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| COMP1168 |
| Group Assignment |
|  |
| **Ashley Hutchinson Student ID 100840293**  **David Olano Student ID 100847924**  **Anna Poluektova Student ID 100786356**  **Minan Suleiman StudentID 100856329** |
| **4/17/2013** |

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Part 1

Relational Schema

Primary Key

Foreign Key

Facility

|  |  |
| --- | --- |
| Facility ID | Facility Name |

Care Center

|  |  |  |  |
| --- | --- | --- | --- |
| CareCenterID | NurseInCharge | Facility ID | Care Center Name |

Employee/CareCenter

|  |  |  |
| --- | --- | --- |
| CareCenterID | EmpNo | HoursWorked |

Employee

|  |  |  |
| --- | --- | --- |
| EmpNo | EmpFirstName | EmpLastName |

Room

|  |  |
| --- | --- |
| RoomNo | CareCenterID |

Physician

|  |  |  |
| --- | --- | --- |
| PhysicianID | PhysicianFirstName | PhysicianLastName |

Physician Patient Admin/Refer

|  |  |  |
| --- | --- | --- |
| PhysicianID | MRN | Admitted/Referred |

Diagnosis

|  |  |
| --- | --- |
| DiagnosisCode | DiagnosisName |

Diagnostic Unit

|  |  |  |
| --- | --- | --- |
| UnitID | FacilityID | UnitName |

Treatment

|  |  |  |
| --- | --- | --- |
| TreatmentCode | UnitID | TreatmentName |

Ordered Treatment

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TreatmentCode | OrderID | TreatmentDate | TreatmentTime | Results |

Vendor

|  |  |
| --- | --- |
| VendorID | VendorName |

ItemVendor

|  |  |
| --- | --- |
| VendorID | ItemNo |

Item

|  |  |  |
| --- | --- | --- |
| ItemNo | ItemDese | ItemUnitCost |

Patient

|  |  |  |  |
| --- | --- | --- | --- |
| MRN | PhysicianID | PatientFirstName | PatientLastName |

Bed

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| BedID | RoomID | MRN | BedNo | CareCenterID |  |

Assessment

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| VisitID | MRN | EmpNo | VisitDate | VisitTime |
| VisitComments | VisitPatientWeight | VisitPatientBP | VisitPatientPulse | VisitPatientTemp |

PhysicianDX

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| DxID | MRN | PhysicianID | DiagnosisDate | DiagnosisTime |

Order

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| OrderID | PhysicianID | MRN | TreatmentCode | ItemNo | OrderDate | OrderTime |

Item Consumption

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ConsumptionID | MRN | ItemNo | ConsumeDate | ConsumeTime | ConsumeQty | TotalCost |

Item Billing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| BillingID | MRN | RoomNo | ItemNo | StartDate | EndDate | Cost |

Schedule

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ScheduleID | FacilityID | PhysicianID | SchedBegin | SchedEnd |

2.

Data Dictionary

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | Facility |  |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| Facility ID | Interger | 15 | 1 | 15 | Facility ID | Administration |
| Facility Name | AlphaNumeric | 30 |  |  | The Name of the Facility | Administration |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | Care Center |  |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| CareCenterID | Interger | 15 | 1 | 15 | Care center Id | Administration |
| NurseInCharge | AlphaNumeric | 50 | 1 | 50 | Name of Nurse in charge of that care center | HR |
| FacilityID | Interger | 15 | 1 | 15 | Facility ID | Administration |
| CareCenterName | AlphaNumeric | 50 |  |  | Name of Care Center | Administration |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | Employee/CareCenter | |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| CareCenterID | Interger | 15 | 1 | 15 | Care center Id | Care Center |
| EmpNo | Interger | 15 | 1 | 15 | Employee ID | HR |
| HourWorked | Decimal | 5(5,2) |  |  | Hours the employee worked (i.e. 40.0 hours) | HR |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | Employee |  |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| EmpNo | Interger | 15 | 1 | 15 | Employee ID | HR |
| EmpFirstName | AlphaNumeric | 50 |  |  | Employee’s First Name | HR |
| EmpLastName | AlphaNumeric | 50 |  |  | Employee’s Last Name | HR |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | Room |  |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| RoomNo | Interger | 15 | 1 | 15 | Room ID | Administration |
| CareCenterID | Interger | 15 | 1 | 15 | Care center Id | Administration |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | Physician |  |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| PhysicianID | Interger | 15 | 1 | 15 | Id of physician | Administration |
| PhysicianFirstName | AlphaNumeric | 50 |  |  | First Name of Physician | HR |
| PhysicianLastName | AlphaNumeric | 50 |  |  | Last name of Physician | HR |

