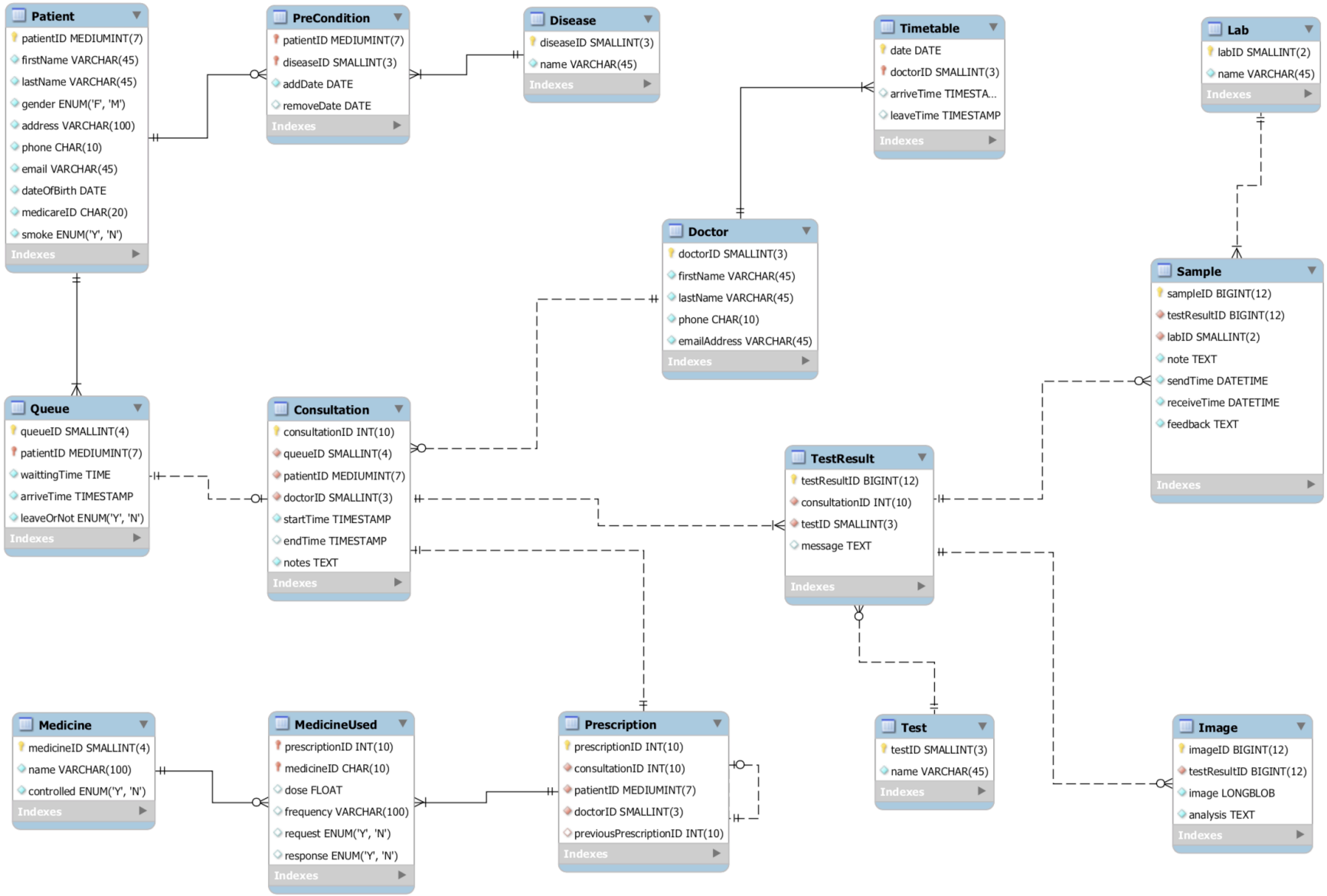
Patient
patientID MEDIUMINT(7)
firstName VARCHAR(45)
lastName VARCHAR(45)
gender ENUM('F', 'M')
address VARCHAR(100)
phone CHAR(10)
email VARCHAR(45)
dateOfBirth DATE
medicareID CHAR(20)
smoke ENUM('Y', 'N')
Indexes
PreCondition
patientID MEDIUMINT(7)
diseaseID SMALLINT(3)
addDate DATE
removeDate DATE
Indexes
Disease
diseaseID SMALLINT(3)
name VARCHAR(45)
Indexes
Timetable
date DATE
doctorID SMALLINT(3)
arriveTime TIMESTA...
leaveTime TIMESTAMP
Indexes
Lab
labID SMALLINT(2)
name VARCHAR(45)
Indexes
Doctor
doctorID SMALLINT(3)
firstName VARCHAR(45)
lastName VARCHAR(45)
phone CHAR(10)
emailAddress VARCHAR(45)
Indexes
Sample
sampleID BIGINT(12)
testResultID BIGINT(12)
labID SMALLINT(2)
note TEXT
sendTime DATETIME
receiveTime DATETIME
feedback TEXT
Indexes
Queue
queueID SMALLINT(4)
patientID MEDIUMINT(7)
waittingTime TIME
arriveTime TIMESTAMP
leaveOrNot ENUM('Y', 'N')
Indexes
Consultation
consultationID INT(10)
queueID SMALLINT(4)
patientID MEDIUMINT(7)
doctorID SMALLINT(3)
startTime TIMESTAMP
endTime TIMESTAMP
notes TEXT
Indexes
TestResult
testResultID BIGINT(12)
consultationID INT(10)
testID SMALLINT(3)
message TEXT
Indexes
Medicine
medicineID SMALLINT(4)
name VARCHAR(100)
controlled ENUM('Y', 'N')
Indexes
MedicineUsed
prescriptionID INT(10)
medicineID CHAR(10)
dose FLOAT
frequency VARCHAR(100)
request ENUM('Y', 'N')
response ENUM('Y', 'N')
Indexes
Prescription
prescriptionID INT(10)
consultationID INT(10)
patientID MEDIUMINT(7)
doctorID SMALLINT(3)
previousPrescriptionID INT(10)
Indexes
Test
testID SMALLINT(3)
name VARCHAR(45)
Indexes
Image
imageID BIGINT(12)
testResultID BIGINT(12)
image LONGBLOB
analysis TEXT
Indexes

