

Functional Dependencies

15th April, 2018

Designed by

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Train

- **Train**(<u>train_id</u>, train_name)
 - train_id ---> train_name
 - Normal Form: BCNF
- **TrainDepartureTime**(<u>train_id</u>, <u>source</u>, departure_time)
 - o {train_id, source} ---> departure_time
 - Normal Form: BCNF
- **TrainReservation**(<u>train_id</u>, <u>class</u>, <u>source</u>, <u>destination</u>, <u>departure_date</u>, fare, train_status, no_of_seats)
 - o {train_id, ClassId, source, destination, Date} --- > fare
 - o {train_id, ClassId, source, destination, Date} ---> train_status
 - o {train_id, ClassId, source, destination, Date} --- > no_of_seats
 - Normal Form: BCNF
- TrainJourneyHours(train_id, source, destination, journey_hours)
 - {train_id, source, destination} ---> journey_hours
 - Normal Form: BCNF

Cab

- CabType(cab_type)
 - Normal Form: BCNF
- CabService(cab service id, provider_name, contact_no, rating)
 - cab_service_id ---> provider_name
 - cab_service_id ---> contact_no
 - cab_service_id ---> rating
 - Normal Form: BCNF

- CabServiceInACity(cab service id, city name)
 - Normal Form: BCNF
- Cabs(cab_service_id, city_name, cab_type, cost_per_day, total_available_cabs)
 - {cab_service_id, city_name, cab_type}---> cost_per_day
 - {cab_service_id, city_name, cab_type} ---> total_available_cabs
 - Normal Form : BCNF

Bus

- Bus(bus_id, provider_name, is_ac, rating)
 - bus_id ---> provider_name
 - o bus_id ---> is_ac
 - bus_id ---> rating
 - Normal Form: BCNF
- BusDepartureTime(bus_id, source, departure_date, time_of_departure)
 - {bus_id, source, departure_date}---> time_of_departure
 - Normal Form: BCNF
- **BusJourneyHours**(<u>bus_id</u>, <u>source</u>, <u>destination</u>, <u>departure_date</u>, journey_hours)
 - {bus_id, source, destination, departure_date} ---> journey_hours
 - Normal Form : BCNF
- **BusReservation**(bus_id, source, destination, departure_date, seat_type, cost, total_available_seats)
 - {bus_id, source, destination, departure_date, seat_type} ---> cost
 - {bus_id, source, destination, departure_date, seat_type}---> total_available_seats

Normal Form: BCNF

City

- City(city name)
 - Normal Form: BCNF
- NearByCity(current city, nearby city)
 - Normal Form: BCNF

Locality

- Locality(locality_id, locality_name, city_name)
 - locality_id ---> locality_name
 - locality_id ---> city_name
 - Normal Form: BCNF

Place to visit

- PlacesToVisit(<u>place_name</u>, <u>locality_id</u>, place_type,
 description_of_the_place, rating, street_address, avg_cost_person)
 - o {place_name, locality_id} ---> place_type
 - {place_name, locality_id} ---> description_of_the_place
 - {place_name, locality_id} ---> rating
 - o {place name, locality id}---> street address
 - {place_name, locality_id} ---> avg_cost_person
 - Normal Form : BCNF

Hotels

- Hotels(<u>hotel_name</u>, <u>locality_id</u>, rating, street_address, is_room_service, contact_no)
 - {hotel_name, locality_id} ---> rating
 - o {hotel_name, locality_id} ---> street_address
 - o {hotel_name, locality_id} ---> is_room_service
 - {hotel_name, locality_id} ---> contact_no
 - Normal Form: BCNF
- HotelReservation(<u>hotel_name</u>, <u>locality_id</u>, <u>date_of_availability</u>,
 <u>room_type</u>, total_available_rooms, cost)
 - {hotel_name, locality_id, date_of_availability, RoomType} ---> total_available_rooms
 - {hotel_name, locality_id,date_of_availability, RoomType} ---> cost
 - Normal Form: BCNF
- TypeOfRoom(<u>room_type</u>, max_accomodation)
 - room_type ---> max_accomodation
 - Normal Form: BCNF

Restaurants

- **Restaurants**(<u>restaurant_name</u>, <u>locality_id</u>, restaurant_type, rating, street_address, AvgRate/Person)
 - o {restaurant_name, locality_id} ---> restaurant_type
 - o {restaurant_name, locality_id} ---> rating
 - o {restaurant_name, locality_id} ---> street_address
 - o {restaurant_name, locality_id} ---> AvgRate/Person
 - Normal Form: BCNF