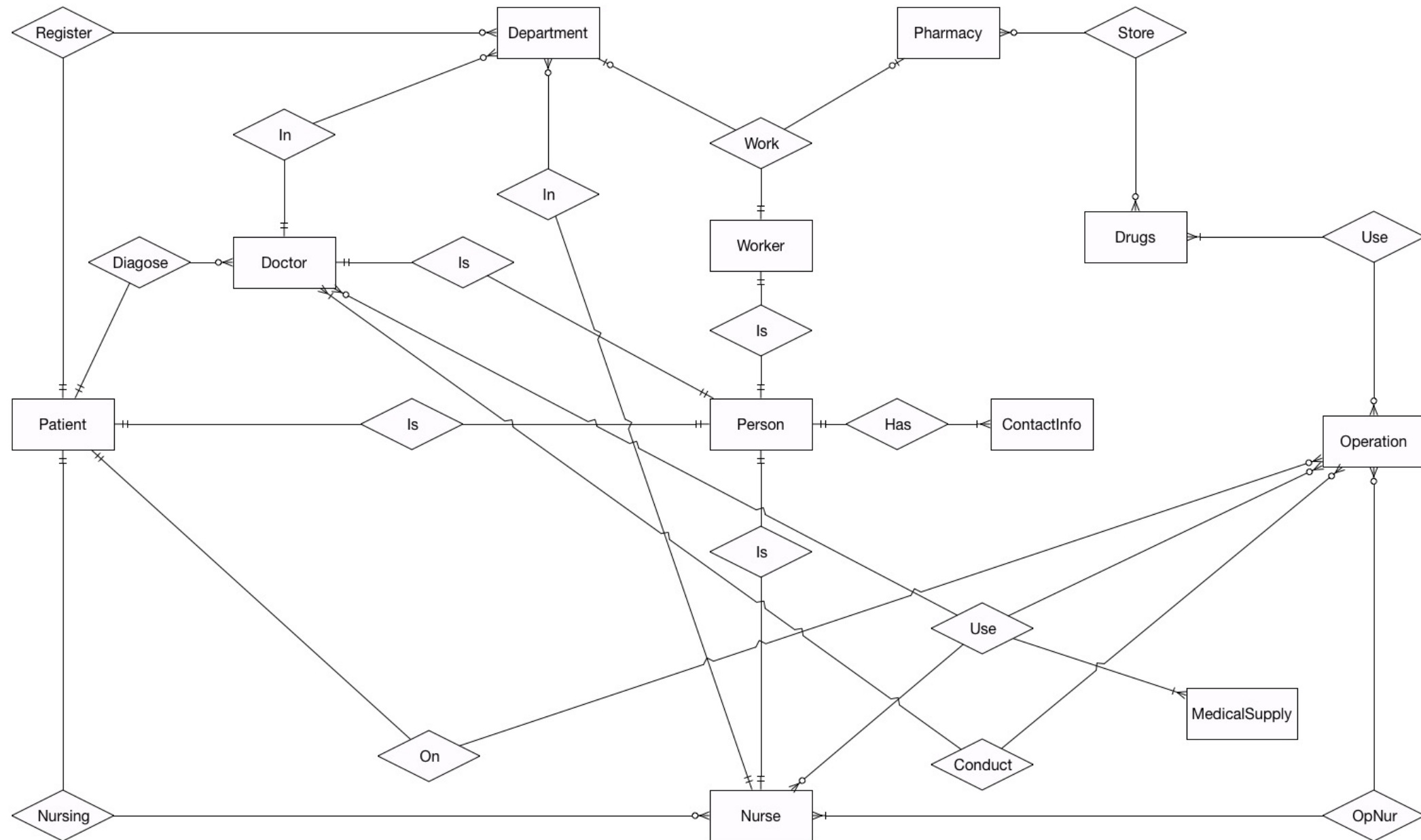# Database for Hospital

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Description

- In this project, I developed a relational database system for hospital, users could use it to store records of patients, doctors, nurses, workers and departments, pharmacy, drugs and operations as entity with detailed information, together with tables to define their relatinships. The database has been normalized to meet 3NF. Besides, I have defined triggers and procedures for a better use.
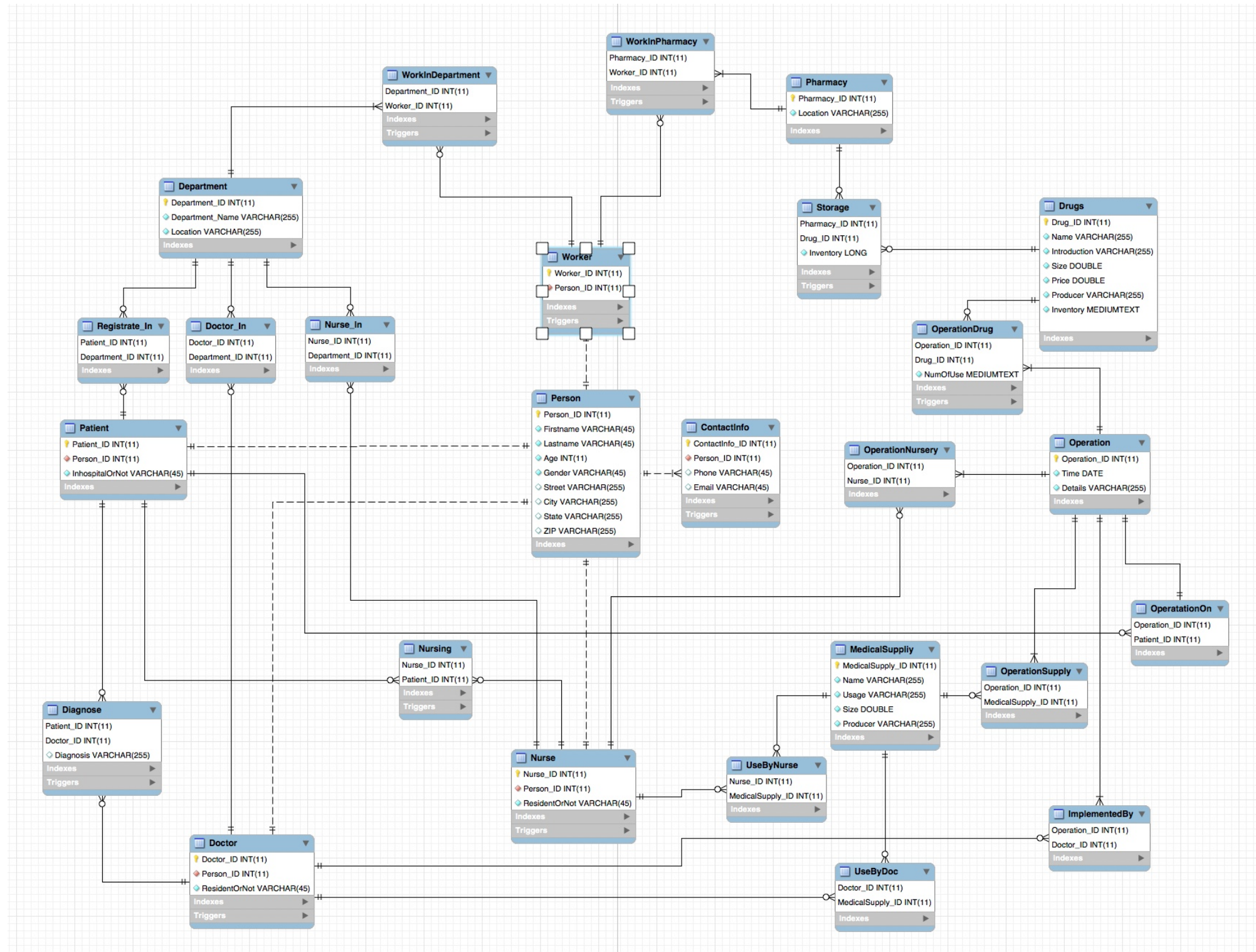
Normalization Steps

- Define the major entities (tables) in 1NF

- Define the tables represent relationships between entities

- Normalize entities and relation tables into 2NF

- Normalize tables to satisfy 3NF, change all transaction dependency

Entity Relationship Diagram

Enhanced Entity Relationship Diagram

Triggers

- Before insert/update on WorkInDepartment: check if the inserted/updated worker can work in the department

- Before insert/update on WorkInPharmacy: check if the inserted/updated worker can work in the pharmacy

- Before insert/update on ContactInfo: check if the new email address satisfies the correct form

- Before insert/update on Diagnose: check if the doctor and the patient are in the same inpatient status

- Before insert/update Nursing: check if the nurse and the patient are in the same inpatient status

Triggers

- Before insert/update, After insert/update on Storage: before insert/update, check if the new drug storage information applies to current inventory, and after check update inventory after change

- Before insert/update, After insert/update on OperationDrug: before insert/update, check if the new drug used in operation information applies to current inventory, and after check update inventory after change

- Before insert/update on Doctor: check if the doctor satisfy his own person status, that is he can only be a doctor

- Before insert/update on Nurse: check if the doctor satisfy his own person status, that is he can only be a doctor

- Before insert/update on Worker: check if the doctor satisfy his own person status, that is he can only be a doctor

Stored Procedures

- GetPharamacyInventorywithLocation(varchar): get a table of a pharmacy's inventory with given location