Data Dictionary

Entity 'Patient'

The entity Patient holds the basic information (ID, first name, last name, phone number etc) of each patient.

Attribute	Description
patientID	This is the primary-key of Patient, automatically generated by the DBMS.
firstName	Holds the first name of the patient. E.g. 'John', for a patient named John Lennon.
lastName	Holds the last name of the patient. E.g. 'Lennon', for a patient named John Lennon.
gender	Holds the gender of the patient. It applies ENUM type. E.g. 'F' or 'M', for female or male respectively.
address	Holds the home address of the patient. It may be up to 100 characters. E.g. '111 Bourke Street, MELBOURNE, VIC 3000, AUSTRALIA.'
phone	Holds the phone number of the patient. E.g. '0123456789'.
email	Holds the email address of the patient. E.g. 'johnlennon@gmail.com'.
dateOfBirth	Holds the date of birth of the patient. E.g. '1995-10-01', for a patient born on October 1st in 1995.
medicareID	Holds the 20-digit Medicare number of the patient. E.g. '01234012340123401234'.
smoke	Holds the information about whether the patient smokes or not. It applies ENUM type. E.g. 'Y' or 'N', for smoking or not.

Entity 'Disease'

The entity Disease holds the information (disease ID and name) of the listed 300 standard disease the patients may have.

Attribute	Description
diseaseID	This is the primary-key of disease, automatically generated by the DBMS.
name	Holds the name of the disease. E.g. 'Diabetes'.

Entity 'PreCondition'

The entity PreCondition holds the information (patient ID, disease ID, add date and remove date) about the disease history of each patient.

Attribute	Description
patientID	This is one of the primary-keys of PreCondition, and it is also a foreign key from entity 'Patient'.
diseaseID	This is another one of the primary-keys of PreCondition, and it is also a foreign key from entity 'Disease'.
addDate	Holds the date information about when the patient get the disease. E.g. '2014-10-01', for a patient get the disease on October 1st in 2014.
removeDate	Holds the date information about when the disease removed. E.g. '2017-10-01', for a patient get the disease on October 1st in 2017. If the disease doesn't remove so far, it should be left as NULL.

