

- Classes

- Class: Amenities

Description: Different types of Amenities accessible to the patients

Superclass: Bill

Attributes: Price, [AmenityID](#)

Attribute Description: Price of Amenities, **Unique ID used to determine amenity chosen for bill.**

- ~~○ Class: Assistant Manager~~

~~Description: Manages the sanitation employees~~

~~Superclass: Management~~

~~Attributes: N/A~~

~~Attribute Description: N/A~~

- ~~○ Class: Assistant Manager~~

~~Description: Manages the maintenance employees~~

~~Superclass: Management~~

~~Attributes: N/A~~

~~Attribute Description: N/A~~

- Class: ATM

Description: Money vending service for patients and employees

Superclass: Amenities

Attributes: N/A

Attribute Description: N/A

- Class: Cafeteria

Description: Place for employees and patients to buy food

Superclass: Amenities

Attributes: N/A

Attribute Description: N/A

- Class: CAT Scan

Description: A type of scanning that allows to see inside the body. More detailed than x-rays.

Superclass: Medical Imaging

Attributes: N/A

Attribute Description: N/A

- Class: Clerks

Description: Responsible for assigning rooms to patients

Superclass: Employees

Attributes: N/A

Attribute Description: N/A

- Class: Doctors

Description: Responsible for treating patients

Superclass: Employees

Attributes: N/A

Attribute Description: N/A

- ~~○ Class: Head Manager~~

~~Description: Manages the assistant managers~~

~~Superclass: Management~~

~~Attributes: N/A~~

~~Attribute Description: N/A~~

- ~~○ Class: Instrument Cleaners~~

~~Description: Make sure medical equipment is cleaned and sanitized~~

~~Superclass: Sanitation~~

~~Attributes: N/A~~

~~Attribute Description: N/A~~

- ~~○ Class: IT Technician~~

~~Description: Maintains the technical framework of the hospital~~

~~Superclass: Maintenance~~

~~Attributes: N/A~~

~~Attribute Description: N/A~~

- Class: Maintenance

Description: Make sure medical equipment is maintained

Superclass: Employees

Attributes: N/A

Foreign Keys: [ManagementID_FK](#)

Attribute Description: N/A

- Class: Management

Description: Manage other employees

Superclass: Employees

Attributes: N/A

Attribute Description: N/A

- Class: Materials

Description: List of all materials that is used to treat the patients.

Attributes: N/A

Attribute Description: N/A

- Class: Medical Imaging

Description: Technique and process of creating visual representation of the interior body

Superclass: Treatments

Attributes: **MedicalID int(10), X-Ray Flag boolean, MRI Flag boolean, Cat Flag boolean, Ultra Flag boolean**

Attribute Description: **MedicalID used to determine which medical imaging was used for bill, Flags are used for determining if imaging type is being used for Bill.**

- ~~○ Class: Medical Instrument Technician~~

~~Description: Maintains the condition of medical instruments~~

~~Superclass: Maintenance~~

~~Attributes: N/A~~

~~Attribute Description: N/A~~

- Class: Medicine

Description: List of all medicine that is given to the patients.

Superclass: Treatments

Attributes: N/A

Attribute Description: N/A

- Class: MRI Scan

Description: Used to diagnose patient using imaging technologies

Superclass: Medical Imaging

Attributes: N/A

Attribute Description: N/A

- Class: Nurses

Description: Record the height and weight of the patients

Superclass: Employees

Attributes: N/A

Attribute Description: N/A

- Class: PT

Description: Physical Therapy given to the patients.

Superclass: Treatments

Attributes: N/A

Attribute Description: N/A

- Class: Sanitation

Description: Cleaning and sanitizing hospital environments

Superclass: Employees

Attributes: N/A

Foreign Keys: MangementID_FK

Attribute Description: N/A

- Class: Surgery

Description: Surgery conducted on patients

Superclass: Treatments

Attributes: N/A

Attribute Description: N/A

- Class: Treatments

Description: Different types of treatments used to bill patient

Superclass: Bill

Attributes: **TreatmentID int(10), Medical Imaging ID int(10), Medical Imaging Flag boolean, Surgery Flag boolean, Materials Flag boolean, PT Flag boolean**

Attribute Description: **TreatmentID used to determine which treatment to be used for bill. Medical Imaging ID used to determine which imaging services were used for the bill. Flags used to determine specific treatment type.**

