

Conceptual and Logical Database Design

Project Name: Go!medicine

Team Name: WaterFly

Team Member:

You Sihan(Team Lead)

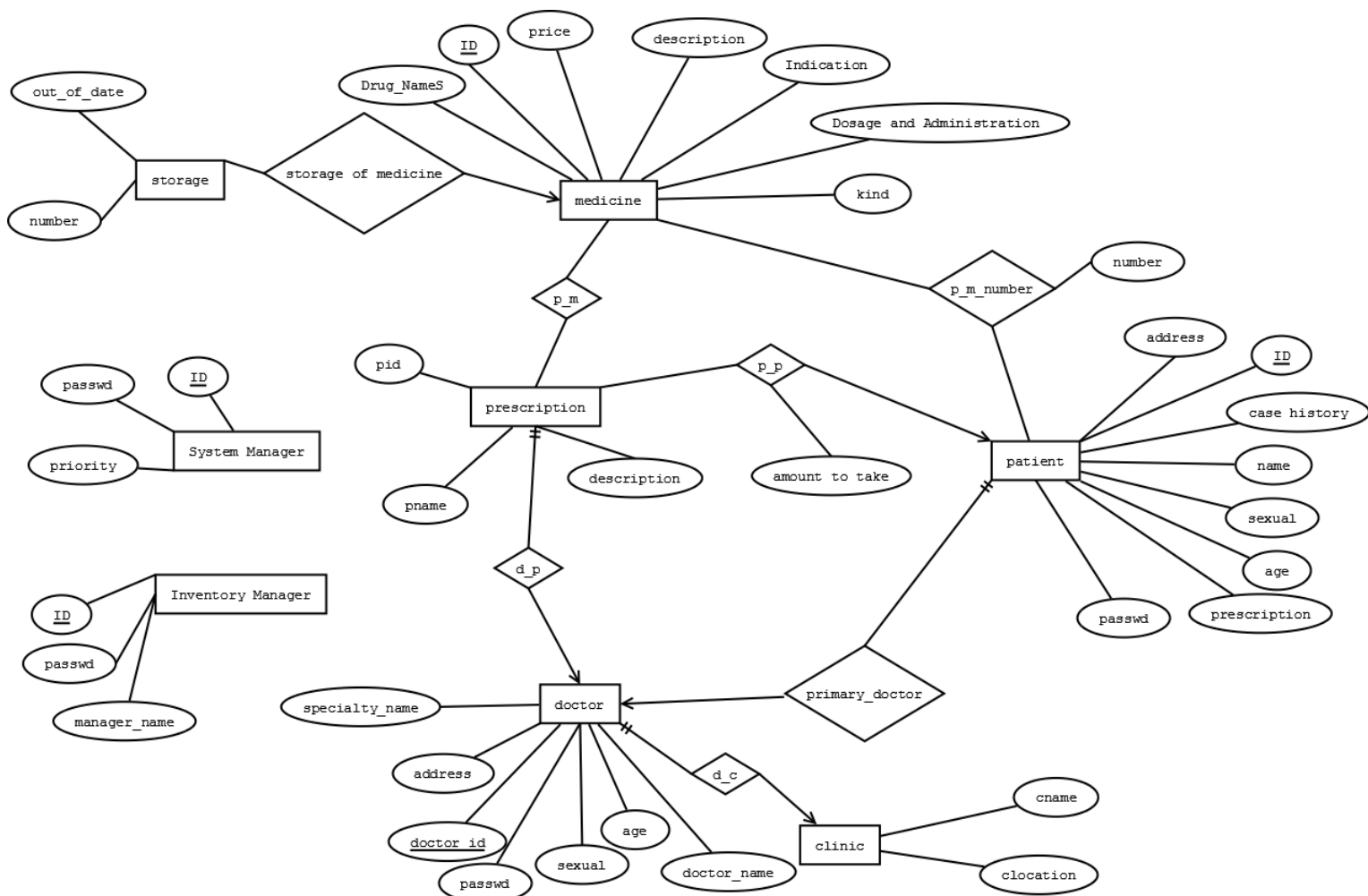
Su Junhao

Du Sijia

An Dong

Database Design

Entity Relationship Diagram (using Dia)



