Creating index for Hospital database

**What is a non-clustered index:**

A non-clustered is an index where the order of the rows does not match the physical order of the actual data. It is instead ordered by the columns that make up the index. In a non-clustered index, the leaf pages of the index do not contain any actual data, but instead contain pointers to the actual data. These pointers would point to the clustered index data page where the actual data exists (or the heap page if no clustered index exists on the table).

**Why create non-clustered indexes:**

Having lower or lowest time to achieve data is the main purpose of using a index. Even when the table is getting larger and larger, an index keeps the searching time low at acceptable rate.

**Non-clustered index for Patient table**

Beside patientId or pId, a perfect element to create the index is SSN column because SSN has its uniqueness for each patient.

Sql code

CREATE NONCLUSTERED INDEX patientSSN\_index ON dbo.Patient(SSN)

**Non-clustered index for Doctor table**

Beside doctorId or dId, doctor ‘s specially is considered a fitting column to create an index

SQL code

CREATE NONCLUSTERED INDEX doctorSpecially\_index on dbo.Doctor\_specialize(specialzie)

**Non-clustered index for Nurse table**

Beside nurseId or nId, nurse ‘s first name is considered a fitting column to create an index in this Hospital database

SQL code

CREATE NONCLUSTERED INDEX nurseName\_index on dbo.Nurse(firstName)

**Non-clustered index for Record table**

Beside recordId or recordId which is optimal in this case, finding record based on patientId is also acceptable within this range of database since a patient normally has no more than 4 records.

SQL code

CREATE NONCLUSTERED INDEX recordPatientId\_index on dbo.Record(pId)