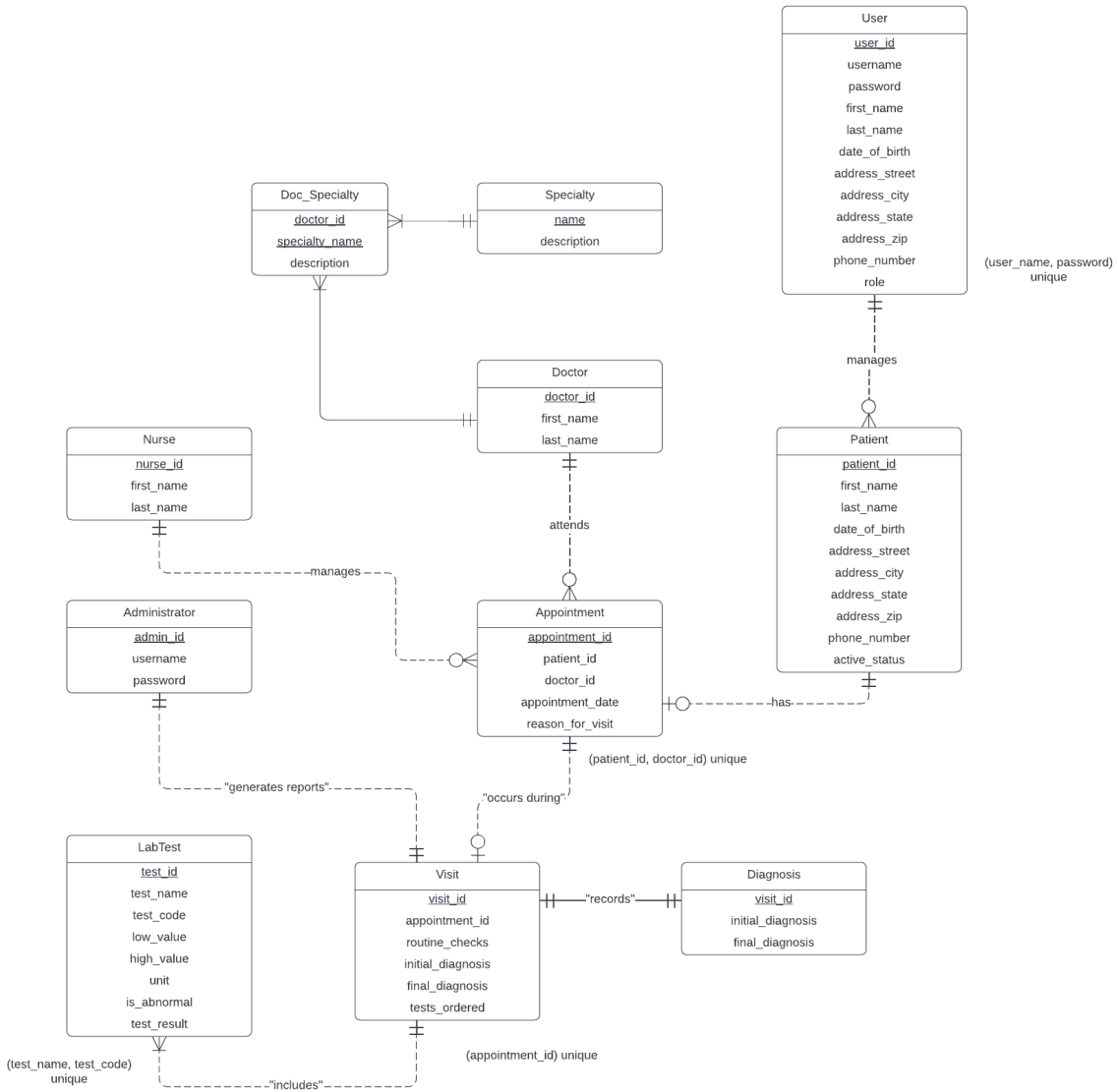
User
user_id
username
password
first_name
last_name
date_of_birth
address_street
address_city
address_state
address_zip
phone_number
role
(user_name, password) unique
Doc_Specialty
doctor_id
specialty_name
description
Specialty
name
description
Doctor
doctor_id
first_name
last_name
manages
Nurse
nurse_id
first_name
last_name
Patient
patient_id
first_name
last_name
date_of_birth
address_street
address_city
address_state
address_zip
phone_number
active_status
attends
manages
Administrator
admin_id
username
password
Appointment
appointment_id
patient_id
doctor_id
appointment_date
reason_for_visit
has
(patient_id, doctor_id) unique
"generates reports"
"occurs during"
LabTest
test_id
test_name
test_code
low_value
high_value
unit
is_abnormal
test_result
Visit
visit_id
appointment_id
routine_checks
initial_diagnosis
final_diagnosis
tests_ordered
"records"
Diagnosis
visit_id
initial_diagnosis
final_diagnosis
(test_name, test_code) unique
"includes"
(appointment_id) unique