- GetPersonDetailswithName(varchar, varchar): get a person's information with his full name

- GetPatientHistorywithID(int): get a patient's history with his patient_ID

- GetOperationDrugswithPatientID(int): get drug usage detail in an operation with the patient_ID

- GetNurseDetailswithName(varchar, varchar): get a nurse's detailed information with his full name

- GetDoctorDetailswithName(varchar, varchar): get a doctor's detailed information with his full name

Q & A

Thank You!
Dump at next page

Dump Code

```sql
CREATE DATABASE  IF NOT EXISTS `mydb` /*!40100 DEFAULT CHARACTER SET
utf8 */;
USE `mydb`;
-- MySQL dump 10.13  Distrib 5.7.12, for osx10.9 (x86_64)
--
-- Host: localhost    Database: mydb
-- ------------------------------------------------------
-- Server version    5.7.16

/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS
*/;
/*!40101                                                      SET
@OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
/*!40101 SET NAMES utf8 */;
/*!40103 SET @OLD_TIME_ZONE=@@TIME_ZONE */;
/*!40103 SET TIME_ZONE='+00:00' */;
/*!40014        SET        @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS,
UNIQUE_CHECKS=0 */;
/*!40014   SET   @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS,
FOREIGN_KEY_CHECKS=0 */;
/*!40101             SET             @OLD_SQL_MODE=@@SQL_MODE,
SQL_MODE='NO_AUTO_VALUE_ON_ZERO' */;
/*!40111 SET @OLD_SQL_NOTES=@@SQL_NOTES, SQL_NOTES=0 */;

--
-- Table structure for table `ContactInfo`
--

DROP TABLE IF EXISTS `ContactInfo`;
/*!40101 SET @saved_cs_client       = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `ContactInfo` (
```

```
  `ContactInfo_ID` int(11) NOT NULL AUTO_INCREMENT,
  `Person_ID` int(11) NOT NULL,
  `Phone` varchar(45) DEFAULT NULL,
  `Email` varchar(45) DEFAULT NULL,
  PRIMARY KEY (`ContactInfo_ID`),
  KEY `P_ID_idx` (`Person_ID`),
  CONSTRAINT `P_ID` FOREIGN KEY (`Person_ID`) REFERENCES `Person`
(`Person_ID`) ON DELETE CASCADE ON UPDATE NO ACTION
) ENGINE=InnoDB AUTO_INCREMENT=13 DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;


--
-- Dumping data for table `ContactInfo`
--

LOCK TABLES `ContactInfo` WRITE;
/*!40000 ALTER TABLE `ContactInfo` DISABLE KEYS */;
INSERT INTO `ContactInfo` VALUES (5,4,'617-717-
9637','patient01@gmail.com'),(6,5,'005-005-
0005','patient02@hotmail.com'),(7,6,'006-006-
0006','doctor01@163.com'),(8,7,'007-007-
0007','doctor02@hosmail.com'),(9,8,'008-008-
0008','nurse01@gmail.com'),(10,9,'009-009-
0009','nurse02@hotmail.com'),(11,10,'010-010-
0010','worker01@163.com'),(12,11,'011-011-0011','worker02@gmail.com');
/*!40000 ALTER TABLE `ContactInfo` ENABLE KEYS */;
UNLOCK TABLES;
/*!50003 SET @saved_cs_client      = @@character_set_client */ ;
/*!50003 SET @saved_cs_results     = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
```

```sql
/*!50003 SET @saved_sql_mode           = @@sql_mode */ ;
/*!50003    SET    sql_mode                                             =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
/*!50003  CREATE*/  /*!50017  DEFINER=`root`@`localhost`*/  /*!50003  TRIGGER
`mydb`.`ContactInfo_BEFORE_INSERT`
BEFORE INSERT ON `mydb`.`ContactInfo`
FOR EACH ROW
BEGIN
if new.Email not like '%_@%_._%'
then
signal sqlstate value '40001'
set message_text = 'Email address is not valid';
end if;
END */;;
DELIMITER ;
/*!50003 SET sql_mode                = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection    = @saved_col_connection */ ;
/*!50003 SET @saved_cs_client        = @@character_set_client */ ;
/*!50003 SET @saved_cs_results       = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection    = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode           = @@sql_mode */ ;
/*!50003    SET    sql_mode                                             =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
```

```sql
DELIMITER ;;
/*!50003 CREATE*/ /*!50017 DEFINER=`root`@`localhost`*/ /*!50003 TRIGGER
`mydb`.`ContactInfo_BEFORE_UPDATE`
BEFORE UPDATE ON `mydb`.`ContactInfo`
FOR EACH ROW
BEGIN
if new.Email not like '%_@%_._%'
then
signal sqlstate value '40002'
set message_text = 'Email address is not valid';
end if;
END */;;
DELIMITER ;
/*!50003 SET sql_mode              = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection    = @saved_col_connection */ ;


--
-- Table structure for table `Department`
--

DROP TABLE IF EXISTS `Department`;
/*!40101 SET @saved_cs_client        = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `Department` (
   `Department_ID` int(11) NOT NULL AUTO_INCREMENT,
   `Department_Name` varchar(255) NOT NULL,
   `Location` varchar(255) NOT NULL,
   PRIMARY KEY (`Department_ID`)
) ENGINE=InnoDB AUTO_INCREMENT=3 DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;
```

```
--
-- Dumping data for table `Department`
--

LOCK TABLES `Department` WRITE;
/*!40000 ALTER TABLE `Department` DISABLE KEYS */;
INSERT INTO `Department` VALUES (1,'Surgery','B2F3'),(2,'Medicine','B2F2');
/*!40000 ALTER TABLE `Department` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `Diagnose`
--

DROP TABLE IF EXISTS `Diagnose`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `Diagnose` (
  `Patient_ID` int(11) NOT NULL,
  `Doctor_ID` int(11) NOT NULL,
  `Diagnosis` varchar(255) DEFAULT NULL,
  PRIMARY KEY (`Patient_ID`,`Doctor_ID`),
  KEY `Doctor_ID_idx` (`Doctor_ID`),
  KEY `Patient_ID_idx` (`Patient_ID`),
  CONSTRAINT `Doctor_ID_Diagnose` FOREIGN KEY (`Doctor_ID`) REFERENCES
`Doctor` (`Doctor_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION,
  CONSTRAINT `Patient_ID_Diagnose` FOREIGN KEY (`Patient_ID`) REFERENCES
`Patient` (`Patient_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `Diagnose`
```

--

```
LOCK TABLES `Diagnose` WRITE;
/*!40000 ALTER TABLE `Diagnose` DISABLE KEYS */;
INSERT INTO `Diagnose` VALUES (1,1,'Need surgery'),(2,2,'Diagnosis01');
/*!40000 ALTER TABLE `Diagnose` ENABLE KEYS */;
UNLOCK TABLES;
/*!50003 SET @saved_cs_client        = @@character_set_client */ ;
/*!50003 SET @saved_cs_results       = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode         = @@sql_mode */ ;
/*!50003   SET   sql_mode                                         =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
/*!50003 CREATE*/ /*!50017 DEFINER=`root`@`localhost`*/ /*!50003 TRIGGER
`mydb`.`Diagnose_BEFORE_INSERT`
BEFORE INSERT ON `mydb`.`Diagnose`
FOR EACH ROW
BEGIN
declare pat_status varchar(45);
declare doc_status varchar(45);
set  pat_status  =  (select  Patient.InhospitalOrNot  from  Patient  where
Patient.Patient_ID = New.Patient_ID);
set  doc_status  =  (select  Doctor.InhospitalOrNot  from  Doctor  where
Doctor.Doctor_ID = New.Doctor_ID);
if(pat_status <> doc_status)
then
signal sqlstate value '40011'
```

set message_text = 'Patient - Doctor does not match on inhospital status!';

end if;

END */;;

DELIMITER ;

/*!50003 SET sql_mode   = @saved_sql_mode */ ;

/*!50003 SET character_set_client   = @saved_cs_client */ ;

/*!50003 SET character_set_results = @saved_cs_results */ ;

/*!50003 SET collation_connection   = @saved_col_connection */ ;

/*!50003 SET @saved_cs_client   = @@character_set_client */ ;

/*!50003 SET @saved_cs_results   = @@character_set_results */ ;

/*!50003 SET @saved_col_connection = @@collation_connection */ ;

/*!50003 SET character_set_client   = utf8 */ ;

/*!50003 SET character_set_results = utf8 */ ;

/*!50003 SET collation_connection   = utf8_general_ci */ ;

/*!50003 SET @saved_sql_mode   = @@sql_mode */ ;

/*!50003   SET   sql_mode   = 'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_SUBSTITUTION' */ ;

DELIMITER ;;

/*!50003 CREATE*/ /*!50017 DEFINER=`root`@`localhost`*/ /*!50003 TRIGGER `mydb`.`Diagnose_BEFORE_UPDATE`

