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   Task: Assignment 1 Hotel database Design
   Date Created: 11/03/2023 Last updated: 26/03/2023
*/

-- DROP TABLE statements
DROP TABLE IF EXISTS Payment
DROP TABLE IF EXISTS Discount
DROP TABLE IF EXISTS Booking
DROP TABLE IF EXISTS ReservationGuest
DROP TABLE IF EXISTS Reservation
DROP TABLE IF EXISTS CustomerAddress
DROP TABLE IF EXISTS Customer
DROP TABLE IF EXISTS PackageServiceItem
DROP TABLE IF EXISTS Package
DROP TABLE IF EXISTS ServiceItem
DROP TABLE IF EXISTS ServiceCategory
DROP TABLE IF EXISTS Facility
DROP TABLE IF EXISTS FacilityType
DROP TABLE IF EXISTS HotelAddress
DROP TABLE IF EXISTS Hotel
GO


--hotel table
CREATE TABLE Hotel(
    hotelID CHAR(3),
    name VARCHAR(30) NOT NULL UNIQUE,
    phone VARCHAR(10) NOT NULL,
    description VARCHAR(100),
    PRIMARY KEY(hotelID)
);

GO

--hotel address table
CREATE TABLE HotelAddress (
    hotelID CHAR(3),
    streetNo INT NOT NULL,
    streetName VARCHAR(100) NOT NULL,
    city VARCHAR(100) NOT NULL,
    postcode VARCHAR(10) NOT NULL,
    country VARCHAR(100) NOT NULL,
    PRIMARY KEY(hotelID),
    FOREIGN KEY (hotelID) REFERENCES Hotel(hotelID) ON UPDATE CASCADE ON DELETE NO
ACTION
);
```

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GO


--facility type table
CREATE TABLE FacilityType(
    facilityTypeID CHAR(7),
    name VARCHAR(30) NOT NULL,
    description VARCHAR(100) NOT NULL,
    capacity INT,
    PRIMARY KEY(facilityTypeID)
);

GO

--facility table
CREATE TABLE Facility(
    facilityID CHAR(9),
    hotelID CHAR(3) NOT NULL,
    name VARCHAR(30) NOT NULL,
    description VARCHAR(100) NOT NULL,
    status VARCHAR(10) NOT NULL,
    facilityTypeID CHAR(7) NOT NULL,
    PRIMARY KEY(facilityID),
    FOREIGN KEY (facilityTypeID) REFERENCES FacilityType(facilityTypeID) ON UPDATE NO
ACTION ON DELETE NO ACTION,
    FOREIGN KEY (hotelID) REFERENCES Hotel(hotelID) ON UPDATE NO ACTION ON DELETE
NO ACTION
);
GO

--service category table
CREATE TABLE ServiceCategory(
    categoryID CHAR(5),
    name VARCHAR(30) NOT NULL UNIQUE,
    description VARCHAR(100),
    type VARCHAR(10) NOT NULL,
    PRIMARY KEY(categoryID)
);

GO

--service item table
CREATE TABLE ServiceItem(
    serviceID CHAR(7),
    categoryID CHAR(5),
    name VARCHAR(30) NOT NULL,
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    description VARCHAR(100) NOT NULL,
    restrictions VARCHAR(100) NOT NULL,
    notes VARCHAR(100),
    comments VARCHAR(100),
    openTime TIME,
    closeTime TIME,
    baseCost MONEY NOT NULL,
    baseCurrency VARCHAR(20) NOT NULL,
    capacity INT,
    facilityID CHAR(9),
    PRIMARY KEY (serviceID),
    FOREIGN KEY (facilityID) REFERENCES Facility(facilityID) ON UPDATE NO ACTION ON
DELETE NO ACTION,
    FOREIGN KEY (categoryID) REFERENCES ServiceCategory(categoryID) ON UPDATE CASCADE
ON DELETE NO ACTION
);

GO

--package table
CREATE TABLE Package(
    packageID CHAR(10),
    name VARCHAR(30) NOT NULL,
    description VARCHAR(100),
    startDate DATETIME NOT NULL,
    endDate DATETIME NOT NULL,
    advPrice MONEY NOT NULL,
    advCurrency VARCHAR(20) NOT NULL,
    inclusions VARCHAR(100),
    exclusions VARCHAR(100),
    status VARCHAR(10),
    gracePeriod VARCHAR(10),
    empName VARCHAR(30) NOT NULL,
    PRIMARY KEY(packageID),
);

GO


--PackageServiceItem table
CREATE TABLE PackageServiceItem(
    packageID CHAR(10),
    serviceID CHAR(7),
    quantity INT,
    PRIMARY KEY (packageID, serviceID),
    FOREIGN KEY (packageID) REFERENCES Package(packageID) ON UPDATE NO ACTION ON
DELETE NO ACTION,
```