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| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | Physician Patient Admin/Refer | | |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| PhysicianID | Interger | 15 | 1 | 15 | Id of physician | Administration |
| MRN | Interger | 15 | 1 | 15 | Id of patient | Administration |
| Admitted/Referred | AlphaNumeric | 1 | 1 | 1 | A for admitted or R for referred | Physician |

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| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | Diagnosis |  |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| DiagnosisCode | Interger | 15 | 1 | 5 | The Code of the diagnosis | Physician |
| DiagnosisName | AlphaNumeric | 100 |  |  | The name of the diagnosis | Physician |

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| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | Diagnostic Unit | |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| UnitID | Interger | 15 | 1 | 15 | Id of the unit | Administration |
| Facility ID | Interger | 15 | 1 | 15 | Facility ID | Administration |
| UnitName | AlphaNumeric | 50 |  |  | Name of Unit | Administration |

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| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | Treatment |  |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| TreatmentCode | Interger | 15 | 1 | 15 | Id of the treatment | Diagnostic Unit |
| UnitID | Interger | 15 | 1 | 15 | Id of the unit | Administration |
| TreatmentName | AlphaNumeric | 100 |  |  | Name of Treatment | Diagnostic Unit |

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| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | Ordered Treatment | | |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| TreatmentCode | Interger | 15 | 1 | 15 | Id of the treatment | Diagnostic Unit |
| OrderID | Interger | 15 | 1 | 15 | Id of the order | Physician |
| TreatmentDate | AlphaNumeric | 8 | 8 | 8 | Date of treatment (i.e. day-month-year 08-10-2012) | Nurse |
| TreatmentTime | Decimal | 4 | 4 | 4 | Time in military standard (i.e. 17.15) | Nurse |
| Results | AlphaNumeric | 100 |  |  | Comments about the results from the treatment (i.e. adverse reactions, successfully treated, further treatment needed) | Physician and Nurse |

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| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | Vendor |  |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| VendorID | Interger | 15 | 1 | 15 | Id of Vendor | Accounts Payable |
| VendorName | AlphaNumeric | 50 |  |  | Name of vendor | Accounts Payable |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | ItemVendor |  |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| VendorID | Interger | 15 | 1 | 15 | Id of Vendor | Accounts Payable |
| ItemNo | Interger | 15 | 1 | 15 | Id of Item | Accounts Payable |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | Item |  |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| ItemNo | Interger | 15 | 1 | 15 | Id of Item | Accounts Payable |
| ItemDese | AlphaNumeric | 50 |  |  | Description of Item | Accounts Payable |
| ItemUnitCost | Decimal | 5(5,2) |  |  | Cost of item per unit (i.e. 23.45 for one unit ) | Accounts Payable |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | Patient |  |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| MRN | Interger | 15 | 1 | 15 | Id of patient | Administration |
| PhysicianID | Interger | 15 | 1 | 15 | Id of physician | Administration |
| PatientFirstName | AlphaNumeric | 50 |  |  | First Name of Patient | Administration |
| PatientLastName | AlphaNumeric | 50 |  |  | Last Name of Patient | Administration |