BEFORE UPDATE ON `mydb`.`Diagnose`

FOR EACH ROW

BEGIN

declare pat_status varchar(45);

declare doc_status varchar(45);

set pat_status = (select Patient.InhospitalOrNot from Patient where Patient.Patient_ID = New.Patient_ID);

set doc_status = (select Doctor.InhospitalOrNot from Doctor where Doctor.Doctor_ID = New.Doctor_ID);

if(pat_status <> doc_status)

then

```sql
signal sqlstate value '40012'
set message_text = 'Patient - Doctor does not match on inhospital status!';
end if;
END */;;
DELIMITER ;
/*!50003 SET sql_mode                 = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection    = @saved_col_connection */ ;


--
-- Table structure for table `Doctor`
--


DROP TABLE IF EXISTS `Doctor`;
/*!40101 SET @saved_cs_client       = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `Doctor` (
    `Doctor_ID` int(11) NOT NULL AUTO_INCREMENT,
    `Person_ID` int(11) NOT NULL,
    `ResidentOrNot` varchar(45) NOT NULL DEFAULT 'Not',
    PRIMARY KEY (`Doctor_ID`),
    KEY `Person_ID_idx` (`Person_ID`),
    CONSTRAINT `Person_ID_Doctor` FOREIGN KEY (`Person_ID`) REFERENCES
`Person` (`Person_ID`) ON DELETE CASCADE ON UPDATE NO ACTION
) ENGINE=InnoDB AUTO_INCREMENT=3 DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;


--
-- Dumping data for table `Doctor`
--


LOCK TABLES `Doctor` WRITE;
```

```sql
/*!40000 ALTER TABLE `Doctor` DISABLE KEYS */;
INSERT INTO `Doctor` VALUES (1,6,'Inhospital'),(2,7,'Not');
/*!40000 ALTER TABLE `Doctor` ENABLE KEYS */;
UNLOCK TABLES;
/*!50003 SET @saved_cs_client       = @@character_set_client */ ;
/*!50003 SET @saved_cs_results       = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode         = @@sql_mode */ ;
/*!50003   SET   sql_mode                                         =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
/*!50003 CREATE*/ /*!50017 DEFINER=`root`@`localhost`*/ /*!50003 TRIGGER
`mydb`.`Doctor_BEFORE_INSERT` BEFORE INSERT ON `Doctor` FOR EACH ROW
BEGIN
if exists (select * from Patient where
new.Person_ID = Patient.Person_ID)
then
signal sqlstate value '40031'
set message_text = 'This person is a patient';
end if;
if exists (select * from Worker where
new.Person_ID = Worker.Person_ID)
then
signal sqlstate value '40032'
set message_text = 'This person is a worker';
end if;
if exists (select * from Nurse where
new.Person_ID = Nurse.Person_ID)
```

then

signal sqlstate value '40033'

set message_text = 'This person is a nurse';

end if;

END */;;

DELIMITER ;

/*!50003 SET sql_mode   = @saved_sql_mode */ ;

/*!50003 SET character_set_client   = @saved_cs_client */ ;

/*!50003 SET character_set_results = @saved_cs_results */ ;

/*!50003 SET collation_connection   = @saved_col_connection */ ;

/*!50003 SET @saved_cs_client   = @@character_set_client */ ;

/*!50003 SET @saved_cs_results   = @@character_set_results */ ;

/*!50003 SET @saved_col_connection = @@collation_connection */ ;

/*!50003 SET character_set_client   = utf8 */ ;

/*!50003 SET character_set_results = utf8 */ ;

/*!50003 SET collation_connection   = utf8_general_ci */ ;

/*!50003 SET @saved_sql_mode   = @@sql_mode */ ;

/*!50003   SET   sql_mode   = 'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_SUBSTITUTION' */ ;

DELIMITER ;;

/*!50003 CREATE*/ /*!50017 DEFINER=`root`@`localhost`*/ /*!50003 TRIGGER `mydb`.`Doctor_BEFORE_UPDATE` BEFORE UPDATE ON `Doctor` FOR EACH ROW BEGIN

if exists (select * from Patient where

new.Person_ID = Patient.Person_ID)

then

signal sqlstate value '40035'

set message_text = 'This person is a patient';

end if;

if exists (select * from Worker where

new.Person_ID = Worker.Person_ID)

```
then
signal sqlstate value '40036'
set message_text = 'This person is a worker';
end if;
if exists (select * from Nurse where
new.Person_ID = Nurse.Person_ID)
then
signal sqlstate value '40037'
set message_text = 'This person is a nurse';
end if;
END */;;
DELIMITER ;
/*!50003 SET sql_mode               = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection    = @saved_col_connection */ ;


--
-- Table structure for table `Doctor_In`
--

DROP TABLE IF EXISTS `Doctor_In`;
/*!40101 SET @saved_cs_client        = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `Doctor_In` (
  `Doctor_ID` int(11) NOT NULL,
  `Department_ID` int(11) NOT NULL,
  PRIMARY KEY (`Doctor_ID`,`Department_ID`),
  KEY `Dep_ID_idx` (`Department_ID`),
  CONSTRAINT `Dep_ID_DocIn` FOREIGN KEY (`Department_ID`) REFERENCES `Department` (`Department_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION,
  CONSTRAINT `Doc_ID_DocIn` FOREIGN KEY (`Doctor_ID`) REFERENCES `Doctor`
```

```sql
(`Doctor_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;


--
-- Dumping data for table `Doctor_In`
--

LOCK TABLES `Doctor_In` WRITE;
/*!40000 ALTER TABLE `Doctor_In` DISABLE KEYS */;
INSERT INTO `Doctor_In` VALUES (1,1),(2,2);
/*!40000 ALTER TABLE `Doctor_In` ENABLE KEYS */;
UNLOCK TABLES;


--
-- Table structure for table `Drugs`
--

DROP TABLE IF EXISTS `Drugs`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `Drugs` (
  `Drug_ID` int(11) NOT NULL AUTO_INCREMENT,
  `Name` varchar(255) NOT NULL,
  `Introduction` varchar(255) NOT NULL,
  `Size` double NOT NULL,
  `Price` double NOT NULL,
  `Producer` varchar(255) NOT NULL,
  `Inventory` mediumtext NOT NULL,
  PRIMARY KEY (`Drug_ID`)
) ENGINE=InnoDB AUTO_INCREMENT=4 DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;
```

--

-- Dumping data for table `Drugs`

--

LOCK TABLES `Drugs` WRITE;

/*!40000 ALTER TABLE `Drugs` DISABLE KEYS */;

INSERT INTO `Drugs` VALUES (1,'anesthetic','Anesthe patient during operation',0.5,10.5,'No.2 Drug Company','78'),(2,'penicillin','diminish inflammation',0.25,5.75,'No.2 Drug Company','469'),(3,'plasma type O','plasma for operation',250,25.25,'No.2 Drug Company','0');

/*!40000 ALTER TABLE `Drugs` ENABLE KEYS */;

UNLOCK TABLES;

--

-- Table structure for table `ImplementedBy`

--

DROP TABLE IF EXISTS `ImplementedBy`;

/*!40101 SET @saved_cs_client   = @@character_set_client */;

/*!40101 SET character_set_client = utf8 */;

CREATE TABLE `ImplementedBy` (

  `Operation_ID` int(11) NOT NULL,

  `Doctor_ID` int(11) NOT NULL,

  PRIMARY KEY (`Operation_ID`,`Doctor_ID`),

  KEY `Doc_ID_idx` (`Doctor_ID`),

  CONSTRAINT `Doc_ID_ImpBy` FOREIGN KEY (`Doctor_ID`) REFERENCES `Doctor` (`Doctor_ID`) ON DELETE CASCADE ON UPDATE NO ACTION,

  CONSTRAINT `OP_ID_ImpBy` FOREIGN KEY (`Operation_ID`) REFERENCES `Operation` (`Operation_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION

) ENGINE=InnoDB DEFAULT CHARSET=utf8;

/*!40101 SET character_set_client = @saved_cs_client */;

