Cover Page

HOTEL MANAGEMENT SYSTEM DATABASE

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Milestone/Version	Date
M2	7/11/2020
M1	6/28/20

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Milestone 1: The Semantic-Conceptual Model

Section I: Project Description

The project I'm working is to create a robust database management system to manage chains of hotel which include three categories: motels, hotels, and resorts. Motels is the cheapest which only focuses on lodging. While hotels have more rooms and has higher quality of service. And lastly, resorts are the premium service that has a lot of extra facilities accustom for esteemed guests. The hotels will be based on specific locales that offers a lot of varieties vendors to satisfy their stay. The key motivation for this project is to get an expectation of what it's like to create and see the inner workings of a database management system. My goal for this project is to implement a simple system that is effective for the end user (AKA clients). The process will begin when a guest or a customer decides to book a reservation in our website. If at any time the guest would like to change their reservation, they would simply have to call the hotel (if they don't have an account) or log in to our website to edit the reservation. Before checking in as a customer, the front desk employee in response will already have logged in to their personal employee account. They will then access the database to confirm the reservation for the guest. Once the guests have confirmed their rooms. Our hotels will offer varieties of service and amenities until they check out!

Section II: Use Cases

Use Case Title:	Booking a room
Actors:	Customer
Description:	The use case begins when the customer visits our website front page and click on a button to book a room. Then there's options to choose to fit what the customer wants such as check in date and check out date, room size. (required info: full name, email, phone, address, city, state, post code, country, payment information)

Use Case Title:	Authenticate account
Actors:	Employee, Customer
Description:	Whenever a person needs to log in to the hotel website, an authentication process is activated. If logged in as a guest (customer), multiple attempts are allowed (max 5 times) then a verification is needed by their email. If logged in as an employee. The employee must sign in with

	their user ID and password to access the local system that's storing the data library of our reservations and of our existing guests. There are only three attempts until it's locked out then a supervisor is needed in order to unlock it.

Use Case Title:	Check in as a guest
Actors:	Employee, Customer
Description:	This use case assumed that customer has already booked a room. The employee logins to the system and checks the reservation tables to confirm the guest is the correct customer who arrive at the correct date. If it's correct they're allowed to stay in the hotel. Otherwise if it's late or wrong, they need to make a reservation or to see if any other acceptable rooms are available.

Use Case Title:	Check out as a guest
Actors:	Employee, Customer
Description:	The employee logins to the system and checks the existing guests in the hotel to see if they're valid. The customer either wants to check out early, exact time, or delayed.

	Early: confirmation they want to check out early.
	Exact time: say goodbye to them.
	Delayed: extra fees required.

Use Case Title:	Edit a guest's booking
Actors:	Employee, customer
Description:	Verify the correct customer who called in to change their booking or login to their account to change in the website. This can be to cancel reservation, more/less rooms, to change check in or check out dates.

Section III: Database Requirements (Business Rules)

1. Employee

    a. An employee can only create one account, and an account belongs to at least one employee.

    b. Only one employee can manage a department.

    c. Many employees can work in a hotel.

    d. An employee shall have only and only one unique SSN

    e. An employee is an hourly or contract employee

    f. An employee shall have a supervisor which is also an employee.

    g. Many employees account can access a hotel's database.

    h. An employee shall have a first and last name.

    i. An employee shall have only and only one unique email.

2. Guest

    a. A guest can reserve multiple rooms.

    b. A guest can check in and out many rooms.

    c. A guest may give many feedbacks.

    d. A guest can check their billing info.

    e. A guest shall have a first and last name.

    f. A guest shall have only and only one unique phone number.

    g. A guest shall have only and only one unique email.

3. Departments

  a. A department must have one or many employees.

4. Hotels

  a. A hotel has one or many facilities.

  b. A hotel is near a locale.

  c. Many Hotels shall have many employees.

  d. A hotel shall have many employees.

5. Locale

  a. A locale may have many tourists.

  b. A Locale have many food vendors.

  c. A Locale have many service and retail vendors.

Section IV: Detailed List of Main Entities, Attributes and Keys

1. Employee (Strong)

    a. Employee_id: key, numeric

    b. SSN: key, numeric

    c. Email: key, alphanumeric

    d. Name: composite, multivalue, alphanumeric

2. Guest (Strong)

    a. Guest_id: key, numeric

    b. Name: composite, multivalue, alphanumeric

    c. Address: alphanumeric

    d. Post code: numeric

    e. Email: key, alphanumeric

    f. Phone: key, numeric

    g. City: alphanumeric

    h. State: alphanumeric

    i. Country: alphanumeric

3. Owner (Strong)

    a. Owner_id: key, numeric

    b. Name: composite, multivalue, alphanumeric

    c. Email: key, alphanumeric

4. Department (Strong)

    a.   D_id: key, numeric

    b.   Name: multivalue, alphanumeric

    c.   Budget: numeric

5. Payment Type (Strong)

    a.   type_id: key, numeric

    b.   address: alphanumeric

    c.   zip code: numeric

    d.   country: alphanumeric

    e.   state: alphanumeric

    f.   city: alphanumeric

6. Invoice (Strong)

    a.   Invoice_id: key, numeric

    b.   Status: alphanumeric

    c.   Invoice description: alphanumeric

7. Room (Strong)

    a.   Room_id: key, numeric

    b.   From_date: composite, date

    c.   To_date: composite, date

8. Room category (Strong)

    a.   roomcategory_id: key, numeric

    b.   Name: composite, multivalue, alphanumeric

    c.   guest_id: key, numeric

9. Price category (Strong)

    a.   Price_id: key, numeric

      b. Date: date

      c. Available rooms: numeric

      d. Price: numeric

      e. Hotel_id: key, numeric

10. Hourly wages (Strong)

      a. hourlywages_id: key, numeric

      b. Employee_id: key, numeric

      c. Money: numeric

11. Hours worked (Strong)

      a. hoursworked_id: key, numeric

      b. Employee_id: key, numeric

      c. Money: numeric

12. Account Type (Strong)

      a. Account_id: key, numeric

      b. Customer or employee: alphanumeric

13. Features (Strong)

      a. Features_id: key, numeric

      b. Number_options: numeric

14. Feedback (Strong)

      a. Feedback_id: key, numeric

      b. Rating: numeric

      c. Description: alphanumeric

15. Delivery service (Strong)

      a. Deleivery_id: key, numeric

      b. description: alphanumeric

16. Food order (Strong)

      a. Foodorder_id: key, numeric

      b. Order date: date

17. Laundry order (Strong)

      a. Laundryorder_id: key, numeric

      b. Order_date: date

18. Meal (Strong)

      a. Meal_id: key, numeric

      b. Price: numeric

      c. Description: alphanumeric

19. clothes (Strong)

