULL
7	Psychiatry	NULL
8	Pathology	NULL
9	Laboratory Services	NULL
10	Physical Therapy	NULL
11	Administration	NULL
NULL	NULL	NULL

15)

```sql
USE hospital;

INSERT INTO `position` VALUES
    (13,'CEO');

INSERT INTO `employee` VALUES
    (24,'Michael','Dean','1995-11-13','311-423-3323','M','');

INSERT INTO `staffrecords` VALUES
    (31,11,13,24,'2023-12-01',NULL);
```

16)

```
1  USE hospital;
2
3  SELECT employee.firstName, employee.lastName, staffrecords.hireDate
4  FROM employee
5  JOIN staffrecords ON employee.idemployee = staffrecords.idEmployee
6  WHERE DATEDIFF(NOW(), staffrecords.hireDate) > 3 * 365;
7
8
9
```

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

firstName	lastName	hireDate
Carmella	Yakobovitz	2002-01-20
Rand	Vina	2015-07-20
Petey	Patesel	2010-10-20
Veronika	Sprionghall	2001-03-20
Tobye	Cheak	2003-12-20
Leonid	Nason	2001-03-20
Corinna	Broadfield	2005-09-20
Evie	Farrey	2014-10-20
Pancho	Node	2001-07-20
Evangeline	Espinheira	2013-11-20
Keith	Sneaky	2013-11-20
Sara	Conor	2013-11-20

17)

```sql
USE hospital;

SELECT
t1.firstName, t1.lastName,
t4.name AS treatmentName,
t2.disease,
t3.dateTime AS appointment,
t5.firstName AS doctorName, t5.lastName AS doctorSurname
FROM patient AS t1
INNER JOIN medicalhistory AS t2 ON t1.idpatient = t2.idPatient
INNER JOIN appointments AS t3 ON t1.idpatient = t3.idPatient
INNER JOIN treatment AS t4 ON t2.idTreatment = t4.idtreatment
INNER JOIN employee AS t5 ON t3.idEmployee = t5.idemployee;
```

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

firstName	lastName	treatmentName	disease	appointment	doctorName	doctorSurname
Jessy	Andreotti	Heart Surgary	Cardiovascular Diseases	2023-11-23 14:00:00	Rand	Vina
Jessy	Andreotti	Heart Surgary	Cardiovascular Diseases	2023-11-24 15:00:00	Kavin	Smith
Lucretia	Buckthарp	Hand Surgary	Orthopedic Conditions	2023-11-23 13:00:00	Veronika	Sprionghall
Lucretia	Buckthарp	Hand Surgary	Orthopedic Conditions	2023-11-24 13:00:00	Kavin	Smith
Julio	Dwire	Sports Medicine Procedures	Orthopedic Conditions	2023-11-23 12:00:00	Tobye	Cheak
Julio	Dwire	Fracture Care	Orthopedic Conditions	2023-11-23 12:00:00	Tobye	Cheak
Magnum	Doding	Cardiac Rehabilitation	Cardiovascular Disease	2023-11-23 13:00:00	Tobye	Cheak
Magnum	Doding	Cardiac Rehabilitation	Cardiovascular Disease	2023-11-24 14:00:00	Kavin	Smith
Magnum	Doding	Interventional Cardiology	Cardiovascular Disease	2023-11-23 13:00:00	Tobye	Cheak
Magnum	Doding	Interventional Cardiology	Cardiovascular Disease	2023-11-24 14:00:00	Kavin	Smith

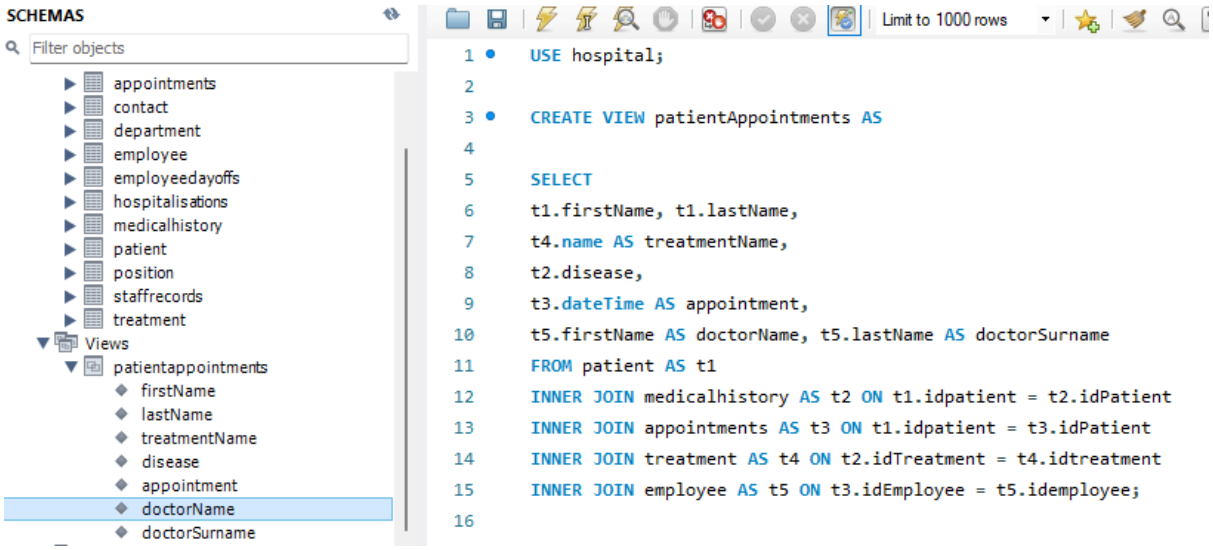
18)

```sql
USE hospital;

SELECT COUNT(*)
FROM patient
INNER JOIN contact ON patient.idpatient = contact.idPatient
WHERE contact.address LIKE '%road%';
```

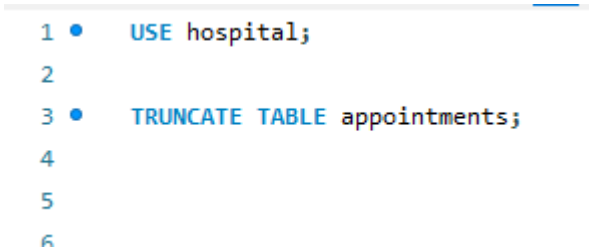
Result Grid | Filter Rows: | Export: | Wrap Cell Content:

COUNT(*)
2

19)


SCHEMAS
Filter objects
appointments
contact
department
employee
employeedayoffs
hospitalisations
medicalhistory
patient
position
staffrecords
treatment
Views
patientappointments
firstName
lastName
treatmentName
disease
appointment
doctorName
doctorSurname
Limit to 1000 rows
1 USE hospital;
2
3 CREATE VIEW patientAppointments AS
4
5 SELECT
6 t1.firstName, t1.lastName,
7 t4.name AS treatmentName,
8 t2.disease,
9 t3.dateTime AS appointment,
10 t5.firstName AS doctorName, t5.lastName AS doctorSurname
11 FROM patient AS t1
12 INNER JOIN medicalhistory AS t2 ON t1.idpatient = t2.idPatient
13 INNER JOIN appointments AS t3 ON t1.idpatient = t3.idPatient
14 INNER JOIN treatment AS t4 ON t2.idTreatment = t4.idtreatment
15 INNER JOIN employee AS t5 ON t3.idEmployee = t5.idemployee;
16

20)


1 USE hospital;
2
3 TRUNCATE TABLE appointments;
4
5
6