--

```
-- Dumping data for table `ImplementedBy`
--

LOCK TABLES `ImplementedBy` WRITE;
/*!40000 ALTER TABLE `ImplementedBy` DISABLE KEYS */;
INSERT INTO `ImplementedBy` VALUES (1,1);
/*!40000 ALTER TABLE `ImplementedBy` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `MedicalSupply`
--

DROP TABLE IF EXISTS `MedicalSupply`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `MedicalSupply` (
    `MedicalSupply_ID` int(11) NOT NULL AUTO_INCREMENT,
    `Name` varchar(255) NOT NULL,
    `Usage` varchar(255) NOT NULL,
    `Size` double NOT NULL,
    `Producer` varchar(255) NOT NULL,
    PRIMARY KEY (`MedicalSupply_ID`)
) ENGINE=InnoDB AUTO_INCREMENT=3 DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `MedicalSupply`
--

LOCK TABLES `MedicalSupply` WRITE;
/*!40000 ALTER TABLE `MedicalSupply` DISABLE KEYS */;
INSERT INTO `MedicalSupply` VALUES (1,'injector','inject',5,'No.1  Medical
```

```sql
Supply'),(2,'scalpel','surgery',25.5,'No.1 Medical Supply');
/*!40000 ALTER TABLE `MedicalSupply` ENABLE KEYS */;
UNLOCK TABLES;


--
-- Table structure for table `Nurse`
--

DROP TABLE IF EXISTS `Nurse`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `Nurse` (
    `Nurse_ID` int(11) NOT NULL AUTO_INCREMENT,
    `Person_ID` int(11) NOT NULL,
    `ResidentOrNot` varchar(45) NOT NULL DEFAULT 'Not',
    PRIMARY KEY (`Nurse_ID`),
    KEY `Person_ID_idx` (`Person_ID`),
    CONSTRAINT `Person_ID_Nurse` FOREIGN KEY (`Person_ID`) REFERENCES
`Person` (`Person_ID`) ON DELETE CASCADE ON UPDATE NO ACTION
) ENGINE=InnoDB AUTO_INCREMENT=3 DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;


--
-- Dumping data for table `Nurse`
--

LOCK TABLES `Nurse` WRITE;
/*!40000 ALTER TABLE `Nurse` DISABLE KEYS */;
INSERT INTO `Nurse` VALUES (1,8,'Inhospital'),(2,9,'Not');
/*!40000 ALTER TABLE `Nurse` ENABLE KEYS */;
UNLOCK TABLES;
/*!50003 SET @saved_cs_client     = @@character_set_client */ ;
/*!50003 SET @saved_cs_results     = @@character_set_results */ ;
```

```
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode        = @@sql_mode */ ;
/*!50003   SET   sql_mode                                           =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
/*!50003  CREATE*/ /*!50017  DEFINER=`root`@`localhost`*/ /*!50003  TRIGGER
`mydb`.`Nurse_BEFORE_INSERT` BEFORE INSERT ON `Nurse` FOR EACH ROW
BEGIN
if exists (select * from Patient where
new.Person_ID = Patient.Person_ID)
then
signal sqlstate value '40038'
set message_text = 'This person is a patient';
end if;
if exists (select * from Worker where
new.Person_ID = Worker.Person_ID)
then
signal sqlstate value '40039'
set message_text = 'This person is a worker';
end if;
if exists (select * from Doctor where
new.Person_ID = Doctor.Person_ID)
then
signal sqlstate value '40040'
set message_text = 'This person is a doctor';
end if;
END */;;
DELIMITER ;
```

```sql
/*!50003 SET sql_mode              = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection   = @saved_col_connection */ ;
/*!50003 SET @saved_cs_client        = @@character_set_client */ ;
/*!50003 SET @saved_cs_results       = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode         = @@sql_mode */ ;
/*!50003   SET   sql_mode                                       =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
/*!50003  CREATE*/  /*!50017  DEFINER=`root`@`localhost`*/  /*!50003  TRIGGER
`mydb`.`Nurse_BEFORE_UPDATE` BEFORE UPDATE ON `Nurse` FOR EACH ROW
BEGIN
if exists (select * from Patient where
new.Person_ID = Patient.Person_ID)
then
signal sqlstate value '40041'
set message_text = 'This person is a patient';
end if;
if exists (select * from Worker where
new.Person_ID = Worker.Person_ID)
then
signal sqlstate value '40042'
set message_text = 'This person is a worker';
end if;
if exists (select * from Doctor where
new.Person_ID = Doctor.Person_ID)
```

```sql
then
signal sqlstate value '40043'
set message_text = 'This person is a doctor';
end if;
END */;;
DELIMITER ;
/*!50003 SET sql_mode                = @saved_sql_mode */ ;
/*!50003 SET character_set_client    = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection    = @saved_col_connection */ ;


--
-- Table structure for table `Nurse_In`
--


DROP TABLE IF EXISTS `Nurse_In`;
/*!40101 SET @saved_cs_client        = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `Nurse_In` (
   `Nurse_ID` int(11) NOT NULL,
   `Department_ID` int(11) NOT NULL,
   PRIMARY KEY (`Nurse_ID`,`Department_ID`),
   KEY `Dep_ID_idx` (`Department_ID`),
   CONSTRAINT `Dep_ID_nurIn` FOREIGN KEY (`Department_ID`) REFERENCES
`Department` (`Department_ID`) ON DELETE NO ACTION ON UPDATE NO
ACTION,
   CONSTRAINT `Nur_ID_nurIn` FOREIGN KEY (`Nurse_ID`) REFERENCES `Nurse`
(`Nurse_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;


--
-- Dumping data for table `Nurse_In`
```

```
--

LOCK TABLES `Nurse_In` WRITE;
/*!40000 ALTER TABLE `Nurse_In` DISABLE KEYS */;
INSERT INTO `Nurse_In` VALUES (1,1),(2,2);
/*!40000 ALTER TABLE `Nurse_In` ENABLE KEYS */;
UNLOCK TABLES;


--
-- Table structure for table `Nursing`
--

DROP TABLE IF EXISTS `Nursing`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `Nursing` (
   `Nurse_ID` int(11) NOT NULL,
   `Patient_ID` int(11) NOT NULL,
   PRIMARY KEY (`Nurse_ID`,`Patient_ID`),
   KEY `Nurse_ID_idx` (`Nurse_ID`),
   KEY `Patient_ID_idx` (`Patient_ID`),
   CONSTRAINT `Nurse_ID_Nursing` FOREIGN KEY (`Nurse_ID`) REFERENCES
`Nurse` (`Nurse_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION,
   CONSTRAINT `Patient_ID_Nursing` FOREIGN KEY (`Patient_ID`) REFERENCES
`Patient` (`Patient_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;


--
-- Dumping data for table `Nursing`
--

LOCK TABLES `Nursing` WRITE;
```

```sql
/*!40000 ALTER TABLE `Nursing` DISABLE KEYS */;
INSERT INTO `Nursing` VALUES (1,1),(2,2);
/*!40000 ALTER TABLE `Nursing` ENABLE KEYS */;
UNLOCK TABLES;
/*!50003 SET @saved_cs_client      = @@character_set_client */ ;
/*!50003 SET @saved_cs_results     = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode        = @@sql_mode */ ;
/*!50003   SET   sql_mode                                          =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
/*!50003  CREATE*/ /*!50017  DEFINER=`root`@`localhost`*/ /*!50003  TRIGGER
`mydb`.`Nursing_BEFORE_INSERT`
BEFORE INSERT ON `mydb`.`Nursing`
FOR EACH ROW
BEGIN
declare pat_status varchar(45);
declare nur_status varchar(45);
set pat_status = (select Patient.InhospitalOrNot from Patient where
Patient.Patient_ID = New.Patient_ID);
set nur_status = (select Nurse.InhospitalOrNot from Nurse where Nurse.Nurse_ID
= New.Nurse_ID);
if(pat_status <> nur_status)
then
signal sqlstate value '40009'
set message_text = 'Patient - Nurse does not match on inhospital status!';
end if;
END */;;
```

```sql
DELIMITER ;
/*!50003 SET sql_mode              = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection   = @saved_col_connection */ ;
/*!50003 SET @saved_cs_client       = @@character_set_client */ ;
/*!50003 SET @saved_cs_results      = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode        = @@sql_mode */ ;
/*!50003 SET sql_mode                                              =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
/*!50003 CREATE*/ /*!50017 DEFINER=`root`@`localhost`*/ /*!50003 TRIGGER
`mydb`.`Nursing_BEFORE_UPDATE`
BEFORE UPDATE ON `mydb`.`Nursing`
FOR EACH ROW
BEGIN
declare pat_status varchar(45);
declare nur_status varchar(45);
set pat_status = (select Patient.InhospitalOrNot from Patient where
Patient.Patient_ID = New.Patient_ID);
set nur_status = (select Nurse.InhospitalOrNot from Nurse where Nurse.Nurse_ID
= New.Nurse_ID);
if(pat_status <> nur_status)
then
signal sqlstate value '40010'
set message_text = 'Patient - Nurse does not match on inhospital status!';
end if;
```

```sql
END */;;
DELIMITER ;
/*!50003 SET sql_mode                  = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection   = @saved_col_connection */ ;


--
-- Table structure for table `OperatationOn`
--

DROP TABLE IF EXISTS `OperatationOn`;
/*!40101 SET @saved_cs_client       = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `OperatationOn` (
    `Operation_ID` int(11) NOT NULL,
    `Patient_ID` int(11) NOT NULL,
    PRIMARY KEY (`Operation_ID`,`Patient_ID`),
    KEY `Pat_ID_idx` (`Patient_ID`),
    CONSTRAINT `Op_ID_opOn`  FOREIGN  KEY  (`Operation_ID`)  REFERENCES
`Operation` (`Operation_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION,
    CONSTRAINT `Pat_ID_OpOn` FOREIGN KEY (`Patient_ID`) REFERENCES `Patient`
(`Patient_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;


--
-- Dumping data for table `OperatationOn`
--

LOCK TABLES `OperatationOn` WRITE;
/*!40000 ALTER TABLE `OperatationOn` DISABLE KEYS */;
INSERT INTO `OperatationOn` VALUES (1,1);
```

```
/*!40000 ALTER TABLE `OperatationOn` ENABLE KEYS */;
UNLOCK TABLES;


--
-- Table structure for table `Operation`
--

DROP TABLE IF EXISTS `Operation`;
/*!40101 SET @saved_cs_client      = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `Operation` (
    `Operation_ID` int(11) NOT NULL AUTO_INCREMENT,
    `Time` date NOT NULL,
    `Details` varchar(255) NOT NULL,
    PRIMARY KEY (`Operation_ID`)
) ENGINE=InnoDB AUTO_INCREMENT=2 DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;


--
-- Dumping data for table `Operation`
--

LOCK TABLES `Operation` WRITE;
/*!40000 ALTER TABLE `Operation` DISABLE KEYS */;
INSERT INTO `Operation` VALUES (1,'2017-01-31','Surgery on patient01');
/*!40000 ALTER TABLE `Operation` ENABLE KEYS */;
UNLOCK TABLES;


--
-- Table structure for table `OperationDrug`
--

DROP TABLE IF EXISTS `OperationDrug`;
```

```sql
/*!40101 SET @saved_cs_client          = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `OperationDrug` (
    `Operation_ID` int(11) NOT NULL,
    `Drug_ID` int(11) NOT NULL,
    `NumOfUse` mediumtext NOT NULL,
    PRIMARY KEY (`Operation_ID`,`Drug_ID`),
    KEY `Drug_ID_idx` (`Drug_ID`),
    CONSTRAINT `Drug_ID_OpDrug` FOREIGN KEY (`Drug_ID`) REFERENCES
`Drugs` (`Drug_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION,
    CONSTRAINT `Op_ID_OpDrug` FOREIGN KEY (`Operation_ID`) REFERENCES
`Operation` (`Operation_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;


--
-- Dumping data for table `OperationDrug`
--

LOCK TABLES `OperationDrug` WRITE;
/*!40000 ALTER TABLE `OperationDrug` DISABLE KEYS */;
INSERT INTO `OperationDrug` VALUES (1,1,'2'),(1,2,'1');
/*!40000 ALTER TABLE `OperationDrug` ENABLE KEYS */;
UNLOCK TABLES;
/*!50003 SET @saved_cs_client          = @@character_set_client */ ;
/*!50003 SET @saved_cs_results         = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client    = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection    = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode          = @@sql_mode */ ;
/*!50003   SET   sql_mode                                      =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
```

```sql
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
/*!50003 CREATE*/ /*!50017 DEFINER=`root`@`localhost`*/ /*!50003 TRIGGER
`mydb`.`OperationDrug_BEFORE_INSERT`
BEFORE INSERT ON `mydb`.`OperationDrug`
FOR EACH ROW
BEGIN
declare inventory_remain long;
set inventory_remain = (select Drugs.Inventory from Drugs where New.Drug_ID =
Drugs.Drug_ID);
if(inventory_remain - new.NumOfUse < 0)
then
signal sqlstate value '40007'
set message_text = 'Not valid drug inventory!';
end if;
END */;;
DELIMITER ;
/*!50003 SET sql_mode              = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection   = @saved_col_connection */ ;
/*!50003 SET @saved_cs_client        = @@character_set_client */ ;
/*!50003 SET @saved_cs_results       = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode         = @@sql_mode */ ;
/*!50003 SET sql_mode                                              =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
```

```sql
DELIMITER ;;
/*!50003 CREATE*/ /*!50017 DEFINER=`root`@`localhost`*/ /*!50003 TRIGGER
`mydb`.`OperationDrug_AFTER_INSERT`
AFTER INSERT ON `mydb`.`OperationDrug`
FOR EACH ROW
BEGIN
update Drugs
set Drugs.Inventory = (Drugs.Inventory - New.NumOfUse)
where Drugs.Drug_ID = New.Drug_ID;
END */;;
DELIMITER ;
/*!50003 SET sql_mode              = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection   = @saved_col_connection */ ;
/*!50003 SET @saved_cs_client       = @@character_set_client */ ;
/*!50003 SET @saved_cs_results      = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode        = @@sql_mode */ ;
/*!50003 SET sql_mode                                          =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
/*!50003 CREATE*/ /*!50017 DEFINER=`root`@`localhost`*/ /*!50003 TRIGGER
`mydb`.`OperationDrug_BEFORE_UPDATE`
BEFORE UPDATE ON `mydb`.`OperationDrug`
FOR EACH ROW
BEGIN
declare inventory_remain long;
```

```
set inventory_remain = (select Drugs.Inventory from Drugs where New.Drug_ID =
Drugs.Drug_ID);
if(inventory_remain - new.NumOfUse < 0)
then
signal sqlstate value '40008'
set message_text = 'Not valid drug inventory!';
end if;
END */;;
DELIMITER ;
/*!50003 SET sql_mode                = @saved_sql_mode */ ;
/*!50003 SET character_set_client    = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection    = @saved_col_connection */ ;
/*!50003 SET @saved_cs_client        = @@character_set_client */ ;
/*!50003 SET @saved_cs_results       = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client    = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection    = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode         = @@sql_mode */ ;
