

- Classes

- Class: Amenities

Description: Different types of Amenities accessible to the patients

Superclass: Bill

Attributes: Price

Attribute Description: Price of Amenities

- 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: 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

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: N/A

Attribute Description: N/A

- 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

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: N/A

Attribute Description: N/A

- 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

Attributes: Nights Stayed, Integer, Amenities, Varchar[], Treatments, Varchar []

Attribute Description: Nights Stayed is a single integer representing the number of nights spent at the hospital. Amenities is an array of possible amenities that can go on the bill. Amenities are coded, C=cafeteria, V=vending machine, A=ATM, W=wi-fi, U=uber. Treatments is an array of possible treatments that can go on the bill. Treatments are coded, I=medical imaging, M=materials, R=medicine, P=PT, S=surgery.

- 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

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 #

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

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

Description: A relationship between the rooms and patients

- Relationship: Take Measurements

Entities: Nurses and Patients

Cardinality: 1:1

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