- Class: Uber

Description: Drop-off service for patients

Superclass: Amenities

Attributes: N/A

Attribute Description: N/A

- Class: UltraSound

Description: Used to diagnose patient using imaging technologies

Superclass: Medical Imaging

Attributes: N/A

Attribute Description: N/A

- Class: Vending Machines

Description: Dispenses food for patients and employees

Superclass: Amenities

Attributes: N/A

Attribute Description: N/A

- Class: Wi-Fi

Description: Internet service for patients and employees

Superclass: Amenities

Attributes: N/A

Attribute Description: N/A

- Class: X-Rays

Description: Used to diagnose patient using imaging technologies

Superclass: Medical Imaging

Attributes: N/A

Attribute Description: N/A

- Entities

- Entity: Bill

Description: A monetary charge assigned to a patient by the hospital

Primary Key: N/A

Foreign Key: SSN_FK

Attributes: **Treatment ID int (10), Amenity ID int (10), Nights Stayed int (100), Treatments Flag boolean, Amenities Flag boolean, Nights Stayed Flag boolean.**

Attribute Description: **Treatment ID used for determining treatments used for bill. Amenity ID used for determining amenity used for bill. Nights Stayed used for determining nights stayed for bill. Flags used for determining if treatments, amenities, or nights stayed were used for bill.**

- Entity: Employees

Description: A human who is employed by the hospital

Primary Key: Employee ID

Attributes: Name, Varchar, Sex, Varchar, Age, Integer, Salary, Integer, Employee ID, Integer, Date of Hire, Varchar, Check In Time, Float, Check Out Time, Float.

Attribute Description: Name is the name of the independent employee. Sex is the sex of the employee, coded M=male, F=female. Age is the age of the employee as an integer. Salary is the salary of the employee, as an integer. Employee ID is a unique integer assigned to the employee at hire time. Date of hire is a varchar, encoded as MM/DD/YYYY. Check in time is a floating point number representing when the employee clocked in for the day. Check out time is a floating point number representing when the employee clocked out for the day.

- Entity: Patients

Description: A human who is under the care of the hospital

Primary Key: SSN

Foreign Keys: DoctorID_FK, Room#_FK

Attributes: SSN, Integer, Diagnosis, Varchar, CheckIn Date, Varchar, CheckOut Date, Varchar, Name, Varchar, Credit Card, Integer, Room Number, Integer, Sex, Varchar, Age, Integer, Height, Float, Weight, Float, DOB, Varchar, Phone Number, Integer, Address, Varchar.

Attribute Description: SSN is the social security number of the patient, and is the unique identifier for the patient. Diagnosis is the diagnosis given to the patient by the doctor, expressed as a varchar. CheckIn Date is the date the patient checked in, coded as MM/DD/YYYY. CheckOut Date is the date the patient checked out, coded as MM/DD/YYYY. Name is the name of the patient. Credit card is the patient's credit card number as an integer. Room number is the number of the room the patient is staying in, as an integer. Sex is the sex of the patient, coded as M=male and F=female. Age is the age of the patient, expressed as an integer. Height is the height of the patient as a floating point number. Weight is the weight of the patient as a floating point number. DOB is the date of birth of the

patient, coded as MM/DD/YYYY. Phone number is the integer phone number of the patient. Address is the address of the patient as a varchar.

- Entity: Rooms

Description: Represents a room within the hospital

Primary Key: Room#

Foreign Key: MaintenenceID_FK, SanitationID_FK

Attributes: Room #, Integer

Attribute Description: Room # is an integer representing the room number in the hospital.

- Relationships

- Relationship: Assign

Entities: Clerks and Rooms

Cardinality: 1:1

Foreign Key: ClerkID_FK, Room#_FK

Description: A relationship between the clerks and rooms

- Relationship: Assigned

Entities: Doctors and Patients

Cardinality: 1:15

Description: A relationship between the doctors and patients

- Relationship: Assigned to

Entities: Rooms and Patients

Cardinality: 1:1

Foreign Key: Room#_FK, SSN_FK

Description: A relationship between the rooms and patients

- Relationship: Take Measurements

Entities: Nurses and Patients

Cardinality: 1:1

Foreign Keys: NurseID_FK, SSN_FK

Description: A relationship between the nurses and patients

- Relationship: Gets

Entities: Patients and Bill

Cardinality: 1:1

Description: A relationship between the Patients and their Bill