Description of E-R the diagram

entity "medicine" has many kind of information

medicine storage information stores in "storage" entity

patient account medicine amount info show in "p_m_number" relationship

patient take prescription info show in "p_p" relationship

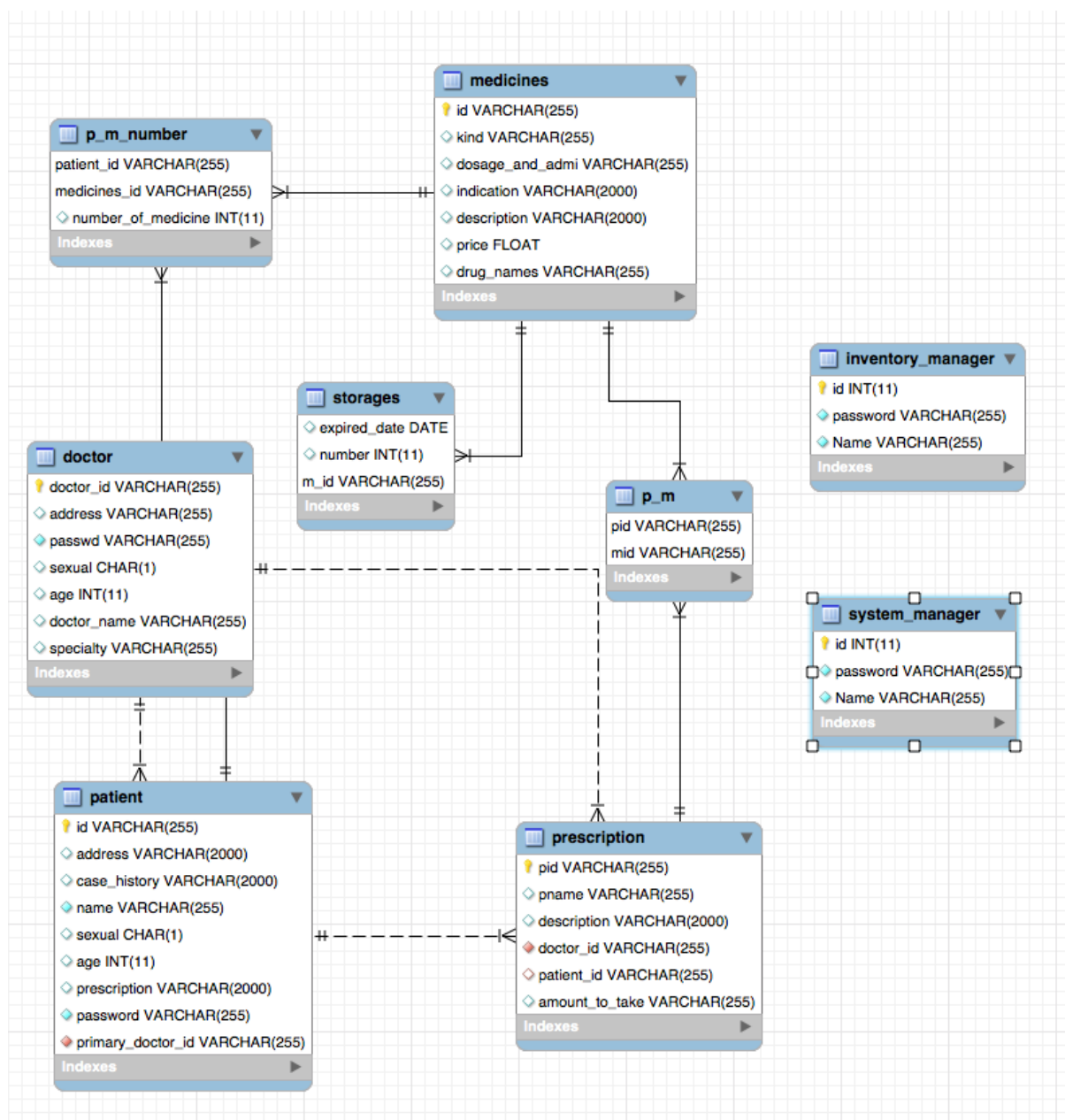
each patient has a primary doctor, show in "primary_doctor" relationship

