Hersh Patel - hp357
Tanvi Parikh - tbp30
Saaketh Krosuri - sk1617
Madison Ling - mtl115
11/12/17

Databases Project Deliverable 2

TABLES

Review
Customer
Writes
Hotel
Room_Has
Breakfast_Offers
Service_Provides
RoomReview
evaluates
BreakfastReview
assesses
ServiceReview
rates
Offer-Room
CreditCard
Reservation
reserves
includes
contains
makes

ASSUMPTIONS

- The mapping rules presented in Lecture 5 were the ones we adhered to. It is assumed that those are correct and are the standards by which we are meant to complete the assignment
- ReviewID, CID, and other IDs are represented by char(20) instead of int to account for the possibility of leading zeroes in the IDs
- We assumed ID numbers will be 20 characters in length exactly
- Reviews written by customers who are removed from the database in turn deleted themselves. Only reviews by customers still in the database will be stored
- If a Hotel is deleted, it is not necessary for the DBMS to store any info related to that hotel's rooms, services, breakfasts, reviews etc
- No need to store information regarding a given reservation if the reservation is deleted
- We assumed that Phone_no in Hotel is a varchar to efficiently handle its multi-attribute type
- TotalAmt is a derived attribute and we assume the value will be set in a future deliverable
- Credit Card Security Code is assumed to be standard, and so is set at 3 characters long
- Discount is likely a percentage, so it is represented as type "real" in this database
- Assume Location for E-R diagram does not have to be made into its own attribute, as we mapped it for Deliverable 1

```
CREATE TABLE Review(
        ReviewID char(20),
        Rating int,
        TextComment varchar(200),
        Primary Key(ReviewID)
);

CREATE TABLE Customer(
        CID char(20),
        Email varchar(40),
        Address varchar(150),
        Phone_no varchar(14),
        Name varchar(30),
        Primary Key(CID)
);

CREATE TABLE writes(
        ReviewID char(20),
        CID char(20),
        Primary Key(ReviewID),
        Foreign Key(ReviewID) references Review(ReviewID) ON DELETE CASCADE,
        Foreign Key(CID) references Customer(CID) ON DELETE CASCADE
);

CREATE TABLE Hotel(
        HotelID char(20),
        Street varchar(20),
        City varchar(20),
        State varchar(20),
        Zip char(5),
        Country varchar(20),
        Phone_no varchar(20),
        Primary Key(HotelID)
);
```

```
CREATE TABLE Room_Has(
        Room_no int,
        HotelID char(20),
        Price real,
        Capacity int,
        Floor_no int,
        Description varchar(100),
        Type varchar(20),
        Primary Key(Room_no, HotelID),
        Foreign Key(HotelID) references Hotel(HotelID) ON DELETE CASCADE
);

CREATE TABLE Breakfast_Offers(
        bType varchar(10),
        Description varchar(200),
        bPrice real,
        HotelID char(20),
        Primary Key(bType, HotelID),
        Foreign Key(HotelID) references Hotel(HotelID) ON DELETE CASCADE
);

CREATE TABLE Service_Provides(
        sType varchar(10),
        sCost real,
        HotelID char(20),
        Primary Key(sType, HotelID),
        Foreign Key(HotelID) references Hotel(HotelID) ON DELETE CASCADE
);

CREATE TABLE RoomReview(
        ReviewID char(20),
        Primary Key(ReviewID),
        Foreign Key(ReviewID) references Review(ReviewID) ON DELETE CASCADE,
);
```

```
CREATE TABLE evaluates(
        ReviewID char(20),
        Room_No int,
        HotelID char(20),
        Primary Key(ReviewID, Room_No, HotelID),
        Foreign Key(ReviewID) references Review(ReviewID) ON DELETE CASCADE,
        Foreign Key(Room_No, HotelID) references Room_Has(Room_No, HotelID)
        ON DELETE CASCADE
);

CREATE TABLE BreakfastReview(
        ReviewID char(20),
        Primary Key(ReviewID),
        Foreign Key(ReviewID) references Review(ReviewID) ON DELETE CASCADE
);

CREATE TABLE assesses(
        ReviewID char(20),
        bType varchar(10),
        HotelID char(20),
        Primary Key(ReviewID, bType, HotelID),
        Foreign Key(ReviewID) references Review(ReviewID) ON DELETE CASCADE
        Foreign Key(bType, HotelID) references Breakfast_Offers(bType, HotelID) ON
        DELETE CASCADE
);

CREATE TABLE ServiceReview(
        ReviewID char(20),
        Primary Key(ReviewID),
        Foreign Key(ReviewID) references Review(ReviewID) ON DELETE CASCADE
);
```

```
CREATE TABLE rates(
        ReviewID char(20),
        sType varchar(10),
        HotelID char(20),
        Primary Key(ReviewID, sType, HotelID),
        Foreign Key (ReviewID) references Review(ReviewID) ON DELETE CASCADE
        Foreign Key(sType, HotelID) references Service_Provides(sType, HotelID) ON
        DELETE CASCADE
);

CREATE TABLE Offer_Room(
        HotelID char(20),
        Room_no int,
        SDate date,
        EDate date,
        Discount real,
        Primary Key(Room_no, HotelID),
        Foreign Key(Room_no, HotelID) references Room_Has(Room_No, HotelID) ON
        DELETE CASCADE
);

CREATE TABLE CreditCard(
        Cnumber char(20),
        BillingAddr varchar(150),
        Name varchar(30),
        SecCode char(3),
        Type varchar(20),
        ExpDate Date,
        Primary Key(Cnumber)
);

CREATE TABLE Reservation(
        InvoiceNo char(20),
        ResDate date,
        TotalAmt real,
        Primary Key(InvoiceNo)
);
```

```
CREATE TABLE Reserves(
        InvoiceNo char(20),
        Room_No int,
        HotelID char(20),
        InDate date,
        OutDate date,
        NoOfDays int,
        Primary Key(InvoiceNo, Room_No, HotelID),
        Foreign Key(InvoiceNo) references Reservation(InvoiceNo) ON DELETE CASCADE,
        Foreign Key(Room_No, HotelID) references Room_Has(Room_No, HotelID) ON
        DELETE CASCADE,
        CHECK (NoOfDays = DateDiff(OutDate, InDate) )
);

CREATE TABLE Includes(
        InvoiceNo char(20),
        bType varchar(10),
        HotelID char(20),
        Primary Key(HotelID, bType, InvoiceNo),
        Foreign Key(HotelID, bType) references Breakfast_Offers(HotelID, bType) ON
        DELETE CASCADE,
        Foreign Key(InvoiceNo) references Reservation(InvoiceNo) ON DELETE CASCADE
 );

CREATE TABLE Contains(
        InvoiceNo char(20),
        sType varchar(10),
        HotelID char(20),
        Primary Key(HotelID, sType, InvoiceNo),
        Foreign Key(HotelID, sType) references Service_Provides(HotelID, sType) ON
DELETE
        CASCADE,
        Foreign Key(InvoiceNo) references Reservation(InvoiceNo) ON DELETE CASCADE
);

CREATE TABLE Makes(
        CID char(20),
        CNumber char(20),
        InvoiceNo char(20),
```

```
        Primary Key(CID, Cnumber, InvoiceNo),
        Foreign Key(CID) references Customer(CID) ON DELETE CASCADE,
        Foreign Key(Cnumber) references CreditCard(Cnumber) ON DELETE CASCADE,
        Foreign Key(InvoiceNo) references Reservation(InvoiceNo) ON DELETE CASCADE
) ;
```