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    FOREIGN KEY (serviceID) REFERENCES ServiceItem(serviceID) ON UPDATE NO ACTION ON
DELETE NO ACTION
);

GO

--customer table
CREATE TABLE Customer(
    customerID CHAR(10),
    name VARCHAR(30) NOT NULL,
    phone VARCHAR(10) NOT NULL,
    email VARCHAR(30) NOT NULL,
    PRIMARY KEY(customerID)
);

GO

--customer adress table
CREATE TABLE CustomerAddress(
    customerID CHAR(10),
    streetNo VARCHAR(10) NOT NULL,
    streetName VARCHAR(40) NOT NULL,
    city VARCHAR(30) NOT NULL,
    postcode VARCHAR(10) NOT NULL,
    country VARCHAR(30) NOT NULL,
    PRIMARY KEY(customerID),
    FOREIGN KEY (customerID) REFERENCES Customer(customerID) ON UPDATE CASCADE ON
DELETE NO ACTION
);

GO

--Reservation table
CREATE TABLE Reservation(
    reservationID CHAR(10),
    customerID CHAR(10) NOT NULL,
    totalPrice MONEY,
    paymentStatus VARCHAR(30) NOT NULL DEFAULT 'Deposit Paid',
    PRIMARY KEY (reservationID),
    FOREIGN KEY (customerID) REFERENCES Customer(customerID) ON UPDATE CASCADE ON
DELETE NO ACTION
);

GO

--reservation guest table
CREATE TABLE ReservationGuest(
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    reservationID CHAR(10),
    guestID INT IDENTITY(1,1), --auto increments unique value starting at 1
    name VARCHAR(30) NOT NULL,
    phone VARCHAR(10) NOT NULL,
    email VARCHAR(30) NOT NULL,
    streetNo VARCHAR(10) NOT NULL,
    streetName VARCHAR(30) NOT NULL,
    city VARCHAR(30) NOT NULL,
    postcode VARCHAR(10) NOT NULL,
    country VARCHAR(30) NOT NULL,
    PRIMARY KEY(reservationID, guestID),
    FOREIGN KEY(reservationID) REFERENCES Reservation(reservationID) ON UPDATE
CASCADE ON DELETE CASCADE
);

GO

--Booking table
CREATE TABLE Booking(
    reservationID CHAR(10),
    packageID CHAR(10),
    qtyBooked INT NOT NULL,
    startDate DATETIME NOT NULL,
    endDate DATETIME NOT NULL,
    PRIMARY KEY(reservationID, packageID),
    FOREIGN KEY (reservationID) REFERENCES Reservation(reservationID) ON UPDATE
CASCADE ON DELETE NO ACTION,
    FOREIGN KEY (packageID) REFERENCES Package(packageID) ON UPDATE NO ACTION ON
DELETE NO ACTION
);

GO
--Discount table
CREATE TABLE Discount(
    reservationID CHAR(10),
    discount DECIMAL(5,2) CHECK (discount <= 100) NOT NULL, --percentage discount
    employee VARCHAR(50) NOT NULL,
    authorizationStatus VARCHAR(50),
    PRIMARY KEY (reservationID),
    FOREIGN KEY (reservationID) REFERENCES Reservation(reservationID) ON UPDATE
CASCADE ON DELETE CASCADE,
    CONSTRAINT CheckAuthorization CHECK ((discount > 25 AND authorizationStatus IS NOT
NULL) OR (discount <= 25))
);