/*!50003    SET    sql_mode                                        =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
/*!50003  CREATE*/ /*!50017  DEFINER=`root`@`localhost`*/ /*!50003  TRIGGER
`mydb`.`OperationDrug_AFTER_UPDATE`
AFTER UPDATE ON `mydb`.`OperationDrug`
FOR EACH ROW
BEGIN
update Drugs
set Drugs.Inventory = (Drugs.Inventory - New.NumOfUse)
where Drugs.Drug_ID = New.Drug_ID;
```

```
END */;;
DELIMITER ;
/*!50003 SET sql_mode                = @saved_sql_mode */ ;
/*!50003 SET character_set_client    = @saved_cs_client */ ;
/*!50003 SET character_set_results   = @saved_cs_results */ ;
/*!50003 SET collation_connection    = @saved_col_connection */ ;


--
-- Table structure for table `OperationNursery`
--

DROP TABLE IF EXISTS `OperationNursery`;
/*!40101 SET @saved_cs_client        = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `OperationNursery` (
  `Operation_ID` int(11) NOT NULL,
  `Nurse_ID` int(11) NOT NULL,
  PRIMARY KEY (`Operation_ID`,`Nurse_ID`),
  KEY `Nur_ID_idx` (`Nurse_ID`),
  CONSTRAINT `Nur_ID_OpNur` FOREIGN KEY (`Nurse_ID`) REFERENCES `Nurse`
(`Nurse_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION,
  CONSTRAINT `Op_ID_OpNur` FOREIGN KEY (`Operation_ID`) REFERENCES
`Operation` (`Operation_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;


--
-- Dumping data for table `OperationNursery`
--

LOCK TABLES `OperationNursery` WRITE;
/*!40000 ALTER TABLE `OperationNursery` DISABLE KEYS */;
INSERT INTO `OperationNursery` VALUES (1,1);
```

```
/*!40000 ALTER TABLE `OperationNursery` ENABLE KEYS */;
UNLOCK TABLES;


--
-- Table structure for table `OperationSupply`
--

DROP TABLE IF EXISTS `OperationSupply`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `OperationSupply` (
  `Operation_ID` int(11) NOT NULL,
  `MedicalSupply_ID` int(11) NOT NULL,
  PRIMARY KEY (`Operation_ID`,`MedicalSupply_ID`),
  KEY `Med_ID_idx` (`MedicalSupply_ID`),
  CONSTRAINT `Med_ID_OpSup` FOREIGN KEY (`MedicalSupply_ID`)
REFERENCES `medicalsupply` (`MedicalSupply_ID`) ON DELETE NO ACTION ON
UPDATE NO ACTION,
  CONSTRAINT `Op_ID_OpSup` FOREIGN KEY (`Operation_ID`) REFERENCES
`Operation` (`Operation_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;


--
-- Dumping data for table `OperationSupply`
--

LOCK TABLES `OperationSupply` WRITE;
/*!40000 ALTER TABLE `OperationSupply` DISABLE KEYS */;
INSERT INTO `OperationSupply` VALUES (1,1),(1,2);
/*!40000 ALTER TABLE `OperationSupply` ENABLE KEYS */;
UNLOCK TABLES;
```

```sql
--
-- Table structure for table `Patient`
--

DROP TABLE IF EXISTS `Patient`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `Patient` (
  `Patient_ID` int(11) NOT NULL AUTO_INCREMENT,
  `Person_ID` int(11) NOT NULL,
  `InhospitalOrNot` varchar(45) NOT NULL DEFAULT 'Not',
  PRIMARY KEY (`Patient_ID`),
  KEY `Person_ID_idx` (`Person_ID`),
  CONSTRAINT `Person_ID_Patient` FOREIGN KEY (`Person_ID`) REFERENCES `Person` (`Person_ID`) ON DELETE CASCADE ON UPDATE NO ACTION
) ENGINE=InnoDB AUTO_INCREMENT=3 DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `Patient`
--

LOCK TABLES `Patient` WRITE;
/*!40000 ALTER TABLE `Patient` DISABLE KEYS */;
INSERT INTO `Patient` VALUES (1,4,'Inhospital'),(2,5,'Not');
/*!40000 ALTER TABLE `Patient` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `Person`
--

DROP TABLE IF EXISTS `Person`;
```

```
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `Person` (
    `Person_ID` int(11) NOT NULL AUTO_INCREMENT,
    `Firstname` varchar(45) NOT NULL,
    `Lastname` varchar(45) NOT NULL,
    `Age` int(11) NOT NULL,
    `Gender` varchar(45) NOT NULL DEFAULT 'Male',
    `Street` varchar(255) DEFAULT NULL,
    `City` varchar(255) DEFAULT NULL,
    `State` varchar(255) DEFAULT NULL,
    `ZIP` varchar(255) DEFAULT NULL,
    PRIMARY KEY (`Person_ID`)
) ENGINE=InnoDB AUTO_INCREMENT=13 DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `Person`
--

LOCK TABLES `Person` WRITE;
/*!40000 ALTER TABLE `Person` DISABLE KEYS */;
INSERT INTO `Person` VALUES (4,'patient01','surgery',22,'Male','1
Burbank','Boston','MA','02115'),(5,'patient02','outpatient',23,'Female','2
Burbank','Boston','MA','02115'),(6,'doctor01','operational',34,'Male','5     New
York','New     York     City','NY','01010'),(7,'doctor02','outpatient',44,'Male','3
Burbank','Boston','MA','02115'),(8,'Nurse01','surgery_nurse',25,'Female','4
Burbank','Boston','MA','02115'),(9,'Nurse02','outpatient_nurse',33,'Female','5
Burbank','Boston','MA','02115'),(10,'Worker01','phamarcy',45,'Male','360
Huntington','Boston','MA','02115'),(11,'Worker02','department',44,'Female','200
Huntington','Boston','MA','02115'),(12,'patient03','outpatient02',30,'Male','7
Burbank','Boston','MA','2115');
/*!40000 ALTER TABLE `Person` ENABLE KEYS */;
```

```
UNLOCK TABLES;


--

-- Table structure for table `Pharmacy`

--


DROP TABLE IF EXISTS `Pharmacy`;
/*!40101 SET @saved_cs_client      = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `Pharmacy` (
   `Pharmacy_ID` int(11) NOT NULL AUTO_INCREMENT,
   `Location` varchar(255) NOT NULL,
   PRIMARY KEY (`Pharmacy_ID`)
) ENGINE=InnoDB AUTO_INCREMENT=3 DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;


--

-- Dumping data for table `Pharmacy`

--


LOCK TABLES `Pharmacy` WRITE;
/*!40000 ALTER TABLE `Pharmacy` DISABLE KEYS */;
INSERT INTO `Pharmacy` VALUES (1,'B1F2'),(2,'B2F3');
/*!40000 ALTER TABLE `Pharmacy` ENABLE KEYS */;
UNLOCK TABLES;


--

-- Table structure for table `Registrate_In`

--


DROP TABLE IF EXISTS `Registrate_In`;
/*!40101 SET @saved_cs_client      = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
```

```sql
CREATE TABLE `Registrate_In` (
   `Patient_ID` int(11) NOT NULL,
   `Department_ID` int(11) NOT NULL,
   PRIMARY KEY (`Patient_ID`,`Department_ID`),
   KEY `Dep_ID_idx` (`Department_ID`),
   CONSTRAINT `Dep_ID_RegIn` FOREIGN KEY (`Department_ID`) REFERENCES `Department` (`Department_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION,
   CONSTRAINT `Patient_ID_RegIn` FOREIGN KEY (`Patient_ID`) REFERENCES `Patient` (`Patient_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `Registrate_In`
--

LOCK TABLES `Registrate_In` WRITE;
/*!40000 ALTER TABLE `Registrate_In` DISABLE KEYS */;
INSERT INTO `Registrate_In` VALUES (1,1),(2,2);
/*!40000 ALTER TABLE `Registrate_In` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `Storage`
--

DROP TABLE IF EXISTS `Storage`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `Storage` (
   `Pharmacy_ID` int(11) NOT NULL,
   `Drug_ID` int(11) NOT NULL,
```

```
  `Inventory` mediumtext NOT NULL,
  PRIMARY KEY (`Pharmacy_ID`,`Drug_ID`),
  KEY `Pharmacy_ID_idx` (`Pharmacy_ID`),
  KEY `Drug_ID_idx` (`Drug_ID`),
  CONSTRAINT `Drug_ID_Storage` FOREIGN KEY (`Drug_ID`) REFERENCES
`Drugs` (`Drug_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION,
  CONSTRAINT `Pharmacy_ID_Storage` FOREIGN KEY (`Pharmacy_ID`)
REFERENCES `Pharmacy` (`Pharmacy_ID`) ON DELETE NO ACTION ON UPDATE
NO ACTION
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;


--
-- Dumping data for table `Storage`
--


LOCK TABLES `Storage` WRITE;
/*!40000 ALTER TABLE `Storage` DISABLE KEYS */;
INSERT INTO `Storage` VALUES (1,1,'10'),(1,2,'20'),(2,1,'10'),(2,2,'10');
/*!40000 ALTER TABLE `Storage` ENABLE KEYS */;
UNLOCK TABLES;
/*!50003 SET @saved_cs_client      = @@character_set_client */ ;
/*!50003 SET @saved_cs_results     = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode       = @@sql_mode */ ;
/*!50003   SET   sql_mode                                        =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
```

```
/*!50003 CREATE*/ /*!50017 DEFINER=`root`@`localhost`*/ /*!50003 TRIGGER
`mydb`.`Storage_BEFORE_INSERT` BEFORE INSERT ON `Storage` FOR EACH ROW
BEGIN
declare inventory_remain long;
set inventory_remain = (select Drugs.Inventory from Drugs where New.Drug_ID =
Drugs.Drug_ID);
if(inventory_remain - new.Inventory < 0)
then
signal sqlstate value '40017'
set message_text = 'Not valid drug inventory!';
end if;
END */;;
DELIMITER ;
/*!50003 SET sql_mode              = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection   = @saved_col_connection */ ;
/*!50003 SET @saved_cs_client       = @@character_set_client */ ;
/*!50003 SET @saved_cs_results      = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode        = @@sql_mode */ ;
/*!50003 SET sql_mode              =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
/*!50003 CREATE*/ /*!50017 DEFINER=`root`@`localhost`*/ /*!50003 TRIGGER
`mydb`.`Storage_AFTER_INSERT` AFTER INSERT ON `Storage` FOR EACH ROW
BEGIN
update Drugs
```

```
set Drugs.Inventory = (Drugs.Inventory - New.Inventory)
where Drugs.Drug_ID = New.Drug_ID;
END */;;
DELIMITER ;
/*!50003 SET sql_mode              = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection   = @saved_col_connection */ ;
/*!50003 SET @saved_cs_client        = @@character_set_client */ ;
/*!50003 SET @saved_cs_results       = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode         = @@sql_mode */ ;
/*!50003    SET    sql_mode                                         =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
/*!50003  CREATE*/  /*!50017  DEFINER=`root`@`localhost`*/  /*!50003  TRIGGER
`mydb`.`Storage_BEFORE_UPDATE`  BEFORE  UPDATE  ON  `Storage`  FOR  EACH
ROW
BEGIN
declare inventory_remain long;
set inventory_remain = (select Drugs.Inventory from Drugs where New.Drug_ID =
Drugs.Drug_ID);
if(inventory_remain - new.Inventory < 0)
then
signal sqlstate value '40018'
set message_text = 'Not valid drug inventory!';
end if;
END */;;
```

```sql
DELIMITER ;
/*!50003 SET sql_mode              = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection   = @saved_col_connection */ ;
/*!50003 SET @saved_cs_client       = @@character_set_client */ ;
/*!50003 SET @saved_cs_results      = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode        = @@sql_mode */ ;
/*!50003     SET     sql_mode                                    =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
/*!50003  CREATE*/ /*!50017  DEFINER=`root`@`localhost`*/ /*!50003  TRIGGER
`mydb`.`Storage_AFTER_UPDATE` AFTER UPDATE ON `Storage` FOR EACH ROW
BEGIN
update Drugs
set Drugs.Inventory = (Drugs.Inventory - New.Inventory)
where Drugs.Drug_ID = New.Drug_ID;
END */;;
DELIMITER ;
/*!50003 SET sql_mode              = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection   = @saved_col_connection */ ;

--
-- Table structure for table `UseByDoc`
--
```

```sql
DROP TABLE IF EXISTS `UseByDoc`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `UseByDoc` (
   `Doctor_ID` int(11) NOT NULL,
   `MedicalSupply_ID` int(11) NOT NULL,
   PRIMARY KEY (`MedicalSupply_ID`,`Doctor_ID`),
   KEY `Med_ID_idx` (`MedicalSupply_ID`),
   KEY `Doc_ID_UseByDoc` (`Doctor_ID`),
   CONSTRAINT `Doc_ID_UseByDoc` FOREIGN KEY (`Doctor_ID`) REFERENCES
`Doctor` (`Doctor_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION,
   CONSTRAINT `Med_ID_UseByDoc` FOREIGN KEY (`MedicalSupply_ID`)
REFERENCES `medicalsupply` (`MedicalSupply_ID`) ON DELETE NO ACTION ON
UPDATE NO ACTION
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `UseByDoc`
--

LOCK TABLES `UseByDoc` WRITE;
/*!40000 ALTER TABLE `UseByDoc` DISABLE KEYS */;
INSERT INTO `UseByDoc` VALUES (2,1),(1,2);
/*!40000 ALTER TABLE `UseByDoc` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `UseByNurse`
--

DROP TABLE IF EXISTS `UseByNurse`;
```

```
/*!40101 SET @saved_cs_client      = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `UseByNurse` (
    `Nurse_ID` int(11) NOT NULL,
    `MedicalSupply_ID` int(11) NOT NULL,
    PRIMARY KEY (`Nurse_ID`,`MedicalSupply_ID`),
    KEY `Medic_ID_idx` (`MedicalSupply_ID`),
    CONSTRAINT `Medic_ID_UseByNurse` FOREIGN KEY (`MedicalSupply_ID`)
REFERENCES `medicalsupply` (`MedicalSupply_ID`) ON DELETE NO ACTION ON
UPDATE NO ACTION,
    CONSTRAINT `Nur_ID_UseByNurese` FOREIGN KEY (`Nurse_ID`) REFERENCES
`Nurse` (`Nurse_ID`) ON DELETE NO ACTION ON UPDATE NO ACTION
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;


--
-- Dumping data for table `UseByNurse`
--


LOCK TABLES `UseByNurse` WRITE;
/*!40000 ALTER TABLE `UseByNurse` DISABLE KEYS */;
INSERT INTO `UseByNurse` VALUES (1,1),(2,1);
/*!40000 ALTER TABLE `UseByNurse` ENABLE KEYS */;
UNLOCK TABLES;


--
-- Table structure for table `WorkInDepartment`
--


DROP TABLE IF EXISTS `WorkInDepartment`;
/*!40101 SET @saved_cs_client      = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `WorkInDepartment` (
```

```sql
  `Department_ID` int(11) NOT NULL,
  `Worker_ID` int(11) NOT NULL,
  PRIMARY KEY (`Department_ID`,`Worker_ID`),
  KEY `Department_ID_idx` (`Department_ID`),
  KEY `Worker_ID_idx` (`Worker_ID`),
  CONSTRAINT `Department_ID_InDepartment` FOREIGN KEY (`Department_ID`)
REFERENCES `Department` (`Department_ID`) ON DELETE NO ACTION ON
UPDATE NO ACTION,
  CONSTRAINT `Worker_ID_InDepartment` FOREIGN KEY (`Worker_ID`)
REFERENCES `Worker` (`Worker_ID`) ON DELETE NO ACTION ON UPDATE NO
ACTION
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `WorkInDepartment`
--

LOCK TABLES `WorkInDepartment` WRITE;
/*!40000 ALTER TABLE `WorkInDepartment` DISABLE KEYS */;
INSERT INTO `WorkInDepartment` VALUES (1,1);
/*!40000 ALTER TABLE `WorkInDepartment` ENABLE KEYS */;
UNLOCK TABLES;
/*!50003 SET @saved_cs_client          = @@character_set_client */ ;
/*!50003 SET @saved_cs_results         = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode          = @@sql_mode */ ;
/*!50003   SET   sql_mode                              =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
```

