**IT340 Assignment2**

**E-R Model (50 Points)**

**Due Wednesday, April 21, by 11:59PM**

**Name1: Aaron Kasic**

**Name2: Nathan Sloneker**

**Entities:**

* Ward: Ward to be occupied bypatientsand staff
* Staff: Workers of the ward
* Patients: Referred to the hospital
* Next of Kin: Contact of the patient
* Local doctors: Refers the hospital to the patient
* Patient appointment: Given by a staff to a patient, results in either an inpatient or outpatient
* Outpatient: Patient determined in the appointment to not need entry to the ward
* Inpatient: Determined by the appointment to be sent to the ward
* Patient Medication: Prescribed to the patient
* Surgical and nonsurgical supplies: Used by the ward
* Pharmaceutical supplies: Used by the war*d*
* Ward requisitions: Requested by the staff(charge nurse) to be taken from the central supply of the hospital and given to a specific ward
* Suppliers: Suppliers of the surgical, nonsurgical, and pharmaceutical supplies

**Relationship types:**

* Staff(M..O) WorksIn (M..O) Ward

Attributes: StartDate, EndDate, Shift

        Many staff can work in one ward at one time

        One ward has many staff at one time

* Inpatient(M..O) Occupies (M..O) Ward

Attributes: bed, bed number

Many inpatients can occupy one ward at one time

One ward is occupied by many inpatients at one time

* Local Doctor(O..O) Refers (O..O) Patient

Attributes: Referral, Clinic number, Doctor Name

One doctor refers one patient at one time

One patient is referred by one doctors at one time

* Staff(O..O) Gives (O..O) Patient Appointment

Attributes: Date, time

One staff gives one patient appointment at one time

One patient appointment is given by one staff at one time.

* Patient(O..O) Receives (O..O)Patient Appointment

Attributes:

One patient receives one patient appointment at one time

One patient appointment is given to one patient at one time

* Patient(O..M) Is Prescribed (O..M) Patient Medication

Attributes: number, patient, drug type

One patient is prescribed many patient medications at one time

Many patient medications are prescribed to one patient at one time

* Ward(M..M) Uses (M..M) Surgical and nonsurgical supplies

Attributes:

Many wards use many surgical and nonsurgical supplies at one time

Many surgical and nonsurgical supplies are used by many wards at one time

* Ward(M..M) Uses (M..M) Pharmaceutical supplies

Attributes:

Many wards use many pharmaceutical supplies at one time

Many pharmaceutical supplies are used by many wards at one time

* Staff(M..M) Orders (M..M) Ward requisitions

Attributes: order number, staff, date

Many staff order many ward requisitions at one time

Many ward requisition re ordered by many staff at one time

* Suppliers(O..M) Supplies (O..M) Surgical and nonsurgical supplies

Attributes: order number, date

One supplier supplies many surgical and nonsurgical supplies at one time

Many surgical and nonsurgical supplies are supplied by one supplier at one time

* Suppliers (O..M) Supplies (O..M) Pharmaceutical supplies

Attributes: order number, date

One supplier supplies many pharmaceutical supplies at one time

Many pharmaceutical supplies are supplied by one supplier at one time

* Patients(O..M) IsContactOf (O..M) Next of Kin

Attributes: name, phone number

One patient is contact of many next of kin at one time

Many next of kin are the contacts of one patient at one time

**Entity Descriptions**

* **Ward**
  + Ward Number : Primary Key
  + Ward Name
  + Location
  + Total number of beds
  + Extension number

* **Staff**
  + Staff Number : Primary Key
  + Name (First and last i.e. **Not atomic**)
  + Full address
  + Telephone number
  + Date of birth
  + Sex
  + National Insurance Number (Alternate Key)
  + Position held
  + Current salary
  + Salary scale
  + Qualifications (**Not atomic,** Date, type, name of institution)
  + Work experience (**Not atomic**, Name of organization, position, start date, finish date)
  + Employment contract type (**Not atomic**, Hours worked per week, temporary or permanent, type of salary payment)

* **Patients**
  + Patient number : Primary Key
  + Name (**Not atomic**, first and last)
  + Address
  + Phone number
  + DOB
  + Sex
  + Marital status
  + Date registered with hospital
  + Info on next of kin(Foreign)

* **Patient’s next of kin**
  + Name (**Not atomic**, First and last)
  + Relationship to patient
  + Address
  + Phone number

* **Local Doctor**
  + Full name
  + Clinic number : Primary Key
  + Clinic address
  + Clinic phone number

* **Patient appointment**
  + Local Doctor
  + Appointment
  + Staff Name
  + Appointment number : Primary Key
  + Staff Number
  + Date
  + Time
  + Examination

* **Outpatient**
  + Patient number : Primary Key
  + Name (**Not atomic,** First and last)
  + Address
  + Phone number
  + Date of birth
  + Sex
  + Appointment date
  + Appointment time

* **Inpatient**
  + Patient number : Primary Key
  + Patient name
  + Address
  + Phone number
  + Date of birth
  + Sex
  + Marital status
  + Next of kin
  + Date placed on waiting list
  + Ward required
  + Expected duration of stay
  + Date placed in ward
  + Date expected to leave
  + Actual date patient left ward
  + Bed number

* **Patient Medication**
  + Patient number : Primary Key
  + Patient name
  + Drug number
  + Drug name
  + Units per day
  + Method of administration
  + Start date
  + Finish date

* **Surgical and Non-Surgical supplies**
  + Item number : Primary Key
  + Item name
  + Item description
  + Quantity in stock
  + Reorder level
  + Cost per unit

* **Pharmaceutical Supplies**
  + Drug number : Primary Key
  + Drug name
  + Description
  + Dosage
  + Method of administration
  + Quantity in stock
  + Reorder level
  + Cost per unit

* **Ward Requisitions**
  + Requisition number : Primary Key
  + Staff name
  + Ward name
  + Ward number
  + Drug/item number
  + drug/item name
  + Description
  + Dosage
  + Method of administration
  + Cost per unit
  + Quantity required
  + Date ordered

* **Suppliers**
  + Number : Primary Key
  + Name
  + Address
  + Telephone
  + Fax number