GO
```

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--Payment table
CREATE TABLE Payment(
    paymentID INT IDENTITY(1,1), --auto increments unique value starting at 1
    reservationID CHAR(10) NOT NULL,
    amount MONEY NOT NULL,
    datePaid DATETIME DEFAULT GETDATE() NOT NULL,
    PRIMARY KEY (paymentID),
    FOREIGN KEY (reservationID) REFERENCES Reservation(reservationID) ON UPDATE NO
ACTION ON DELETE NO ACTION
);

GO




--inserting data into the tables

INSERT INTO Hotel VALUES
('001','The Magpie Resort', '0492857285','5 star beachfront resort with a view'),
('002','The Fairywren Hotel', '0498375728', 'Upscale hotel with river views'),
('003', 'The Cormorant Hotel', '6622485511', 'Luxury hotel in the center of town');
GO
INSERT INTO HotelAddress VALUES
('001', 20, 'King Street', 'Newcastle', '2400', 'Australia'),
('002', 222, 'Margaret Street', 'Brisbane', '4000', 'Australia'),
('003', 372, 'Thanon Si Ayutthaya', 'Bangkok', '10400', 'Thailand');
GO


INSERT INTO FacilityType VALUES
('FT00001', 'Standard Room', 'Basic room for 2', 2),
('FT00002', 'Family Room', 'Spacious room for a family of 4', 4),
('FT10001', 'Restaurant', 'Fine dining restaurant', 20);
GO

INSERT INTO Facility VALUES
('FAC000001', '001', 'Room 001', 'Small yet spacious', 'Available', 'FT00001'),
('FAC000002', '001', 'Room 002', 'Small yet spacious', 'Available', 'FT00001'),
('FAC100001', '001', 'Room 003', 'Large', 'Available', 'FT00002'),
('FAC000010', '001', 'The Bird Restauraunt', 'Small scale fine dining', 'Running', 'FT10001');
GO

INSERT INTO ServiceCategory VALUES
('SC001', 'Accomodation', NULL, 'Rooms'),
('SC101', 'Food & Meals', NULL, 'Food');
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GO

INSERT INTO ServiceItem VALUES
('SI00001', 'SC101', 'Breakfast', 'Buffet Breakfeast with coffee', '2 hour limit', NULL, NULL, '06:00', '10:00', 8.50, 'AUD', 15, 'FAC000010'),
('SI00002', 'SC101', 'Dinner', '3 course meal', 'Semi-formal dress', NULL, 'Takes approx 1 hour per person', '18:00', '21:00', 50, 'AUD', 10, 'FAC000010'),
('SI10001', 'SC001', 'Standard Room', 'Overnight stay', 'No parties', NULL, NULL, '14:00', '10:00', 80, 'AUD', 10, 'FAC000002'),
('SI10002', 'SC001', 'Standard Room', 'Overnight stay', 'No parties', NULL, NULL, '14:00', '10:00', 80, 'AUD', 2, 'FAC000001');

GO

INSERT INTO Package VALUES
('P000000001','awesome package','a standard room with breakfast','2023-01-20','2023-06-20',300,'AUD','Standard room and a breakfast','excludes laundry','available','5 days','Keanu'),
('P000000002','Room and dinner daily','a standard room with dinner','2023-02-10','2023-06-10',278,'AUD','Standard room and dinner','excludes breakfast','available','5 days','John'),
('P000000003','Bed,Breakfast and dinner daily','a standard room with breakfast and dinner','2023-02-28','2023-06-30',400,'AUD','Standard room, breakfast and dinner','excludes laundry','available','5 days','Thomas'),
('P000000004','dinner daily','dinner','2023-02-28','2023-06-30',60,'AUD','3 course dinner','excludes alcohol','available','5 days','Tom');
GO

INSERT INTO PackageServiceItem VALUES
('P000000001','SI00001', 1),
('P000000001','SI10001', 1),
('P000000002','SI10001', 1),
('P000000002','SI00002', 1),
('P000000003','SI10002', 1),
('P000000003','SI00001', 1),
('P000000003','SI00002', 1),
('P000000004','SI00002', 1);
GO

INSERT INTO Customer VALUES
('C000000001', 'Cathy Cockatoo', '0412487653', 'cathy@gmail.com'),
('C000000002', 'Donald Duck', '0419657653', 'donald@gmail.com'),
('C000000003', 'Maggie Magpie', '0419657123', 'maggie@gmail.com');
GO

INSERT INTO CustomerAddress VALUES
('C000000001', '1', 'Cockatoo Lane', 'Cockatoo Island', '2000', 'Australia'),
('C000000002', '2', 'Duck Drive', 'Duck Bay', '3185', 'Australia'),

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('C000000003', '3', 'Magpie Motorway', 'Magpie Meadow', '4020', 'Australia');
GO

INSERT INTO Reservation VALUES
('R000000001','C000000001', 300,'Paid in full'),
('R000000002','C000000002', 278,'Paid in full'),
('R000000003','C000000003', 700,DEFAULT);
GO

INSERT INTO ReservationGuest VALUES
('R000000001','Rhea Ripley','0415987365','mami@gmail.com','23','Easy
Street','Melbourne','2095','Australia'),
('R000000002','Bayley Martinez','0415974563','bayley@gmail.com','10','Glass
Avenue','Newcastle','4675', 'Australia'),
('R000000003','Ronda Rousey','0450196548','ronda@gmail.com','15','Cool Close', 'Dubbo',
'7464','Australia');
GO

INSERT INTO Booking VALUES
('R000000001','P000000001',1,'2023-01-22','2023-01-27'),
('R000000002','P000000002',1,'2023-02-15','2023-02-20'),
('R000000003','P000000003',1,'2023-03-22','2023-03-23'),
('R000000003','P000000001',1,'2023-03-22','2023-03-23');
GO

INSERT INTO Discount VALUES
('R000000001', 5, 'Greg', NULL),
('R000000002', 26, 'Janet', 'Authorized');
GO


INSERT INTO Payment VALUES
('R000000001', 75, '2023-01-10 11:05:12'),
('R000000001', 210, '2023-01-27 09:50:10'),
('R000000002', 69.5 , '2023-02-20 09:42:19'),
('R000000002', 171.58 , '2023-02-05 14:42:19'),
('R000000003', 100, '2023-03-21 20:10:22');
GO
```