IT 340 Assignment2

E-R Model (50 Points)

Due Wednesday, April 21, by 11:59 PM

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You MUST do it in groups with both students in the same section.

Download the document from D2L and change the file name using your MNSU usernames.

Keep the following instructions and type your work below.

You must follow the given style. You could lose up to five points on the style.

Upload your document to D2L by the due time.

Everyone is required to create GitHub repository for this course, but I need only one GitHub submission for this

project. Add the link of GitHub in the D2L Dropbox description box.

Each group is required to use Microsoft Teams for communication while working on the project.

You must use the following style to do Phase I of the project.

1. Identify entity types with brief description

a) Wards – wards for patients

b) Patient – Patients In hospital

c) Staff – Staff/doctors in hospital

d) Appointment – scheduled appointments in hospital

e) Medication – Medications for patients

f) Items – Items/equipment/tools required for medical use.

g) Pharmacy – Pharmacy for medications(patients)

h) Requisition – requisitions for staff and accommodations

i) Suppliers – Medical suppliers for equipment

**2.** Identify relationship types with brief description. You must include the multiplicity and attributes if any.

**Ward(0..1) assignsPatient (1..M)Patients**

Attributes: Ward\_Name, Patient\_Name(first,last), Ward\_Number

one Ward can have many Patients at one time

one Patient can have one Ward at one time

**Ward(0..M) assignsStaff (M..1)Staff**

Attributes: Ward\_Number, Staff\_Number

one Ward can have many Staff at one time

many Staff can have one Ward at one time

**Ward(0..M) orderRequisition (1..M)Requisition**

Attributes: Ward\_Number, Requisition\_Number

one Ward can have many Requisitions at one time

many Requisitions can be sent to one Ward at one time

**Ward(0..M) getsSurgical/Nonsurgical (1..M)Surgical/Nonsurgical Supplies**

Attributes: Ward\_Number, Item\_Number, Suppliers\_Number

one Ward can have many Surgical/Nonsurgical Supplies

many Surgical/Nonsurgical Supplies can be at one Ward at one time

**Ward(0..M) getPharmaceuticals (1..M)Pharmacy**

Attributes: Ward\_Number, Drug/Item\_Number

one Ward can have many Drug/Items at one time

many Drug/Items can be at one Ward at one time

**Staff(0..1) assignsAppointment (1..1)Appointment**

Attributes: Staff\_Number, Appointment\_Number, Patient\_Number, Ward\_Number

one Staff can only have one Appointments at one time

one Appointment can only have one Staff at one time

**Staff(0..M) getsRequisition (1..1)Requisition**

Attributes: Staff\_Number, Requisition\_Number, Ward\_Number

one Staff can have many Requisitions at one time

one Requisition can only have one Staff at one time

**Staff(0..M) assignPatient (1..M)Patient**

Attributes: Staff\_Number, Patient\_Number

one Staff can have many Patients at one time

many Patients can have one Staff at one time

**Patient(0..M) getsMedication (1..M)Medication**

Attributes: Patient\_Number, Medication\_Number

one Patient can have many Medications at one time

one Medication can have many Patients at one time

**Suppliers(0..M) hasSurgical/Nonsurgical (1..M)Surgical/Nonsurgical**

Attributes: Suppliers\_Numbers, Item\_Number

one Suppliers can have many Items at one time

one Item can have many Suppliers at one time

**3.** Describe each entity type in detail

a) **Ward:** Assign and record the patients ward number, ward name, and location. The number of beds and telephone number is stored in the data.

**Ward\_Number**, Ward\_Name, Location, Number\_of\_Beds, Telephone

PRIMARY KEY: **Ward\_Number**

ALTERNATE KEY:

FOREIGN KEY:

b) **Staff:** Records for the staff including qualifications and work experience. The records contain qualitative information based on their experience, hiring dates, and organization work.

**Staff\_Number**, First\_Name, Last\_Name, Address, Sex, Telephone, DOB, **NIN**, Position, **Ward\_Number**, Currently\_Salary, Hours/Week, Paid Weekly/Monthly, Permanent/Temporary, Qualification, Work\_Experience\_Position, Work\_StartDate, Work\_EndDate, Organization

PRIMARY KEY: **Staff\_Number**

ALTERNATE KEY: **NIN**

FOREIGN KEY : **Ward\_Number**

c) **Patient:** Records for the patients. Records include personal information, relational information, and clinical information. The records include information about the kin and doctor/clinic.

**Patient\_Number**, First\_Name, Last\_Name, Address, Telephone, DOB, Sex, Marital\_Status, Registered\_Date, Next\_of\_Kin, Kin\_Relationship, Kin\_Address, Kin\_Telephone, Doctor\_Name, Clinic\_Address, Clinic\_Telephone

PRIMARY KEY: **Patient\_Number**

ALTERNATE KEY:

FOREIGN KEY:

d) **Appointment:** Records for appointments that include information about the patient and staff. Appointments include ward, date, type, and duration.

**Appointment\_Number**, **Staff\_Number**, **Patient\_Number**, **Ward\_Number**, Date\_of\_Appointment, Room\_Number, Status, Type\_Of\_Appointment, Duration

PRIMARY KEY: **Appointment\_Number**

ALTERNATE KEY:

FOREIGN KEY: **Staff\_Number, Patient\_Number, Patient\_Number**

e) **Medication:** Records for medication given to patients from staff. The records for medication include a start and end date, method of use, and quantity needed to be taken per day.

**Medication\_Number**, **Patient\_Number**, Units\_Per\_Day, Method, Start\_Date, End\_Date

PRIMARY KEY: **Medication\_Number**

ALTERNATE KEY:

FOREIGN KEY: **Patient\_Number**

f) **Surgical/Nonsurgical Supplies:** Records for medical and non- medical supplies. The supplies data gives an item number for each item, supplier number, name of the item, description, quantity of the given item, reorder level, and the cost.

**Item\_Number**, **Suppliers\_Number**, Item\_Name, Item\_Desc, Quantity, Reorder\_Level, Cost\_Per\_Unit

PRIMARY KEY: **Item\_Number**

ALTERNATE KEY:

FOREIGN KEY: **Suppliers\_Number**

g) **Pharmacy:** Records that hold information about the pharmacy for given drugs. The data holds a drug number, supplier number, drug name and type, description of the drug, dosage, and the method of use.

**Drug\_Number**, **Suppliers\_Number**, Drug\_Name, Drug\_Desc, Dosage, Method, Quantity, Reorder\_Level, Cost\_Per\_Unit

PRIMARY KEY: **Drug\_Number**

ALTERNATE KEY:

FOREIGN KEY: **Suppliers\_Number**

h) **Requisition:** Records for the demand of supply. The data includes information about the staff and ward. It also includes supply information about drugs needed.

**Requsition\_Number**, **Staff\_Number**, **Ward\_Number**, **Drug\_Number**, Requisition\_Type, Quantity, Order\_Date, Delivery\_Date

PRIMARY KEY: **Requisition\_Number**

ALTERNATE KEY:

FOREIGN KEY: **Staff\_Number, Ward\_Number, Drug/Item\_Number**

1. **Suppliers:** Records for the suppliers. The data gives general information including name, address, and phone number.

**Suppliers\_Number**, First\_Name, Last\_Name, Address, Telephone, Fax\_Number

PRIMARY KEY: **Suppliers\_Number**

ALTERNATE KEY:

FOREIGN KEY:

4. Draw the E-R diagram Show the primary key for each table.

E-R diagram is in .pdf of Lucid Charts