UBSTITUTION' */ ;
DELIMITER ;;
/*!50003 CREATE*/ /*!50017 DEFINER=`root`@`localhost`*/ /*!50003 TRIGGER `mydb`.`WorkInDepartment_BEFORE_INSERT` BEFORE INSERT ON `WorkInDepartment` FOR EACH ROW
BEGIN
if exists (select * from WorkInPharmacy where
new.Worker_ID = WorkInPharmacy.Worker_ID)
then
signal sqlstate value '40003'
set message_text = 'Worker already work in pharmacy';
end if;
if exists (select * from WorkInDepartment where
new.Worker_ID = WorkInDepartment.Worker_ID)
then
signal sqlstate value '40013'
set message_text = 'Worker already has a position in another department';
end if;
END */;;
DELIMITER ;
/*!50003 SET sql_mode   = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection   = @saved_col_connection */ ;
/*!50003 SET @saved_cs_client   = @@character_set_client */ ;
/*!50003 SET @saved_cs_results   = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode   = @@sql_mode */ ;
/*!50003 SET sql_mode   =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_

```
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
/*!50003 CREATE*/ /*!50017 DEFINER=`root`@`localhost`*/ /*!50003 TRIGGER
`mydb`.`WorkInDepartment_BEFORE_UPDATE`    BEFORE    UPDATE    ON
`WorkInDepartment` FOR EACH ROW
BEGIN
if exists (select * from WorkInPharmacy where
new.Worker_ID = WorkInPharmacy.Worker_ID)
then
signal sqlstate value '40004'
set message_text = 'Worker already work in pharmacy';
end if;
if exists (select * from WorkInDepartment where
new.Worker_ID = WorkInDepartment.Worker_ID)
then
signal sqlstate value '40014'
set message_text = 'Worker already has a position in another department';
end if;
END */;;
DELIMITER ;
/*!50003 SET sql_mode                = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection    = @saved_col_connection */ ;

--
-- Table structure for table `WorkInPharmacy`
--

DROP TABLE IF EXISTS `WorkInPharmacy`;
/*!40101 SET @saved_cs_client        = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
```

```sql
CREATE TABLE `WorkInPharmacy` (
    `Pharmacy_ID` int(11) NOT NULL,
    `Worker_ID` int(11) NOT NULL,
    PRIMARY KEY (`Pharmacy_ID`,`Worker_ID`),
    KEY `Pharmacy_ID_idx` (`Pharmacy_ID`),
    KEY `Worker_ID_idx` (`Worker_ID`),
    CONSTRAINT `Pharmacy_ID_InPharmacy` FOREIGN KEY (`Pharmacy_ID`)
REFERENCES `Pharmacy` (`Pharmacy_ID`) ON DELETE NO ACTION ON UPDATE
NO ACTION,
    CONSTRAINT `Worker_ID_InPharmacy` FOREIGN KEY (`Worker_ID`)
REFERENCES `Worker` (`Worker_ID`) ON DELETE NO ACTION ON UPDATE NO
ACTION
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;


--
-- Dumping data for table `WorkInPharmacy`
--


LOCK TABLES `WorkInPharmacy` WRITE;
/*!40000 ALTER TABLE `WorkInPharmacy` DISABLE KEYS */;
INSERT INTO `WorkInPharmacy` VALUES (2,2);
/*!40000 ALTER TABLE `WorkInPharmacy` ENABLE KEYS */;
UNLOCK TABLES;
/*!50003 SET @saved_cs_client      = @@character_set_client */ ;
/*!50003 SET @saved_cs_results     = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode        = @@sql_mode */ ;
/*!50003   SET   sql_mode                                    =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
```

DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
/*!50003 CREATE*/ /*!50017 DEFINER=`root`@`localhost`*/ /*!50003 TRIGGER
`mydb`.`WorkInPharmacy_BEFORE_INSERT`   BEFORE   INSERT   ON
`WorkInPharmacy` FOR EACH ROW
BEGIN
if exists (select * from WorkInDepartment where
new.Worker_ID = WorkInDepartment.Worker_ID)
then
signal sqlstate value '40005'
set message_text = 'Worker already work in department';
end if;
if exists (select * from WorkInPharmacy where
new.Worker_ID = WorkInPharmacy.Worker_ID)
then
signal sqlstate value '40015'
set message_text = 'Worker already has a position in another pharmacy';
end if;
END */;;
DELIMITER ;
/*!50003 SET sql_mode   = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection   = @saved_col_connection */ ;
/*!50003 SET @saved_cs_client   = @@character_set_client */ ;
/*!50003 SET @saved_cs_results   = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode   = @@sql_mode */ ;
/*!50003   SET   sql_mode   =

'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
/*!50003 CREATE*/ /*!50017 DEFINER=`root`@`localhost`*/ /*!50003 TRIGGER
`mydb`.`WorkInPharmacy_BEFORE_UPDATE` BEFORE UPDATE ON
`WorkInPharmacy` FOR EACH ROW
BEGIN
if exists (select * from WorkInDepartment where
new.Worker_ID = WorkInDepartment.Worker_ID)
then
signal sqlstate value '40006'
set message_text = 'Worker already work in department';
end if;
if exists (select * from WorkInPharmacy where
new.Worker_ID = WorkInPharmacy.Worker_ID)
then
signal sqlstate value '40016'
set message_text = 'Worker already has a position in another pharmacy';
end if;
END */;;
DELIMITER ;
/*!50003 SET sql_mode   = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection   = @saved_col_connection */ ;