Entity 'Queue'

After the patients register or sign in, they will be put into the queue list until the doctors use specific software to call the waiting patients in order.

Attribute	Description
queueID	This is the primary key of the Queue, which is given automatically to patients after registration or signing. It will be called by order when doctors are free for next consultation.
patientID	This is the primary key and foreign key at the same time. When the system calls the queueID for consultation, patientID will help identify which patient in the queue list is. By searching patientID, the system will be able to access the details of patients.
waitingTime	From the time when patients sign in to the time when patients are called to consultation or leave, the time of whole process will be recorded in waitingTime which is for the purpose of future analysis.
arriveTime	The system will automatically record the precise time when patients sign in for queue. E.g.'2018-8-27 13:34:45', for the time a patient signed in.
leaveOrNot	If the queueID is called for three times when doctor is ready for consultation and no one shows up in room, the doctor will use the software to call the next patient and it will be recorded as 'Y' in this column. Otherwise, a 'N' will be recorded.

Entity 'Doctor'

The table includes all details of doctors who work for the clinic.

Attribute	Description
doctorID	This is the primary key of the Doctor. By tracking this attribute which is a unique number for working staff in the clinic, system will show all related stuff, working time, prescription, etc.

firstName	This is the column for recording the first name of all doctors.
LastName	This is the column for recording the last name of all doctors.
phone	This is the column for recording phone number of each doctor to contact them, which should be limited to 10 characters.
emailAddress	This is the column for recording email address of each doctor.

Entity 'Timetable'

The entity Timetable holds the arrangement information (date, doctor ID, arrive time and leave time) of each doctor.

Attribute	**Description**
date	This is one of the primary-keys of Timetable. E.g. '2017-10-01', for October 1st in 2017.
doctorID	This is another one of the primary-keys of Timetable, and it is also a foreign key from entity 'Disease'. With the combination of another primary-key of date, the arrangement of a doctor can be checked.
arriveTime	Holds the information about when the doctor arrives the clinic. It applies TIMESTAMP type. E.g. '2017-10-01 10:00:00', for a doctor arrived the clinic at 10 am on October 1st in 2017. If a doctor is not arranged on that day, it should be left as NULL.
leaveTime	Holds the information about when the doctor leaves the clinic. It applies TIMESTAMP type. E.g. '2017-10-01 10:00:00', for a doctor leaved the clinic at 10 am on October 1st in 2017. If a doctor is not arranged on that day, it should be left as NULL.

Entity 'Consultation'

The process that the patients have inquiries to doctors and doctors try diagnose what kind of diseases the patients get.

Attribute	Description
consultationID	This is the primary key of the Consultation, and it will be set up when the doctor starts the consultation.
queueID	This is a foreign key of the Consultation, which will be given before the consultation.
patientID	This is a foreign key of the Consultation to identify which patient is at the consultation.
doctorID	This is a foreign key of the Consultation and shows which doctor holds the consultation.
startTime	When the patient is called for the consultation and show up, it means the the start of the consultation and the precise time will be recorded manually when the doctor starts. e.g. '2018-8-23 8:15:23', for start of the consultation.
endTime	The tine when doctor use the software to record the end time of consultation manually, which can also be a signal that the doctor is ready for next patient. e.g. '2018-8-23 9:10:23', for the end of the consultation.
notes	At the end of consultation, doctors need to take some notes of details, which are limited to up to 200 words, for the future reference.

Entity 'Medicine'

The entity Medicine holds the information (medicine ID, name, controlled) of about five thousand medicines which can be prescribed by the clinic.

Attribute	Description
medicineID	This is the primary-key of Medicine. Each medicine has its unique medicine ID to identify them.

name	The name of medicine itself. E.g. ‘aspirin’.
controlled	This field holds either a 'Y' for Yes, or 'N' for NO- regarding whether or not the medicine belongs to controlled drugs. About 10% of the medications on our list are “Schedule 8” controlled drugs, such as strong painkillers with addictive potential. Prescribing one of these to a patient requires that we ask the government Chief Health Officer for permission.