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| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | Bed |  |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| BedID | Interger | 15 | 1 | 15 | ID of Bed | Administration |
| RoomID | Interger | 15 | 1 | 15 | ID of Room | Administration |
| MRN | Interger | 15 | 1 | 15 | Id of patient | Administration |
| BedNo | Interger | 1 | 1 | 6 | Bed Number (position of Bed in room) | Administration |
| CareCenterID | Interger | 15 | 1 | 15 | Care center Id | Administration |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | Assessement |  |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| VisitID | Interger | 15 | 1 | 15 | ID of visit | Administration |
| MRN | Interger | 15 | 1 | 15 | Id of patient | Administration |
| EmpNo | Interger | 15 | 1 | 15 | Employee ID | HR |
| VisitDate | AlphaNumeric | 8 | 8 | 8 | Date of visit (i.e. day-month-year 08-10-2012) | Nurse |
| VisitTime | Decimal | 4(2,2) | 4 | 4 | Time in military standard (i.e. 17.15) | Nurse |
| VisitComments | AlphaNumeric | 150 |  |  | Record reason for visit and symptoms | Physician |
| VisitPatientWeight | Decimal | 5(3,2) |  |  | Weight of patient in Kg. (i.e. 61.4 Kg) | Nurse |
| VisitPatientBP | Interger | 6 |  |  | Blood pressure of Patient (i.e. 120/80) | Nurse |
| VisitPatientPulse | Interger | 3 |  |  | Pulse rate of Patient (i.e. 74) | Nurse |
| VisitPatientTemp | Decimal | 5(3,2) |  |  | Temperature of patient in Celsius (i.e. 36.6) | Nurse |

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| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | PhysicianDx |  |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| DxID | Interger | 15 | 1 | 15 | Id of diagnosis | Physician |
| MRN | Interger | 15 | 1 | 15 | Id of patient | Administration |
| PhysicianID | Interger | 15 | 1 | 15 | Id of physician | Administration |
| DiagnosisDate | AlphaNumeric | 8 | 8 | 8 | Date of diagnosis (i.e. day-month-year 08-10-2012) | Physician |
| DiagnosisTime | Decimal | 4(2,2) | 4 | 4 | Time in military standard (i.e. 17.15) | Physician |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | Order |  |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| OrderID | Interger | 15 | 1 | 15 | Id of the order | Physician |
| PhysicianID | Interger | 15 | 1 | 15 | Id of physician | Administration |
| MRN | Interger | 15 | 1 | 15 | Id of patient | Administration |
| TreatmentCode | Interger | 15 | 1 | 15 | Id of the treatment | Diagnostic Unit |
| ItemNo | Interger | 15 | 1 | 15 | Id of Item | Accounts Payable |
| OrderDate | AlphaNumeric | 8 | 8 | 8 | Date of order(i.e. day-month-year 08-10-2012) | Physician |
| OrderTime | Decimal | 4(2,2) | 4 | 4 | Time in military standard (i.e. 17.15) | Physician |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | ItemConsumption |  |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| ConsumptionID | Interger | 15 | 1 | 15 | Id of Consumption | Nurse |
| MRN | Interger | 15 | 1 | 15 | Id of patient | Administration |
| ItemNo | Interger | 15 | 1 | 15 | Id of Item | Accounts Payable |
| ConsumeDate | AlphaNumeric | 8 | 8 | 8 | Date of consumption(i.e. day-month-year 08-10-2012) | Nurse |
| ConsumeTime | Decimal | 4(2,2) | 4 | 4 | Time in military standard (i.e. 17.15) | Nurse |
| ConsumeQty | Interger | 15 | 1 | 15 | Amount Consumed | Nurse |
| TotalCost | Decimal | 5(3,2) |  |  | ConsumeQty \* ItemUnitCost | Accounts Payable |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | Item Billing |  |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| BillingID | Interger | 15 | 1 | 15 | ID of Billing | Accounts Receivable |
| MRN | Interger | 15 | 1 | 15 | Id of patient | Administration |
| RoomNo | Interger | 15 | 1 | 15 | Room ID | Administration |
| ItemNo | Interger | 15 | 1 | 15 | Id of Item | Accounts Payable |
| StartDate | AlphaNumeric | 8 | 8 | 8 | Start date of billing(i.e. day-month-year 08-10-2012) | Accounts Receivable |
| EndDate | AlphaNumeric | 8 | 8 | 8 | End date of billing(i.e. day-month-year 08-10-2012) | Accounts Receivable |
| Cost | Decimal | 7(5,2) |  |  | Total cost of the bill | Accounts Receivable |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Data Item: | Schedule |  |  |  |  |  |
| Name | Type | Length | Min | Max | Description | Source |
| ScheduleID | Interger | 15 | 1 | 15 | Id of schedule | HR |
| Facility ID | Interger | 15 | 1 | 15 | Facility ID | Administration |
| PhysicianID | Interger | 15 | 1 | 15 | Id of physician | Administration |
| SchedBegin | AlphaNumeric | 8 | 8 | 8 | Start date of the Schedule (i.e. day-month-year 08-10-2012) | HR |
| SchedEnd | AlphaNumeric | 8 | 8 | 8 | End date of the Schedule (i.e. day-month-year 08-10-2012) | HR |