User

user_id	username	password	first_name	last_name	date_of_birth	address_street	address_city	address_state	address_zip	phone_number	role

Patient

patient_id	first_name	last_name	date_of_birth	address_street	address_city	address_state	address_zip	phone_number	active_status

Appointment

appointment_id	patient_id	doctor_id	appointment_date	reason_for_visit

Doctor

doctor_id	first_name	last_name

Specialty

Name	description

Doc_Specialty

doctor_id	specialty_name	description

Nurse

nurse_id	first_name	last_name

Administrator

admin_id	username	password

LabTest

test_id	test_name	test_code	low_value	high_value	unit	is_abnormal	test_result

Visit

visit_id	appointment_id	routine_checks	initial_diagnosis	final_diagnosis	tests_ordered

Diagnosis

visit_id	initial_diagnosis	final_diagnosis

User:

user_id (pk) INTEGER

username (unique, not null) VARCHAR(255)

password (unique, not null) VARCHAR(255)

first_name VARCHAR(255)

last_name VARCHAR(255)

date_of_birth DATETIME

address_street VARCHAR(255)

address_city VARCHAR(255)

address_state VARCHAR(255)

address_zip INTEGER

phone_number CHAR(10)

role VARCHAR(255)

Patient:

`patient_id`(pk) <INTEGER>,

`first_name` < VARCHAR(255)>,

`last_name` < VARCHAR(255)>,

`date_of_birth` <DATETIME>,

`address_street` < VARCHAR(255)>,

`address_city` < VARCHAR(255)>,

`address_state` < VARCHAR(255)>,

`address_zip` <INTEGER>,

`phone_number` <CHAR(10)>,

`active_status` <bool>

Appointment

`appointment_id`(pk) <INTEGER>,

`patient_id` (unique)

`doctor_id` (unique)

`appointment_date` <DATETIME>,

`reason_for_visit` <VARCHAR(255)>

Foreign Key Appointment(patient_id) references Patient(patient_id)

Foreign Key Appointment(doctor_id) references Doctor(doctor_id)

Doctor

`doctor_id` <INTEGER>,

`first_name` < VARCHAR(255)>,

`last_name` < VARCHAR(255)>

Specialty

`name` (pk)<VARCHAR(255)>,

`description` < VARCHAR(255)>

Doc_Specialty

`doctor_id` (pk)<INTEGER>,

`specialty_name` < VARCHAR(255)>,

`description` < VARCHAR(255)>

Foreign Key Doc_Specialty(doctor_id) references Doctor(doctor_id)

Nurse

`nurse_id` (pk)<INTEGER>,

`first_name` < VARCHAR(255)>,

`last_name` < VARCHAR(255)>

Administrator

`admin_id` (pk)<INTEGER>,

`username` < VARCHAR(255)>,

`password` < VARCHAR(255)>

LabTest

`test_id` (pk,)<INTEGER>,

`test_name` (unique)<VARCHAR(255)>,

`test_code` (unique)<INTEGER>,

`low_value` < INTEGER >,

`high_value` < INTEGER >,

`unit` < INTEGER >,

`is_abnormal` <bool>,

`test_result` <VARCHAR(255)>

Visit

`visit_id` (pk)<INTEGER>,

`appointment_id`(unique),

`routine_checks` <bool>,

`initial_diagnosis` <VARCHAR(255)>,

`final_diagnosis` < VARCHAR(255)>,

`tests_ordered` < VARCHAR(255)>

Foreign Key Visit (appointment_id) references Appointment(appointment_id)

Diagnosis

`visit_id`(pk) <INTEGER>,

`initial_diagnosis` <VARCHAR(255)>,

`final_diagnosis` <VARCHAR(255)>

Foreign Key Diagnosis (visit_id) references Visit(visit_id)

Assumption of the min and max cardinality

1. The User has one to many relationships with Patient table. A patient managed by one and only one user where a user can manage zero of many patients.
2. The Appointment table has one to one relationship with patient table. A individual appointment has one and only one patient, where a patient can have zero or one appointment in the individual time.
3. The Specialty table has one to many relationships to the Doc_Specialty table. A doc_Specialty can be special with one and only one Special subject where that special subject can have many doc-Specialty.
4. The Doc_Specialty table has one to many relationships to the Doc_Specialty table. A doc_Specialty can be special with one and only one doctor where that doctor can have one many doc-Specialty.
5. A doctor can have zero or many appointments where an appointment can be assigned with one and only one doctor.
6. A nurse can manage zero or many appointments where an appointment can be assigned with one and only one nurse.
7. An administrator can generate one and only visit at a time where a visit must be generated by one and only one administrator.
8. An appointment can have zero or one visit (doctor or patient might be absent) where a visit can be occurred by one and only one appointment.
9. A visit can be included with one or many Labs test where each lab test to be conducted by one and only one visit.
10. Diagnosis must be done by each visit once.