      a. clothes_id: key, numeric

      b. price: numeric

      c. size: numeric

      d. description: alphanumeric

20. hotel types (Strong)

      a. hotel_id: key, numeric

      b. hotel type: alphanumeric

      c. num_rooms: numeric

      d. description: alphanumeric

21. facilities (Strong)

      a. facility_id: key, numeric

      b. name: alphanumeric

22. locale (Strong)

    a. locale_id: key, numeric

    b. location name: alphanumeric

23. food vendors (Strong)

    a. foodvendor_id: key, numeric

    b. description: alphanumeric

24. service and retail vendor (Strong)

    a. service&retail_id: key, numeric

    b. description: alphanumeric

25. Restaurant (Strong)

    a. restaurant_id: key, numeric

    b. popular: alphanumeric

    c. rating: numeric

26. Bars (Strong)

    a. bars_id: key, numeric

    b. rating: numeric

    c. Description: alphanumeric

27. Lounge (Strong)

    a. lounge_id: key, numeric

    b. rating: numeric

    c. Description: alphanumeric

28. Hair saloon (Strong)

    a. hair_id: key, numeric

    b. rating: numeric

29. Spa (Strong)

    a. spa_id: key, numeric

    b. Description: alphanumeric

30. Clothing Stores (Strong)

    a. shops_id: key, numeric

    b. rating: numeric

    c. store brand name: alphanumeric

31. Movie theater (Strong)

    a. theater_id: key, numeric

    b. Description: alphanumeric
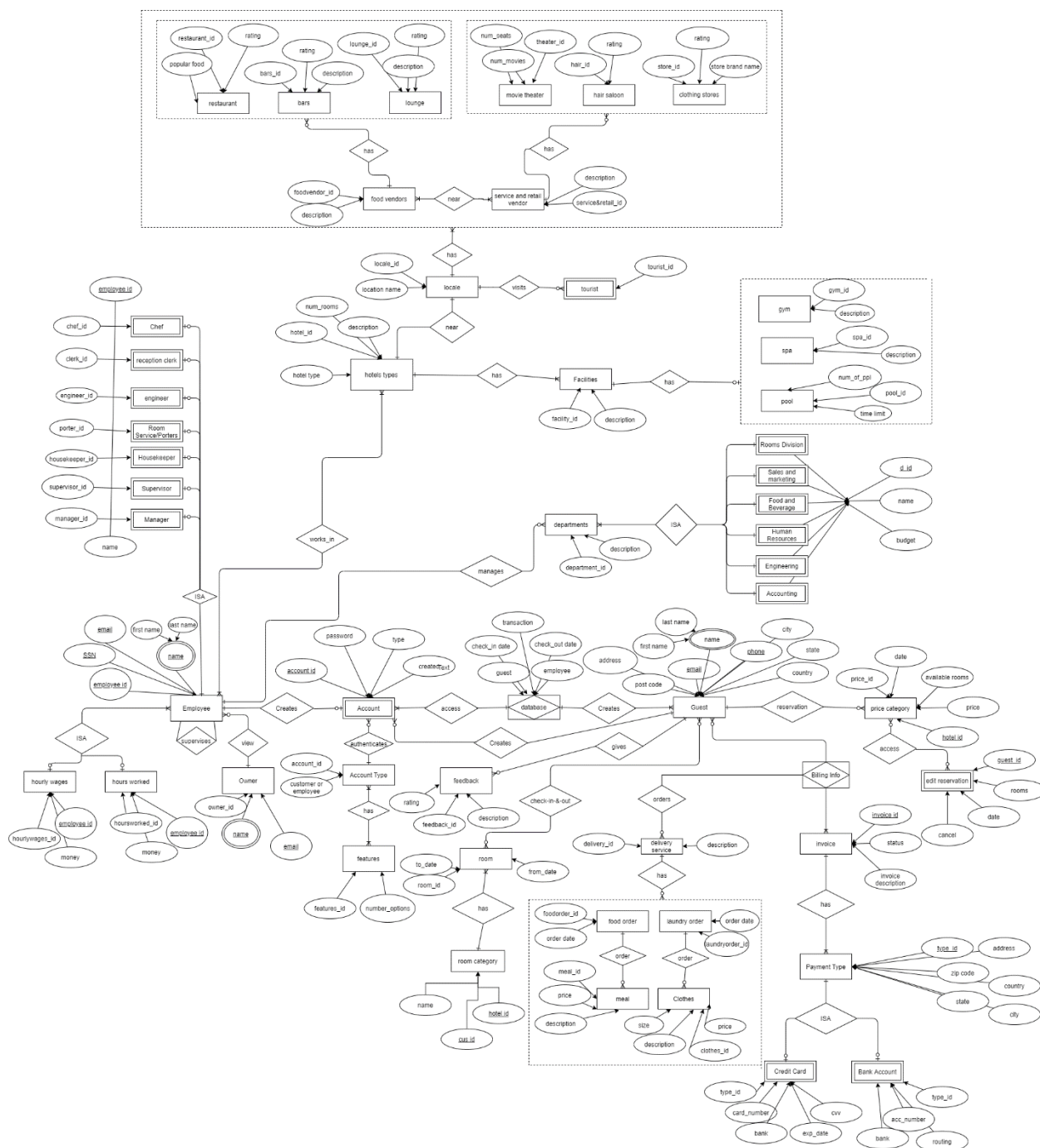
32. gym (Strong)

    a. gym_id: key, numeric

    b. Description: alphanumeric

33. Pool (Strong)

    a. Pool_id: key, numeric

    b. Num_of_ppl: numeric

    c. Time limit: numeric

Section V: Entity Relationship Diagram (ERD)