3. Creating Tables

CREATE TABLE Facility

(FacilityID INTEGER(15) NOT NULL,

FacilityName ALPHANUMERIC(30),

CONSTRAINT Customer\_PK PRIMARY KEY (FacilityID));

CREATE TABLE CareCenter

(CareCenterID INTEGER(15) NOT NULL,

NurseInCharge ALPHANUMERIC(50) NOT NULL,

FacilityID INTEGER(15) NOT NULL,

CareCenterName ALPHANUMERIC(50),

CONSTRAINT CareCenter\_PK PRIMARY KEY (CareCenterID),

CONSTRAINT CareCenter\_FK1 FOREIGN KEY (NurseInCharge),

CONSTRAINT CareCenter\_FK2 FOREIGN KEY (FacilityID) REFERENCES Facility (FacilityID));

CREATE TABLE Employee\_CareCenter

(CareCenterID INTEGER(15) NOT NULL,

EmpNo INTEGER(15) NOT NULL,

HoursWorked DECIMAL(5(5,2)),

CONSTRAINT Employee\_CareCenter\_PK PRIMARY KEY (CareCenterID),

CONSTRAINT Employee\_CareCenter\_PK PRIMARY KEY (EmpNo));

CREATE TABLE Employee

(EmpNo INTEGER(15) NOT NULL,

EmpFirstName ALPHANUMERIC(50),

EmpLastName ALPHANUMERIC(50),

CONSTRAINT Employee\_PK PRIMARY KEY (EmpNo));

CREATE TABLE Room

(RoomNo INTEGER(15) NOT NULL,

CareCenterID INTEGER(15) NOT NULL,

CONSTRAINT PK Room\_PK PRIMARY KEY (RoomNo),

CONSTRAINT Room\_FK FOREIGN KEY (CareCenterID) REFERENCES CareCenter (CareCenterID));

CREATE TABLE Physician

(PhysicianID INTEGER(15) NOT NULL,

PhysicianFirstName ALPHANUMERIC(50),

PhysicianLastName ALPHANUMERIC(50),

CONSTRAINT Physician\_PK PRIMARY KEY (PhysicianID));

CREATE TABLE PhysicianPatientAdmin\_Refer

(PhysicianID INTEGER(15) NOT NULL,

MRN INTEGER(15),

Admitted\_Referred ALPHANUMERIC(1),

CONSTRAINT PhysicianPatientAdmin\_Refer \_PK PRIMARY KEY (PhysicianID));

CREATE TABLE Diagnosis

(DiagnosisCode INTERGER(15) NOT NULL,

DiagnosisName ALPHANUMERIC(100),

CONSTRAINT Diagnosis\_PK PRIMARY KEY (DiagnosisCode));

CREATE TABLE DiagnosisUnit

(UnitID INTEGER(15) NOT NULL,

FacilityID INTEGER(15) NOT NULL,

UnitName ALPHANUMERIC(50),

CONSTRAINT PK DiagnosisUnit \_PK PRIMARY KEY (UnitID),

CONSTRAINT DiagnosisUnit \_FK FOREIGN KEY (FacilityID) REFERENCES Facility (FacilityID));

CREATE TABLE Treatment

(TreatmentCode INTEGER(15) NOT NULL,

UnitID INTEGER(15) NOT NULL,

TreatmentName ALPHANUMERIC(100),

CONSTRAINT PK Treatment \_PK PRIMARY KEY (TreatmentCode),

CONSTRAINT Treatment \_FK FOREIGN KEY (UnitID) REFERENCES DiagnosticUnit (UnitID));