each doctor have one clinic and one speciality

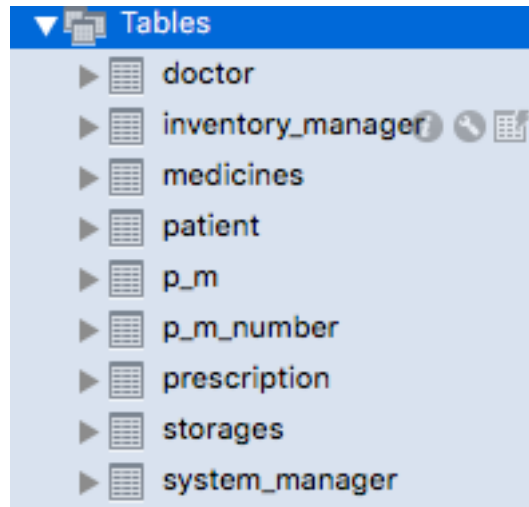
each "prescription" entity has a relationship among doctor show in "d_p"

we also assume that each prescription can only create for a patient

Logical Database Design (using MySQL Workbench)



Database Schema



```
CREATE TABLE inventory_manager
(
  Id int not null,
  password varchar(255) not null,
  Name varchar(255) not null,
  primary key(id)
);
```

```
CREATE TABLE system_manager
(
  Id int not null,
  password varchar(255) not null,
  Name varchar(255) not null,
  primary key(id)
);
```

```
CREATE TABLE storages
(
  medicines_name varchar(255) not null,
  expired_date date,
  number varchar(255),
  primary key(medicines_name)
);
```

```
CREATE TABLE medicines
(
  id varchar(255) not null,
  kind varchar(255),
  dosage_and_admi varchar(255),
```

```
indication varchar(2000),
description varchar(2000),
price float,
drug_names varchar(255),
primary key(id)
);
create table prescription
(
pid varchar(255) not null,
pname varchar(255),
description varchar(2000),
doctor_id varchar(255) not null,
patient_id varchar(255),
amount_to_take varchar(255),
primary key(pid)
);
create table med_des
(
pid varchar(255) not null,
mid varchar(255) not null,
primary key(pid)
);
create table doctor
(
doctor_id varchar(255) not null,
address varchar(255),
passwd varchar(255) not null,
sexual char(1),
age int,
doctor_name varchar(255),
specialty varchar(255),
primary key(doctor_id)
);
create table patient
(
id varchar(255) not null,
address varchar(2000),
case_history varchar(2000),
name varchar(255) not null,
sexual char(1),
age int,
prescription varchar(2000),
password varchar(255) not null,
primary_doctor_id varchar(255) not null,
primary key(id)
);
create table p_m_number
```

```
(
patient_id varchar(255) not null,
medicines_id varchar(255) not null,
number_of_medicine int,
primary key(patient_id,medicines_id),
foreign key(patient_id) references patient(id),
foreign key(medicines_id) references medicines(id)
);
```

The Identification of Data Sources

The database of our project is designed to manage the stock of medicines in the hospital, so our data source is hospital, especially the data from Pharmaceutical Warehouse in the hospital. As the generality of the database become stronger, we may use data from clinic and pharmacy for further test. The information about patients, doctors, storage of drugs and something about medicines will be provided by the hospital. And we will use the data from the website of CPI (China pharmaceutical Information) and CFDA (China food and drug administration) for the details and security guarantee of the various medicines from different brand and produced from different area.

Privacy and Security Risk Management

There is a risk of obtaining information about the database by persons who are not employee of the medical institution. We can create an account for each employee, and each of them will have their own access rights to the system, depending on the requirement and status.

Meeting Log

No	Date and time	Duration	Location	Discussion topic	Attendance
1	2016/04/21 10:00am	20mins	Zhengxin Building	Entity Relationship	ALL
2	2016/04/28 10:00am	1.5hours	Zhengxin Building	schema of our database	ALL