Section VI: Testing Table

Rule	Entity A	Relation	Entity B	Cardinality (entity A to Entity B)	Pass/Fail	Error Description
1	Employee	Creates	Account	1 1 or many	Fail	an employee can create 0 or many accounts
2	Employee	ISA	Hourly wages	1 or many 0 or 1	pass	none
3	Employee	ISA	Hours worked	1 or many 0 or 1	pass	none
4	Employee	supervise	employee	recursive	pass	none
5	Employee	manages	department	1 0 to many	pass	none
6	Employee	Works_in	Hotel type	1 or many 1 or many	Pass	none
7	owner	view	employee	1 0 or many	Pass	none

8	Account	autheticate	Account type	0 or 1 1	fail	Account can be more than 0 or 1
9	Account type	Has	features	1 1 or many	fail	Account type should be 1 or many
10	Account	Access	database	1 1	fail	Many accounts should have access to a database
11	Database	Creates	guest	1 1	fail	A database should have many guests
12	Guest	Reservation	Price category	1 1 or many	fail	Guest can reserve 0 or many
13	guest	create	account	1 0 or many	Pass	none
14	guest	gives	feedback	1 0 to many	pass	none

15	Price category	access	Edit reservation	1 or many 0 or many	fail	Price category can be 0 or many
16	Guest	Check-in and check out	Room	0 or many 0 or many	pass	none
17	Room	Has	Room category	1 or many 1	Pass	none
18	Guest	Billing info	invoice	0 or many 1 or many	Pass	none
19	Invoice	Has	Payment type	1 1 or many	pass	none
20	Payment type	ISA	Credit card	1 0 or 1	pass	none
21	Payment type	ISA	Bank account	1 0 or 1	pass	none
22	Billion info	orders	Delivery service	0 to many 0 to many	Pass	none
23	Delivery service	Has	Food order	1 0 to many	Pass	none
24	Delivery service	Has	Laundry order	1 0 to many	Pass	none
25	Food order	Order	Meal	1	Pass	None

				0 to many		
26	Laundry order	Order	clothes	1 0 to many	Pass	none
27	Chef	ISA	employee	1 or many 1 or many	Fail	An employee can be 0 or 1 chef
28	Reception clerk	ISA	employee	1 or many 1 or many	Fail	An employee can be 0 or 1 clerk
29	engineer	ISA	employee	1 or many 1 or many	Fail	An employee can be 0 or 1 engineer
30	Roomer service/porters	ISA	employee	1 or many 1 or many	Fail	An employee can be 0 or 1 porter
31	housekeeper	ISA	employee	1 or many 1 or many	Fail	An employee can be 0 or 1 housekeeper
32	supervisor	ISA	employee	1 or many 1 or many	Fail	An employee can be 0 or 1 supervisor

33	manager	ISA	employee	1 or many 1 or many	Fail	An employee can be 0 or 1 manager
34	employee	manages	departments	1 or many 1 or many	fail	Only 1 employee can manage 0 or many departments
35	departments	Has	Room division	1 or many 1	Pass	none
36	departments	has	Sales and marketing	1 or many 1	pass	none
37	departments	has	Food and beverage	1 or many 1	pass	none
38	departments	has	Human resources	1 or many 1	pass	none
39	departments	has	engineering	1 or many 1	pass	none
40	departments	has	accounting	1 or many 1	pass	none
41	Hotels types	Has	facilities	1 1 or many	Pass	none

42	Facilities	Has	gym	1 or many 0 or many	fail	1 facility should have 0 or 1 gym
43	Facilities	Has	spa	1 or many 0 or many	fail	1 facility should have 0 or 1 spa
44	Facilities	has	pool	1 or many 0 or many	fail	1 facility should have 0 or 1 pool
45	Hotel types	near	locale	1 or many 0 or many	fail	1 hotel should have one ore more facilities
46	tourist	visits	locale	1 or many 0 or many	fail	0 or many tourists should visit one locale
47	Food vendor	Near	Service and retail vendors	1 or many 0 or many	fail	1 or many food vendors should have 1 or many

						service and retail vendors.
48	Food vendors	has	restaurant	1 0 or many	pass	none
49	Food vendors	has	bars	1 0 or many	pass	none
50	Food vendors	has	lounge	1 0 or many	pass	none
51	Service and retail vendor	has	Movie theater	1 0 or many	pass	none
52	Service and retail vendor	has	Hair saloon	1 0 or many	pass	none
53	Service and retail vendor	has	Clothing stores	1 0 or many	pass	none