CREATE TABLE OrderedTreatment

(TreatmentCode INTEGER(15) NOT NULL,

OrderID INTEGER(15) NOT NULL,

TreatmentDate ALPHANUMERIC(8),

TreatmentTime DECIMAL(4),

Results ALPHANUMERIC(100),

CONSTRAINT OrderedTreatment\_PK PRIMARY KEY (TreatmentCode),

CONSTRAINT OrderedTreatment\_PK PRIMARY KEY (OrderID));

CREATE TABLE Vendor

(VendorID INTEGER(15) NOT NULL,

VendorName ALPHANUMERIC(50),

CONSTRAINT Vendor\_PK PRIMARY KEY (VendorID));

CREATE TABLE ItemVendor

(VendorID INTEGER(15) NOT NULL,

ItemNo INTEGER(15) NOT NULL,

CONSTRAINT ItemVendor\_PK PRIMARY KEY (VendorID),

CONSTRAINT ItemVendor\_PK PRIMARY KEY (ItemNo));

CREATE TABLE Item

(ItemID INTEGER(15) NOT NULL,

ItemDese ALPHANUMERIC(50),

ItemUnitCost DECIMAL(5(5,2)),

CONSTRAINT Item\_PK PRIMARY KEY (ItemID));

CREATE TABLE Patient

(MRN INTEGER(15) NOT NULL,

PhysicianID INTEGER(15) NOT NULL,

PatientFirstName ALPHANUMERIC(50),

PatientLastName ALPHANUMERIC(50),

CONSTRAINT PK Patient \_PK PRIMARY KEY (MRN),

CONSTRAINT Patient \_FK FOREIGN KEY (PhysicianID) REFERENCES Physician (PhysicianID));

CREATE TABLE Bed

(BedID INTEGER(15) NOT NULL,

RoomID INTEGER(15) NOT NULL,

MRN INTEGER(15) NOT NULL,

BedNo INTEGER(1),

CareCenterID INTEGER(15),

CONSTRAINT Bed\_PK PRIMARY KEY (BedID),

CONSTRAINT Bed\_FK1 FOREIGN KEY (RoomID) REFERENCES Room (RoomNo),

CONSTRAINT Bed\_FK2 FOREIGN KEY (MRN) REFERENCES Patient (MRN));

CREATE TABLE Assessment

(VisitID INTEGER(15) NOT NULL,

MRN INTEGER(15) NOT NULL,

EmpNo INTEGER(15) NOT NULL,

VisitDate ALPHANUMERIC(8),

VisitTime DECIMAL(4(2,2)),

VisitComments ALPHANUMERIC(150),

VisitPatientWeight DECIMAL(5(3,2)),

VisitPatientBP INTEGER(6),

VisitPatientPulse INTEGER(3),

VisitPatientTemp DECIMAL(5(3,2)),

CONSTRAINT Assessment\_PK PRIMARY KEY (VisitID),

CONSTRAINT Assessment \_FK1 FOREIGN KEY (MRN) REFERENCES Patient (MRN),

CONSTRAINT Assessment \_FK2 FOREIGN KEY (EmpNo) REFERENCES Employee (EmpNo));

CREATE TABLE PhysicianDx

(DxID INTEGER(15) NOT NULL,

MRN INTEGER(15) NOT NULL,

PhysicianID INTEGER(15) NOT NULL,

DiagnosisDate ALPHANUMERIC(8),

DiagnosisTime DECIMAL(4(2,2)),

CONSTRAINT PhysicianDx\_PK PRIMARY KEY (DxID),

CONSTRAINT PhysicianDx \_FK1 FOREIGN KEY (MRN) REFERENCES Patient (MRN),

CONSTRAINT PhysicianDx \_FK2 FOREIGN KEY (PhysicianID) REFERENCES Physician (PhysicianID));