Entity ‘MedicineUsed’

The entity MedicineUsed holds the information (prescription ID, medicine ID, dose, frequency, request, response) of the medicine which is used in the prescription.

Attribute	**Description**
prescriptionID	This is the primary-key of MedicineUsed. It will be set up when a prescription is written.
medicineID	This is the primary-key and the foreign-key of MedicineUsed. This unique integer refers to a certain medicine.
dose	This instructs the dose of medicine each patient should take each time. E.g. ‘10 mg’.
frequency	This instructs patient how often they should take the medicine. E.g. ‘twice a day’.
request	This field holds either a 'Y' for Yes, or 'N' for NO- regarding whether or not clinic ask the government Chief Health Officer for permission to use the controlled drug.
response	This field holds either a 'Y' for Yes, or 'N' for NO- regarding whether or not the government’s respond that clinic can use the controlled drug.

Entity 'Prescription'

The entity Prescription holds the information (prescription ID, consultation ID, patient ID, doctor ID, previous prescription ID) of the Prescription which is written by doctor or extended by duty nurse.

Attribute	Description
prescriptionID	This is the primary-key of Prescription. It will be set up when a prescription is written.
consultationID	This is the foreign-key of Prescription. And it shows the prescription is written in which consultation.
patientID	This is the foreign-key of Prescription. And it shows which patient the prescription is written for.
doctorID	This is the foreign-key of Prescription. And it shows which doctor writes the prescription.
previousPrescriptionID	This is for extended prescription. If the prescription is extended from a previous prescription by the patient phoning the clinic, we should record the previous prescriptionID. If it is an initial prescription, previosPrescriptionID is NULL.

Entity 'Test'

The entity holds the information (test ID, name) of 100 standard tests (such as "chest x- ray") that doctors can choose from.

Attribute	Description
testID	This is the primary-key of Test. Each test has its unique test ID to identify them.
name	The name of test itself. E.g. 'chest x- ray'.

Entity 'Image'

The entity image holds the information (image ID, test result ID, image, analysis) about the images result from the test.

Attribute	Description
imageID	This is the primary-key of Image. It will be set up when the test results in one or more images.
testResultID	This is the foreign-key of Image. It shows which test result the image is included.
image	Images result from test and can be up to 20 Mb in size. Therefore, the type should be LONGBLOB.
analysis	The short analysis is around 100 words and analyses the image.

Entity 'TestResult'

When one or more tests are operated, the results should be recorded manually in this table. It helps both patient and doctor get notified in time.

Atrribute	Description
testResultID	This is the primary key of the TestResult. It is a unique number for each test result.
consultationID	This is the foreign key of the TestResult, which helps identify which consultation the test result belongs to.
testID	This is the foreign key of the TestResult. It is extracted from test list to show which type of test is used.
message	When the results of each sample are sent back from lab, the message will be sent to patients and doctors in time. At the same time, it will be recorded for the later review.

Entity ‘Sample’

When some tests are performed, one or more biological samples are taken from patients for further study. This table includes all details of the sample and help working staff track down the whole process.

Attribute	Description
sampleID	This is the primary key of the Sample which is a unique number, for proper management of numerous samples.
testResultID	This is the foreign key of the Sample. The test result may have one or more samples, so it helps track which test result the samples belong to.
labID	This is the foreign key of the Sample and it shows which one of ten labs do the sample study.
note	This is a piece of descriptive text of each sample. It is limited to up to 15 words.
sendTime	When samples are sent to labs, the time of sending will be recorded manually. E.g. ‘2018-8-21 15:23:45’.
recieveTime	When samples are sent back from labs, the time of receiving will be recorded manually. E.g. ‘2018-8-22 10:45:32’.
feedback	The working staff will write a piece of text which is limited to 500 words for each sample to help both patient and doctors understand the fact.

Entity 'Lab'

The entity Lab holds the information (lab ID and name) of the labs which would receive the results of samples.

Attribute	Description
labID	This is the primary-key of disease, automatically generated by the DBMS.
name	Holds the name of the lab. E.g. ‘Blood Test Lab’.