Section VII: Database Model
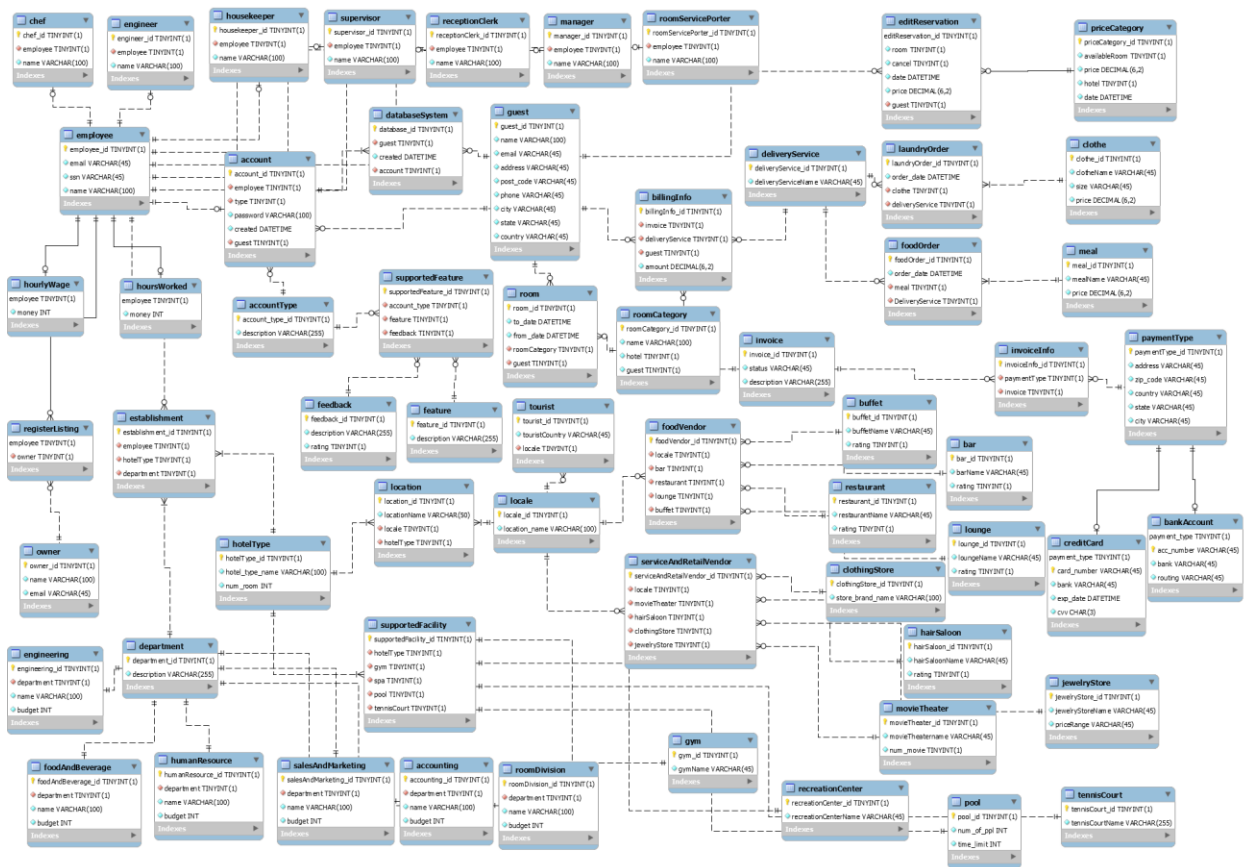
Relation becomes an entity or weak entity	On delete and on update	Reference description (weak entity or relation becomes an entity)
account	cascade	Employee, accountTYpe, guest
accounting	cascade	department
bankAccount	cascade	paymentType
billingInfo	cascade	Invoice, delieveryService, guest
chef	cascade	employee
creditCard	cascade	paymentType

database	cascade	Account, guest
editReservation	cascade	priceCategory, guest
engineer	cascade	employee
engineering	cascade	department
establishment	cascade	Employee, hotelType, department
foodAndBeverage	cascade	department
foodOrder	cascade	Meal, deliveryService
foodVendor	cascade	Locale, restaurant, bar, lounge, buffet
hourlyWage	cascade	employee
hourlyWorked	cascade	employee
housekeeper	cascade	employee
humanResource	cascade	department
invoiceInfo	cascade	paymentType, invoice
laundryOrder	cascade	clothe, deliveryService
location	cascade	Locale, hotelType
manager	cascade	employee
receptionClerk	cascade	employee
registerListing	cascade	Employee, owner
room	cascade	RoomCategory, guest
roomDivision	cascade	department
roomServicePorter	cascade	employee

salesAndMarketing	cascade	department
serviceAndRetailVendor	cascade	Locale, movieTheater, hairSaloon, clothingStore, jewelryStore
Supervisor	cascade	employee
supportedFacility	cascade	hotelType, gym, recreationCenter, pool, tennisCourt
supportedFeature	cascade	Feature, accountType, feedback
tourist	cascade	locale