CREATE TABLE Order

(OrderID INTEGER(15) NOT NULL,

PhysicianID INTEGER(15) NOT NULL,

MRN INTEGER(15) NOT NULL,

TreatmentCode INTEGER(15) NOT NULL,

ItemNo INTEGER(15) NOT NULL,

OrderDate ALPHANUMERIC(8),

OrderTime DECIMAL(4(2,2)),

CONSTRAINT Order\_PK PRIMARY KEY (OrderID),

CONSTRAINT Order \_FK1 FOREIGN KEY (PhysicianID) REFERENCES Physician (PhysicianID),

CONSTRAINT Order \_FK2 FOREIGN KEY (MRN) REFERENCES Patient (MRN),

CONSTRAINT Order \_FK3 FOREIGN KEY (TreatmentCode) REFERENCES Treatment (TreatmentCode),

CONSTRAINT Order\_FK4 FOREIGN KEY (ItemNo) REFERENCES Item (ItemNo));

CREATE TABLE Item\_Consumption

(ConsumptionID INTEGER(15) NOT NULL,

MRN INTEGER(15) NOT NULL,

ItemNo INTEGER(15) NOT NULL,

ConsumeDate ALPHANUMERIC(8),

ConsumeTime DECIMAL(4(2,2)),

ConsumeQty INTEGER(15),

TotalCost DECIMAL(5(3,2)),

CONSTRAINT Item\_Consumption \_PK PRIMARY KEY (ConsumptionID),

CONSTRAINT Item\_Consumption \_FK1 FOREIGN KEY (MRN) REFERENCES Patient (MRN),

CONSTRAINT Item\_Consumption \_FK2 FOREIGN KEY (ItemNo) REFERENCES Item (ItemNo));

CREATE TABLE Item\_Billing

(BillingID INTEGER(15) NOT NULL,

MRN INTEGER(15) NOT NULL,

RoomNo INTEGER(15) NOT NULL,

ItemNo INTEGER(15) NOT NULL,

StartDate ALPHANUMERIC(8),

EndDate ALPHANUMERIC(8),

Cost DECIMAL(7(5,2)),

CONSTRAINT Item\_Billing\_PK PRIMARY KEY (BillingID),

CONSTRAINT Item\_Billing \_FK1 FOREIGN KEY (MRN) REFERENCES Patient (MRN),

CONSTRAINT Item\_Billing \_FK2 FOREIGN KEY (RoomNo) REFERENCES Room (RoomNo),

CONSTRAINT Item\_Billing \_FK3 FOREIGN KEY (ItemNo) REFERENCES Item (ItemNo));

CREATE TABLE Schedule

(ScheduleID INTEGER(15) NOT NULL,

FacilityID INTEGER(15) NOT NULL,

PhysicianID INTEGER(15) NOT NULL,

SchedBegin ALPHANUMERIC(8),

SchedEnd ALPHANUMERIC(8),

CONSTRAINT Schedule\_PK PRIMARY KEY (ScheduleID),

CONSTRAINT Schedule\_FK1 FOREIGN KEY (FacilityID) REFERENCES Facility (FacilityID ),

CONSTRAINT Schedule \_FK2 FOREIGN KEY (PhysicianID) REFERENCES Physician (PhysicianID));

4. Inserting Data into tables

INSERT INTO Facility ( FacilityID, FacilityName) VALUES (2, ‘Howard Hughs Facility’ );

INSERT INTO CareCenter (CareCenterID, NurseInCharge, FacilityID, CareCenterName) VALUES (1, ‘Jill Myler’, 2, ‘Johns Facility’);

INSERT INTO Employee\_CareCenter (CareCenterID, EmpNo, HoursWorked) VALUES ( 1, 2324, 34.50 );

INSERT INTO Employee ( EmpNo, EmpFirstName, EmpLastName) VALUES ( 2233, ‘Bill’, ‘Johnston’);

INSERT INTO Room ( RoomNo, CareCenterID) VALUES ( 34, 56);

INSERT INTO Physician ( PhysicianID, PhysicianFirstName, PhysicianLastName) VALUES (4, ‘Bob’, ‘Smith’);

INSERT INTO PhysicianPatientAdmin\_Refer (PhysicianID, MRN, Admitted\_Referred) VALUES (342, 34334, ‘A’);