--
-- Table structure for table `Worker`
--

DROP TABLE IF EXISTS `Worker`;
/*!40101 SET @saved_cs_client   = @@character_set_client */;

```sql
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `Worker` (
    `Worker_ID` int(11) NOT NULL AUTO_INCREMENT,
    `Person_ID` int(11) NOT NULL,
    PRIMARY KEY (`Worker_ID`),
    KEY `Person_ID_idx` (`Person_ID`),
    CONSTRAINT `Person_ID_Worker` FOREIGN KEY (`Person_ID`) REFERENCES
`Person` (`Person_ID`) ON DELETE CASCADE ON UPDATE NO ACTION
) ENGINE=InnoDB AUTO_INCREMENT=3 DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `Worker`
--

LOCK TABLES `Worker` WRITE;
/*!40000 ALTER TABLE `Worker` DISABLE KEYS */;
INSERT INTO `Worker` VALUES (1,10),(2,11);
/*!40000 ALTER TABLE `Worker` ENABLE KEYS */;
UNLOCK TABLES;
/*!50003 SET @saved_cs_client      = @@character_set_client */ ;
/*!50003 SET @saved_cs_results     = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client  = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection  = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode       = @@sql_mode */ ;
/*!50003 SET sql_mode              =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
/*!50003 CREATE*/ /*!50017 DEFINER=`root`@`localhost`*/ /*!50003 TRIGGER
```

```sql
`mydb`.`Worker_BEFORE_INSERT` BEFORE INSERT ON `Worker` FOR EACH ROW
BEGIN
if exists (select * from Patient where
new.Person_ID = Patient.Person_ID)
then
signal sqlstate value '40025'
set message_text = 'This person is a patient';
end if;
if exists (select * from Doctor where
new.Person_ID = Doctor.Person_ID)
then
signal sqlstate value '40026'
set message_text = 'This person is a doctor';
end if;
if exists (select * from Nurse where
new.Person_ID = Nurse.Person_ID)
then
signal sqlstate value '40027'
set message_text = 'This person is a nurse';
end if;
END */;;
DELIMITER ;
/*!50003 SET sql_mode                 = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection   = @saved_col_connection */ ;
/*!50003 SET @saved_cs_client        = @@character_set_client */ ;
/*!50003 SET @saved_cs_results       = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode         = @@sql_mode */ ;
```

```sql
/*!50003    SET    sql_mode                                          =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
/*!50003  CREATE*/  /*!50017  DEFINER=`root`@`localhost`*/  /*!50003  TRIGGER
`mydb`.`Worker_BEFORE_UPDATE`  BEFORE  UPDATE  ON  `Worker`  FOR  EACH
ROW
BEGIN
if exists (select * from Patient where
new.Person_ID = Patient.Person_ID)
then
signal sqlstate value '40028'
set message_text = 'This person is a patient';
end if;
if exists (select * from Doctor where
new.Person_ID = Doctor.Person_ID)
then
signal sqlstate value '40029'
set message_text = 'This person is a doctor';
end if;
if exists (select * from Nurse where
new.Person_ID = Nurse.Person_ID)
then
signal sqlstate value '40030'
set message_text = 'This person is a nurse';
end if;
END */;;
DELIMITER ;
/*!50003 SET sql_mode                  = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection   = @saved_col_connection */ ;
```

```
/*!50003 DROP PROCEDURE IF EXISTS `GetDoctorDetailswithName` */;
/*!50003 SET @saved_cs_client      = @@character_set_client */ ;
/*!50003 SET @saved_cs_results     = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client  = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection  = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode       = @@sql_mode */ ;
/*!50003   SET   sql_mode                                     =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
CREATE DEFINER=`root`@`localhost` PROCEDURE `GetDoctorDetailswithName`(
    in firstname varchar(45),
     in lastname varchar(45)
)
begin
    select  b.Firstname,  b.Lastname,  b.Age,  b.Gender,  d.Department_Name,
d.Location from
       Doctor as a join Person as b on
       a.Person_ID = b.Person_ID
       join Doctor_In as c on
       a.Doctor_ID = c.Doctor_ID
       join Department as d on
```

```sql
        c.Department_ID = d.Department_ID
        where b.Firstname = firstname and b.Lastname = lastname;
end ;;
DELIMITER ;
/*!50003 SET sql_mode                = @saved_sql_mode */ ;
/*!50003 SET character_set_client    = @saved_cs_client */ ;
/*!50003 SET character_set_results   = @saved_cs_results */ ;
/*!50003 SET collation_connection    = @saved_col_connection */ ;
/*!50003 DROP PROCEDURE IF EXISTS `GetNurseDetailswithName` */;
/*!50003 SET @saved_cs_client        = @@character_set_client */ ;
/*!50003 SET @saved_cs_results       = @@character_set_results */ ;
/*!50003 SET @saved_col_connection   = @@collation_connection */ ;
/*!50003 SET character_set_client    = utf8 */ ;
/*!50003 SET character_set_results   = utf8 */ ;
/*!50003 SET collation_connection    = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode         = @@sql_mode */ ;
/*!50003    SET    sql_mode                                       =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
CREATE DEFINER=`root`@`localhost` PROCEDURE `GetNurseDetailswithName`(
    in firstname varchar(45),
     in lastname varchar(45)
)
begin
    select b.Firstname, b.Lastname, b.Age, b.Gender, d.Department_Name,
d.Location from
        Nurse as a join Person as b on
        a.Person_ID = b.Person_ID
        join Nurse_In as c on
        a.Nurse_ID = c.Nurse_ID
        join Department as d on
```

```sql
        c.Department_ID = d.Department_ID
        where b.Firstname = firstname and b.Lastname = lastname;
end ;;
DELIMITER ;
/*!50003 SET sql_mode                 = @saved_sql_mode */ ;
/*!50003 SET character_set_client    = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection    = @saved_col_connection */ ;
/*!50003 DROP PROCEDURE IF EXISTS `GetOperationDrugswithPatientID` */;
/*!50003 SET @saved_cs_client         = @@character_set_client */ ;
/*!50003 SET @saved_cs_results        = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client    = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection    = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode          = @@sql_mode */ ;
/*!50003    SET    sql_mode                                          =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
CREATE              DEFINER=`root`@`localhost`              PROCEDURE
`GetOperationDrugswithPatientID`(
    in patient_id int
)
begin
    select a.Operation_ID, d.Name, c.NumOfUse from
    OperatationOn as a join Operation as b join OperationDrug as c on
    a.Operation_ID = b.Operation_ID = c.Operation_ID
    join Drugs as d on
    c.Drug_ID = d.Drug_ID
    where a.Patient_ID = patient_id;
end ;;
```

```sql
DELIMITER ;
/*!50003 SET sql_mode              = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection   = @saved_col_connection */ ;
/*!50003 DROP PROCEDURE IF EXISTS `GetPatientHistorywithID` */;
/*!50003 SET @saved_cs_client        = @@character_set_client */ ;
/*!50003 SET @saved_cs_results       = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode         = @@sql_mode */ ;
/*!50003    SET    sql_mode                                        =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
CREATE DEFINER=`root`@`localhost` PROCEDURE `GetPatientHistorywithID`(
    in check_patient_id int
)
begin
    select  a.Patient_ID,  c.Firstname,  c.Lastname,  c.Age,  c.Gender,  b.Diagnosis
from (
    Patient as a join Person as c on
    a.Person_ID = c.Person_ID
    join Diagnose as b on
    a.Patient_ID = b.Patient_ID
    )
    where
    a.Patient_ID = check_patient_id;

end ;;
```

```
DELIMITER ;
/*!50003 SET sql_mode                = @saved_sql_mode */ ;
/*!50003 SET character_set_client    = @saved_cs_client */ ;
/*!50003 SET character_set_results   = @saved_cs_results */ ;
/*!50003 SET collation_connection    = @saved_col_connection */ ;
/*!50003 DROP PROCEDURE IF EXISTS `GetPersonDetailswithName` */;
/*!50003 SET @saved_cs_client        = @@character_set_client */ ;
/*!50003 SET @saved_cs_results       = @@character_set_results */ ;
/*!50003 SET @saved_col_connection   = @@collation_connection */ ;
/*!50003 SET character_set_client    = utf8 */ ;
/*!50003 SET character_set_results   = utf8 */ ;
/*!50003 SET collation_connection    = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode         = @@sql_mode */ ;
/*!50003 SET sql_mode                =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
CREATE DEFINER=`root`@`localhost` PROCEDURE `GetPersonDetailswithName`(
    in firstname varchar(45),
     in lastname varchar(45)
)
begin
    select * from
     Person as a join ContactInfo as b on
     a.Person_ID = b.Person_ID
     where a.Firstname = firstname and a.Lastname = lastname;
end ;;
DELIMITER ;
/*!50003 SET sql_mode                = @saved_sql_mode */ ;
/*!50003 SET character_set_client    = @saved_cs_client */ ;
/*!50003 SET character_set_results   = @saved_cs_results */ ;
/*!50003 SET collation_connection    = @saved_col_connection */ ;
```

```sql
/*!50003 DROP PROCEDURE IF EXISTS `GetPharamacyInventorywithLocation` */;
/*!50003 SET @saved_cs_client          = @@character_set_client */ ;
/*!50003 SET @saved_cs_results         = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client   = utf8 */ ;
/*!50003 SET character_set_results = utf8 */ ;
/*!50003 SET collation_connection   = utf8_general_ci */ ;
/*!50003 SET @saved_sql_mode          = @@sql_mode */ ;
/*!50003    SET    sql_mode                                             =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_
DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_S
UBSTITUTION' */ ;
DELIMITER ;;
CREATE                DEFINER=`root`@`localhost`                PROCEDURE
`GetPharamacyInventorywithLocation`(
    in location varchar(255)
)
begin
    select a.Location, c.Name, c.Size, c.Price, c.Producer, b.Inventory from
     Pharmacy as a join Storage as b on
     a.Pharmacy_ID = b.Pharmacy_ID
     join Drugs as c on
     b.Drug_ID = c.Drug_ID
     where a.Location = location;
end ;;
DELIMITER ;
/*!50003 SET sql_mode                  = @saved_sql_mode */ ;
/*!50003 SET character_set_client   = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection   = @saved_col_connection */ ;
/*!40103 SET TIME_ZONE=@OLD_TIME_ZONE */;

/*!40101 SET SQL_MODE=@OLD_SQL_MODE */;
```

```
/*!40014 SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS */;

/*!40014 SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS */;

/*!40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT */;

/*!40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS */;

/*!40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION */;

/*!40111 SET SQL_NOTES=@OLD_SQL_NOTES */;
```

-- Dump completed on 2017-04-13 18:38:38