Section VIII: Forward Engineering

Output

Action Output

#	Time	Action	Message	Duration / Fetch
⚠	684	13:53:12	CREATE TABLE IF NOT EXISTS `locale` (`locale_id` TINYINT(1) NOT NULL, `location_name` VARCHAR(100) NOT NULL, PRIMARY KEY (local...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.062 sec
⚠	685	13:53:12	DROP TABLE IF EXISTS `tourist`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'hotelmanagementdb.tourist'	0.000 sec
⚠	686	13:53:12	CREATE TABLE IF NOT EXISTS `tourist` (`tourist_id` TINYINT(1) NOT NULL, `touristCountry` VARCHAR(45) NOT NULL, `locale` TINYINT(1) NO...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 1681 Integer display width is deprecate...	0.062 sec
⚠	687	13:53:12	DROP TABLE IF EXISTS `restaurant`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'hotelmanagementdb.restaurant'	0.000 sec
⚠	688	13:53:12	CREATE TABLE IF NOT EXISTS `restaurant` (`restaurant_id` TINYINT(1) NOT NULL, `restaurantName` VARCHAR(45) NOT NULL, `rating` TINYI...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 1681 Integer display width is deprecate...	0.078 sec
⚠	689	13:53:12	DROP TABLE IF EXISTS `bar`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'hotelmanagementdb.bar'	0.000 sec
⚠	690	13:53:12	CREATE TABLE IF NOT EXISTS `bar` (`bar_id` TINYINT(1) NOT NULL, `barName` VARCHAR(45) NOT NULL, `rating` TINYINT(1) NOT NULL, ...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 1681 Integer display width is deprecate...	0.062 sec
⚠	691	13:53:12	DROP TABLE IF EXISTS `buffet`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'hotelmanagementdb.buffet'	0.000 sec
⚠	692	13:53:12	CREATE TABLE IF NOT EXISTS `buffet` (`buffet_id` TINYINT(1) NOT NULL, `buffetName` VARCHAR(45) NOT NULL, `rating` TINYINT(1) NOT N...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 1681 Integer display width is deprecate...	0.047 sec
⚠	693	13:53:12	DROP TABLE IF EXISTS `foodVendor`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'hotelmanagementdb.foodvendor'	0.016 sec
⚠	694	13:53:12	CREATE TABLE IF NOT EXISTS `foodVendor` (`foodVendor_id` TINYINT(1) NOT NULL, `locale` TINYINT(1) NOT NULL, `bar` TINYINT(1) NOT ...	0 row(s) affected, 6 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 1681 Integer display width is deprecate...	0.437 sec
⚠	695	13:53:13	DROP TABLE IF EXISTS `movieTheater`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'hotelmanagementdb.movietheater'	0.016 sec
⚠	696	13:53:13	CREATE TABLE IF NOT EXISTS `movieTheater` (`movieTheater_id` TINYINT(1) NOT NULL, `movieTheatername` VARCHAR(45) NOT NULL, `nu...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 1681 Integer display width is deprecate...	0.172 sec
⚠	697	13:53:13	DROP TABLE IF EXISTS `jewelryStore`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'hotelmanagementdb.jewelrystore'	0.015 sec
⚠	698	13:53:13	CREATE TABLE IF NOT EXISTS `jewelryStore` (`jewelryStore_id` TINYINT(1) NOT NULL, `jewelryStoreName` VARCHAR(45) NOT NULL, `priceR...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.141 sec
⚠	699	13:53:13	DROP TABLE IF EXISTS `serviceAndRetailVendor`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'hotelmanagementdb.serviceandretailvendor'	0.000 sec
⚠	700	13:53:13	CREATE TABLE IF NOT EXISTS `serviceAndRetailVendor` (`serviceAndRetailVendor_id` TINYINT(1) NOT NULL, `locale` TINYINT(1) NOT NULL, ...	0 row(s) affected, 6 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 1681 Integer display width is deprecate...	0.140 sec
⚠	701	13:53:13	DROP TABLE IF EXISTS `bankAccount`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'hotelmanagementdb.bankaccount'	0.000 sec
⚠	702	13:53:13	CREATE TABLE IF NOT EXISTS `bankAccount` (`payment_type` TINYINT(1) NOT NULL, `acc_number` VARCHAR(45) NOT NULL, `bank` VAR...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.063 sec
⚠	703	13:53:13	DROP TABLE IF EXISTS `invoiceInfo`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'hotelmanagementdb.invoiceinfo'	0.000 sec
⚠	704	13:53:13	CREATE TABLE IF NOT EXISTS `invoiceInfo` (`invoiceInfo_id` TINYINT(1) NOT NULL, `paymentType` TINYINT(1) NOT NULL, `invoice` TINYIN...	0 row(s) affected, 3 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 1681 Integer display width is deprecate...	0.218 sec
⚠	705	13:53:13	DROP TABLE IF EXISTS `supportedFeature`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'hotelmanagementdb.supportedfeature'	0.000 sec
⚠	706	13:53:13	CREATE TABLE IF NOT EXISTS `supportedFeature` (`supportedFeature_id` TINYINT(1) NOT NULL, `account_type` TINYINT(1) NOT NULL, `fea...	0 row(s) affected, 4 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 1681 Integer display width is deprecate...	0.125 sec
⚠	707	13:53:14	DROP TABLE IF EXISTS `registerListing`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'hotelmanagementdb.registerlisting'	0.000 sec
⚠	708	13:53:14	CREATE TABLE IF NOT EXISTS `registerListing` (`employee` TINYINT(1) NOT NULL, `owner` TINYINT(1) NOT NULL, INDEX fk_registerListing_...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 1681 Integer display width is deprecate...	0.094 sec
⚠	709	13:53:14	DROP TABLE IF EXISTS `hoursWorked`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'hotelmanagementdb.hoursworked'	0.000 sec
⚠	710	13:53:14	CREATE TABLE IF NOT EXISTS `hoursWorked` (`employee` TINYINT(1) NOT NULL, `money` INT NOT NULL, PRIMARY KEY (`employee`), IN...	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed in a future release.	0.078 sec
⚠	711	13:53:14	DROP TABLE IF EXISTS `establishment`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'hotelmanagementdb.establishment'	0.016 sec
⚠	712	13:53:14	CREATE TABLE IF NOT EXISTS `establishment` (`establishment_id` TINYINT(1) NOT NULL, `employee` TINYINT(1) NOT NULL, `hotelType` TIN...	0 row(s) affected, 4 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 1681 Integer display width is deprecate...	0.094 sec
⚠	713	13:53:14	DROP TABLE IF EXISTS `accounting`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'hotelmanagementdb.accounting'	0.000 sec
⚠	714	13:53:14	CREATE TABLE IF NOT EXISTS `accounting` (`accounting_id` TINYINT(1) NOT NULL, `department` TINYINT(1) NOT NULL, `name` VARCHAR(...	0 row(s) affected, 2 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 1681 Integer display width is deprecate...	0.062 sec
⚠	715	13:53:14	DROP TABLE IF EXISTS `location`	0 row(s) affected, 1 warning(s): 1051 Unknown table 'hotelmanagementdb.location'	0.000 sec
⚠	716	13:53:14	CREATE TABLE IF NOT EXISTS `location` (`location_id` TINYINT(1) NOT NULL, `locationName` VARCHAR(50) NOT NULL, `locale` TINYINT(1) ...	0 row(s) affected, 3 warning(s): 1681 Integer display width is deprecated and will be removed in a future release. 1681 Integer display width is deprecate...	0.078 sec
✅	717	13:53:14	SET SQL_MODE=@OLD_SQL_MODE	0 row(s) affected	0.000 sec
✅	718	13:53:14	SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS	0 row(s) affected	0.000 sec
✅	719	13:53:14	SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS	0 row(s) affected	0.000 sec