INSERT INTO Diagnosis ( DiagnosisCode, DiagnosisName) VALUES (5, ‘Diabetes’);

INSERT INTO DiagnosisUnit (UnitID, FacilityID, UnitName) VALUES ( 34, 55, ‘ICU Unit’);

INSERT INTO Treatment ( TreatmentCode, UnitID, TreatmentName) VALUES (3455, 87, ‘Allergy Shot’);

INSERT INTO OrderedTreatment (TreatmentCode, OrderID, TreatmentDate, TreatmentTime, Results) VALUES ( 3422, 3445, ‘09-08-2012’);

INSERT INTO Vendor (VendorID, VendorName) VALUES (34, ‘OxyMed’);

INSERT INTO ItemVendor (VendorID, ItemNo) VALUES ( 345, 232344);

INSERT INTO Item (ItemID, ItemDese, ItemUnitCost) VALUES (343, ‘Oxygen Mask for Adults’, 344.42);

INSERT INTO Patient (MRN, PhysicianID, PatientFirstName, PatientLastName) VALUES (343455, “Andrea”, “Payner” );

INSERT INTO Bed (BedID, RoomID, MRN) VALUES (2, 455, 342345);

INSERT INTO Assessment (VisitID, MRN, EmpNo, VisitDate, VisitTime, VisitComments, VisitPatientWeight, VisitPatientBP, VisitPatientPulse, VisitPatientTemp) VALUES ( 2323445, 43404, 034, ‘07-09-2012’, ’23.15’, ‘complaints of fever, aches, vomiting for last 3 days’ , 144.5, ‘120/80’, 59, 39.9 );

INSERT INTO PhysicianDx (DxID, MRN, PhsicianID, DiagnosisDate, DiagnosisTime) VALUES (34, 232344, 342, ’06-23-2000’, 12.30);

INSERT INTO Order (OrderID, PhysicianID, MRN, TreatmentCode, ItemNo, OrderDate, OrderTime) VALUES ( 3422, 45, 2323008, 44, 0388, 06-08-2011, ‘14.30’);

INSERT INTO Item\_Consumption (ConsumptionID, MRN, ItemNo, ConsumeDate, ConsumeTime, ConsumeQTY, TotalCost) VALUES (23555, 235058, 340686, ’04-04-2012’, ’20.45’, 3, 233.44);

INSERT INTO Item\_Billing(BillingID, MRN, RoomNo, ItemNo, StartDate, EndDate, Cost) VALUES (343444342, 3402929, 2, 232334, ’07-07-2012’, ’05-08-2012’, 23455.34);

INSERT INTO Schedule (ScheduleID, FacilityID, PhysicianID, SchedBegin, SchedEnd) VALUES (2323, 344, 44554, ’07-03-2012’, ’14-03-2012’);

5. Queries

a)

SELECT \*

FROM Facility

WHERE FacilityID = 2;

b)

SELECT SUM(COST)

FROM ITEM\_BILLING

WHERE MRN = 100833;

C)

SELECT \*

FROM ItemVendor

ORDER BY ItemID ;

D)

SELECT \*

FROM ItemVendor

GROUP BY ItemID AND HAVING 54;

e.)

SELECT \*

FROM Item I, ItemVendor IV, Vendor V

WHERE I.itemid = IV.ItemNo AND IV.VendorID = V.VendorID;

f.)

SELECT \*

FROM Item I RIGHT OUTER JOIN ItemVendor IV,

ON I.itemid = IV.ItemNo;

g.)

SELECT \*

FROM Patient

WHERE MRN IN (SELECT DISTINCT TreatementID FROM Treatment WHERE TreatmentID > 5)

h.)

SELECT e1.EmpNo,

e1.EmpFirstName,

e1.EmpLastName,

e1.SupervisorID,

e2.EmpFirstName as SupervisorFirstName,

e2.EmpLastName as SupervisorLastName

from Employee e1

left outer join Employee e2 on e1.SupervisorID = e2.EmployeeID

i.)

SELECT CASE

WHEN ItemDese = 8882 THEN ItemDese

ELSE “No Description entered’

END AS ItemDese

FROM Item;