Section IX: Inserting Data

Output

Action Output ▾

#	Time	Action	Message	Duration / Fetch
1510	14:45:41	INSERT INTO recreationCenter (recreationCenter_id, recreationCenterName) VALUE(1, 'Minnie and Lovie'),(2,'Potrero Hill'),(3,'Koret Health')	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1511	14:45:41	INSERT INTO pool (pool_id, num_of_ppl, time_limit) VALUE(1, 25,60),(2, 50, 60),(3, 100,180)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1512	14:45:41	INSERT INTO tennisCourt (tennisCourt_id, tennisCourtName) VALUE(1, 'Tenacious Tennis Academy'),(2,'McCoppin Park Tennis Courts'),(3,'GGP Tennis...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1513	14:45:41	INSERT INTO clothingStore (clothingStore_id, store_brand_name) VALUE(1,'Nike'),(2,'Adidas'),(3,'Gucci')	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1514	14:45:41	INSERT INTO hairSaloon(hairSaloon_id, hairSaloonName, rating) VALUE(1,'Perfect Cut Hair Salon',3),(2,'Ken & Mary Hair Salon',4),(3,'A and k Hair Salo...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1515	14:45:41	INSERT INTO movieTheater(movieTheater_id, movieTheaterName,num_movie) VALUE(1,'Four Star Theatre',10),(2,'CineArts at the Empire',15),(3,'AMC...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1516	14:45:41	INSERT INTO jewelryStore(jewelryStore_id,jewelryStoreName, priceRange) VALUE(1,'Geoffreys Diamonds & Goldsmith','medium'),(2,'Kay Jewelers','high')...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1517	14:45:41	INSERT INTO buffet(buffet_id, buffetName, rating) VALUE(1,'Fiery Hot Pot Buffet',5),(2,'Moonstar',5),(3,'Julies Kitchen',4)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1518	14:45:41	INSERT INTO restaurant(restaurant_id, restaurantName, rating) VALUE(1,'Dumpling Kitchen',4),(2,'Toyose',4),(3,'Hongs Kitchen',4)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1519	14:45:41	INSERT INTO bar(bar_id, barName, rating) VALUE(1,'Flanahans Pub',4),(2,'Fire Fly Sports Bar',4),(3,'The Riptide',4)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1520	14:45:41	INSERT INTO lounge(lounge_id, loungeName, rating) VALUE(1,'Boomerang Cocktail Lounge',3),(2,'Buddha Lounge',5),(3,'Lush Lounge',4)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1521	14:45:41	INSERT INTO establishment(establishment_id, employee, hotelType,department) VALUE(1,1,1,1),(2,2,2,2),(3,3,3,3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1522	14:45:41	INSERT INTO hotelType(hotelType_id, hotel_type_name,num_room) VALUE(1,'Staypineapple',100),(2,'Holiday Inn',200),(3,'Dream Resort',50)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1523	14:45:41	INSERT INTO location(location_id,locationName, locale, hotelType) VALUE(1,'San Francisco',1,1),(2,'New York',2,2),(3,'Florida',3,3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1524	14:45:41	INSERT INTO supportedFacility(supportedFacility_id, hotelType,gym,spa,pool,tennisCourt) VALUE(1,1,1,1,1,1),(2,2,2,2,2,2),(3,3,3,3,3,3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1525	14:45:41	INSERT INTO locale(locale_id,location_name) VALUE(1,'Stonestown'),(2,'Lakeshore Plaza'),(3,'Florida Centre')	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1526	14:45:41	INSERT INTO foodVendor(foodVendor_id, locale, bar, restaurant, lounge, buffet) VALUE(1,1,1,1,1,1),(2,2,2,2,2,2),(3,3,3,3,3,3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1527	14:45:41	INSERT INTO serviceAndRetailVendor(serviceAndRetailVendor_id, locale, movieTheater, hairSaloon, clothingStore, jewelryStore) VALUE(1,1,1,1,1,1),(2...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1528	14:45:41	INSERT INTO tourist(tourist_id, touristCountry, locale) VALUE(1, 'China', 1),(2, 'Africa', 2),(3,'Europe',3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1529	14:45:41	INSERT INTO databaseSystem(database_id, guest, created, account) VALUE(1,1,'2020-05-11',1),(2,2,'2020-05-02',2),(3,3,'2020-05-09',3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1530	14:45:41	INSERT INTO guest(guest_id, name,email,address,post_code,phone,city,state,country) VALUE(1, 'Jesse M Arellano', 'jackolantern@gmail.com','2412 C...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1531	14:45:41	INSERT INTO room(room_id,to_date,from_date,roomCategory,guest) VALUE(1,'2020-05-11','2020-05-15',1,1),(2,'2020-05-02','2020-05-28',2,2),(3,'2020-...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1532	14:45:41	INSERT INTO roomCategory(roomCategory_id,name, hotel, guest) VALUE(1,1,1,1),(2,2,2,2),(3,3,3,3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1533	14:45:41	INSERT INTO billingInfo(billingInfo_id, invoice, deliveryService, guest, amount) VALUE(1,1,1,1,45.45),(2,2,2,2,420.45),(3,3,3,3,67.69)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1534	14:45:41	INSERT INTO deliveryService(deliveryService_id, deliveryServiceName) VALUE(1,'Food Delivery'),(2,'Laundry Delivery'),(3,'Amenities Delivery')	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1535	14:45:41	INSERT INTO laundryOrder(laundryOrder_id,order_date,clothe, deliveryService) VALUE(1,'2020-05-15',1,1),(2,'2020-05-02',2,2),(3,'2020-05-09',3,3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1536	14:45:41	INSERT INTO clothe(clothe_id, clotheName, size , price) VALUE(1,'T-Shirt', 'Big', 15),(2,'Jeans','Xtra Large', 40),(3,'Sweater', 'Small', 15)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1537	14:45:41	INSERT INTO foodOrder(foodOrder_id, order_date,meal, deliveryService) VALUE(1,'2020-05-15',1,1),(2,'2020-06-15',2,2),(3,'2020-07-15',3,3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1538	14:45:41	INSERT INTO meal(meal_id, mealName, price) VALUE(1,'Sushi', 40),(2,'Burger',10),(3,'Spaghetti and Meat Balls',20)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1539	14:45:41	INSERT INTO invoice(invoice_id, status, description) VALUE(1,'Paid','Your balance has been paid.'),(2,'Paid','Your balance has been paid.'),(3,'Overdue'...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1540	14:45:41	INSERT INTO invoiceInfo(invoiceInfo_id, paymentType,invoice) VALUE(1,1,1),(2,2,2),(3,3,3)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1541	14:45:41	INSERT INTO paymentType(paymentType_id,address,zip_code,country,state,city) VALUE(1,'2342 Sanputo St.', '23422', 'Africa', 'AF', 'Fan Fan'),(2,'532...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1542	14:45:41	INSERT INTO creditCard(payment_type,card_number,bank,exp_date,cvv) VALUE(1,'368194405088870','American Express','2022-11-23',121),(2,'5589...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
1543	14:45:41	INSERT INTO bankAccount(payment_type, acc_number, bank, routing) VALUE(1,'565777','Bank of America','021000021'),(2,'482917','Chase','011401...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
1544	14:45:41	INSERT INTO editReservation(editReservation_id, room, cancel, date, price, guest) VALUE(1,50,1,'2020-06-15',22,1),(2,33,33,'2020-05-15',33,2),(3,44,...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
1545	14:45:41	INSERT INTO priceCategory(priceCategory_id,availableRoom,price,hotel,date) VALUE(1,1,23,2,'2020-05-15'),(2,2,2,2,'2020-06-15'),(3,2,2,2,'2020-07-1...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec

Section X: Testing

#	Time	Action	Message	Duration / Fetch
1632	14:46:13	UPDATE priceCategory SET priceCategory_id = 0 WHERE date = '2020-06-15'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.016 sec
1633	14:46:13	DELETE FROM tourist WHERE touristCountry = 'China'	1 row(s) affected	0.000 sec
1634	14:46:13	UPDATE tourist SET tourist_id = 0 WHERE touristCountry = 'Africa'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.015 sec
1635	14:46:13	DELETE FROM feature WHERE description = 'Guest Features'	1 row(s) affected	0.000 sec
1636	14:46:13	UPDATE feature SET feature_id = 0 WHERE description = 'Employee Features'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.000 sec
1637	14:46:13	DELETE FROM department WHERE description = 'Motel Department'	1 row(s) affected	0.000 sec
1638	14:46:13	UPDATE department SET department_id = 0 WHERE description = 'Hotel Department'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.000 sec
1639	14:46:13	DELETE FROM engineering WHERE engineering_id = 1	1 row(s) affected	0.015 sec
1640	14:46:13	UPDATE engineering SET name = 'Team F' WHERE budget = 100000	2 row(s) affected Rows matched: 2 Changed: 2 Warnings: 0	0.000 sec
1641	14:46:13	DELETE FROM foodAndBeverage WHERE foodAndBeverage_id = 1	1 row(s) affected	0.000 sec
1642	14:46:13	UPDATE foodAndBeverage SET name = 'Team E' WHERE budget = 100000	2 row(s) affected Rows matched: 2 Changed: 2 Warnings: 0	0.000 sec
1643	14:46:13	DELETE FROM humanResource WHERE humanResource_id = 1	1 row(s) affected	0.000 sec
1644	14:46:13	UPDATE humanResource SET name = 'Team D' WHERE budget = 100000	2 row(s) affected Rows matched: 2 Changed: 2 Warnings: 0	0.016 sec
1645	14:46:13	DELETE FROM salesAndMarketing WHERE salesAndMarketing_id = 1	1 row(s) affected	0.000 sec
1646	14:46:13	UPDATE salesAndMarketing SET name = 'Team C' WHERE budget = 100000	2 row(s) affected Rows matched: 2 Changed: 2 Warnings: 0	0.000 sec
1647	14:46:13	DELETE FROM accounting WHERE accounting_id = 1	1 row(s) affected	0.015 sec
1648	14:46:13	UPDATE accounting SET name = 'Team B' WHERE budget = 100000	2 row(s) affected Rows matched: 2 Changed: 2 Warnings: 0	0.000 sec
1649	14:46:13	DELETE FROM roomDivision WHERE roomDivision_id = 1	1 row(s) affected	0.000 sec
1650	14:46:13	UPDATE roomDivision SET name = 'Team A' WHERE budget = 100000	2 row(s) affected Rows matched: 2 Changed: 2 Warnings: 0	0.016 sec
1651	14:46:13	DELETE FROM gym WHERE gymName = 'Raise the Bar Fitness'	1 row(s) affected	0.000 sec
1652	14:46:13	DELETE FROM recreationCenter WHERE recreationCenterName = 'Minnie and Lovie'	1 row(s) affected	0.000 sec
1653	14:46:13	UPDATE recreationCenter SET recreationCenter_id = 0 WHERE recreationCenterName = 'Potrero Hill'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.016 sec
1654	14:46:13	DELETE FROM pool WHERE time_limit = 180	1 row(s) affected	0.000 sec
1655	14:46:13	UPDATE pool SET num_of_ppl = 75 WHERE time_limit = 60	2 row(s) affected Rows matched: 2 Changed: 2 Warnings: 0	0.000 sec
1656	14:46:13	DELETE FROM tennisCourt WHERE tennisCourtName = 'Tenacious Tennis Academy'	1 row(s) affected	0.000 sec
1657	14:46:13	UPDATE tennisCourt SET tennisCourt_id = 0 WHERE tennisCourtName = 'McCoppin Park Tennis Courts'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.000 sec
1658	14:46:13	DELETE FROM clothingStore WHERE store_brand_name = 'Nike'	1 row(s) affected	0.000 sec
1659	14:46:13	UPDATE clothingStore SET clothingStore_id = 0 WHERE store_brand_name = 'Adidas'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.000 sec
1660	14:46:13	DELETE FROM hairSaloon WHERE hairSaloonName = 'Perfect Cut Hair Salon'	1 row(s) affected	0.000 sec
1661	14:46:13	UPDATE hairSaloon SET hairSaloon_id = 0 WHERE hairSaloonName = 'Ken & Mary Hair Salon'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.015 sec
1662	14:46:13	DELETE FROM movieTheater WHERE movieTheaterName = 'Four Star Theatre'	1 row(s) affected	0.000 sec
1663	14:46:13	UPDATE movieTheater SET movieTheater_id = 0 WHERE movieTheaterName = 'CineArts at the Empire'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.000 sec
1664	14:46:13	DELETE FROM jewelryStore WHERE jewelryStoreName = 'Geoffreys Diamonds & Goldsmith'	1 row(s) affected	0.016 sec
1665	14:46:13	UPDATE jewelryStore SET jewelryStore_id = 0 WHERE jewelryStoreName = 'Kay Jewelers'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.000 sec
1666	14:46:13	DELETE FROM buffet WHERE buffetName = 'Fiery Hot Pot Buffet'	1 row(s) affected	0.000 sec
1667	14:46:13	UPDATE buffet SET buffet_id = 0 WHERE buffetName = 'Moonstar'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.000 sec

Section XI: Testing Table

Entity	SQLQuery	OK/Failed	Error Description	Possible Solution
employee	Delete	OK	None	None
employee	Update	OK	None	None
chef	Delete	OK	None	None
chef	Update	OK	None	None
engineer	Delete	OK	None	None
engineer	Update	OK	None	None
housekeeper	Delete	OK	None	None
housekeeper	Update	OK	None	None
supervisor	Delete	OK	None	None
supervisor	Update	OK	None	None
receptionClerk	Delete	OK	None	None
receptionClerk	Update	OK	None	None
manager	Delete	OK	None	None
manager	Update	OK	None	None
roomServicePorter	Delete	OK	None	None
roomServicePorter	Update	OK	None	None
hourlyWage	Delete	OK	None	None
hourlyWage	Update	Failed	Duplicate entry '0' for key 'hourlywage.PRIMARY'	updating multiple primary

				variables with the same value, should be non-primary instead.
hoursWorked	Delete	OK	None	None
hoursWorked	Update	OK	None	None
registerListing	Delete	OK	None	None
registerListing	Update	OK	None	None
owner	Delete	OK	None	None
owner	Update	OK	None	None
account	Delete	OK	None	None
account	Update	OK	None	None
accountType	Delete	OK	None	None
accountType	Update	OK	None	None
supportedFeature	Delete	OK	None	None
supportedFeature	Update	OK	None	None
feedback	Delete	OK	None	None
feedback	Update	OK	None	None
restaurant	Delete	OK	None	None
restaurant	Update	OK	None	None
bar	Delete	OK	None	None

bar	Update	OK	None	None
lounge	Delete	OK	None	None
lounge	Update	OK	None	None
establishment	Delete	OK	None	None
establishment	Update	OK	None	None
hotelType	Delete	OK	None	None
hotelType	Update	OK	None	None
location	Delete	OK	None	None
location	Update	OK	None	None
supportedFacility	Delete	OK	None	None
supportedFacility	Update	OK	None	None
locale	Delete	OK	None	None
locale	Update	OK	None	None
foodVendor	Delete	OK	None	None
foodVendor	Update	OK	None	None
serviceAndRetailVendor	Delete	OK	None	None
serviceAndRetailVendor	Update	OK	None	None
databaseSystem	Delete	OK	None	None
databaseSystem	Update	OK	None	None
guest	Delete	OK	None	None
guest	Update	OK	None	None
room	Delete	OK	None	None
room	Update	OK	None	None

roomCategory	Delete	OK	None	None
roomCategory	Update	OK	None	None
billingInfo	Delete	OK	None	None
billingInfo	Update	OK	None	None
deliveryService	Delete	OK	None	None
deliveryService	Update	OK	None	None
laundryOrder	Delete	OK	None	None
laundryOrder	Update	OK	None	None
clothe	Delete	OK	None	None
clothe	Update	OK	None	None
foodOrder	Delete	OK	None	None
foodOrder	Update	OK	None	None
meal	Delete	OK	None	None
meal	Update	OK	None	None
invoice	Delete	OK	None	None
invoice	Update	OK	None	None
invoiceInfo	Delete	OK	None	None
invoiceInfo	Update	OK	None	None
paymentType	Delete	OK	None	None
paymentType	Update	OK	None	None
creditCard	Delete	OK	None	None
creditCard	Update	OK	None	None
bankAccount	Delete	OK	None	None

bankAccount	Update	OK	None	None
editReservation	Delete	OK	None	None
editReservation	Update	OK	None	None
priceCategory	Delete	OK	None	None
priceCategory	Update	OK	None	None
tourist	Delete	OK	None	None
tourist	Update	OK	None	None
feature	Delete	OK	None	None
feature	Update	OK	None	None
department	Delete	OK	None	None
department	Update	OK	None	None
engineering	Delete	OK	None	None
engineering	Update	OK	None	None
foodAndBeverage	Delete	OK	None	None
foodAndBeverage	Update	OK	None	None
humanResource	Delete	OK	None	None
humanResource	Update	OK	None	None
salesAndMarketing	Delete	OK	None	None
salesAndMarketing	Update	OK	None	None
accounting	Delete	OK	None	None
accounting	Update	OK	None	None
roomDivision	Delete	OK	None	None
roomDivision	Update	OK	None	None

gym	Delete	OK	None	None
gym	Update	Failed	Truncated incorrect DOUBLE value: 'Fit Club'	Miss type gym_id, should be gymName instead.
recreationCenter	Delete	OK	None	None
recreationCenter	Update	OK	None	None
pool	Delete	OK	None	None
pool	Update	OK	None	None
tennisCourt	Delete	OK	None	None
tennisCourt	Update	OK	None	None
clothingStore	Delete	OK	None	None
clothingStore	Update	OK	None	None
hairSaloon	Delete	OK	None	None
hairSaloon	Update	OK	None	None
movieTheater	Delete	OK	None	None
movieTheater	Update	OK	None	None
jewelryStore	Delete	OK	None	None
jewelryStore	Update	OK	None	None
buffet	Delete	OK	None	None
buffet	Update	OK	None	None