Group 17 Final ERD (Logical Model)

In the following ERD we've made several changes considering the feedback provided:

1. **Relationship Establishment:**
   - Added relationship line between "Support" & "Reservation Entity"

   - Added relationship between "Billing" and "Return & Inspection" (In case there's some damage reported)

   - Added relationship between "Insurance" & "Reservation Entity" (Giving option to customer for Insurance)

   - Added unary relationship in "Employee" (For Supervisors)

   - Added relationship between "Employee" & "Rental Mart" (For Employees Working there)

2. **Added Foreign Key in the entities wherever required.**

3. **Added several attributes in some entities here's the list of them:**

   Billing:
   - **Added:** Reservation_ID(FK), Payment_Mode, Payment_Status, Bill Amount Total, Bill Amount Due (In case there was any advance deposit), Billing_Statement(Which will contain a summary of all the charges)
   - **Removed:** None

   Car:
   - **Added:** Category_ID(FK), Store_ID(FK), Fuel Type, LicensePlate_Number, Color, Availability, Transmission_Type, Image URL
   - **Removed:** None

   Car_Category:
   - **Added:** Hourly_Rate
   - **Removed:** Daily_Rate

Customer:

- **Added:** First Name, Last Name, Driver's License Number
- **Removed:** Name

Employee:

- **Added**: Store_ID(FK), Supervisor_ID(FK), First Name, Last Name, Street Address, City, State, Country
- **Removed**: Name, Address

Insurance:

- **Added:** Reservation_ID as a foreign key for the Insurance table
- **Removed:** None

Maintenance:

- **Added:** Car_ID(FK1) and Employee_ID(FK2) as the foreign keys for the Maintenance table
- **Removed:** None

Return and Inspection:

- **Added:** Employee_ID as a foreign key for the Return and Inspection table
- **Removed:** Replaced with the Inspection_Date in place of the Return_Date

Reservation:

- **Added:** Customer_ID(FK) and Car_ID(FK) as the foreign keys, StartTime, EndTime, Opt_insurance?
- **Removed:** None

Rental_Mart: Renamed the "Location" entity to "Rental_Mart" to make it sound more logical

- **Added:** Contact_No, Email Address
- **Removed:** None

Support:

- **Added:** Reservation_ID(FK1), Customer_ID(FK2), Employee_ID(FK3) as the foreign keys for the Support table, Support_Type, Support_Status
- **Removed:** None

RENTAL_MART

PK	Store_ID
	Street Address
	City
	State
	Country
	Contact_No
	Email_addr

EMPLOYEE

PK	Employee_ID
FK(1)	Store_ID
FK(2)	Supervisor_ID
	First_Name
	Last_Name
	Contact_No
	Email_addr
	Employee_Rank
	Street Address
	City
	State
	Country

CAR

PK	Car_ID
FK(1)	Category_ID
FK(2)	Store_ID
	Make
	Model
	Fuel_Type
	Year
	Condition
	License Plate Number
	Color
	Availability
	Transmission_Type
	Image_url

MAINTENANCE

PK	Maintenance_ID
FK(1)	Employee_ID
FK(2)	Car_ID
	Maintenance_Date
	Maintenance_Details

SUPPORT

PK	Request_ID
FK(1)	Reservation_ID
FK(2)	Customer_ID
FK(3)	Employee_ID
	Support_Type
	Support_Description
	Support_Status

CAR CATEGORY

PK	Category_ID
	Category_Name
	Hourly_Rate
	Weekly_Rate
	Monthly_Rate

RESERVATION

PK	Reservation_ID
FK(1)	Customer_ID
FK(2)	Car_ID
	Pickup_Date
	Return_Date
	Pickup_Time
	Return_Time
	Opt_Insurance?

CUSTOMER

PK	Customer_ID
	Driver_LicenseNo
	FirstName
	LastName
	ContactNo
	Email_Addr

INSURANCE

PK	Insurance_ID
FK	Reservation_ID
	Coverage_Type
	Coverage_Amount

RETURN_&_INSPECTION

PK	Inspection_ID
FK(1)	Reservation_ID
FK(2)	Employee_ID
	Inspection_Date
	Inspection_Outcome
	Damage_Details
	Feedback

BILLING

PK	Billing_ID
FK	Reservation_ID
	Bill_Amount_Total
	Bill_Amount_Due
	Payment_Date
	Payment_Status
	Payment_Mode
	Billing_Statement

Relationship labels: supervises, employs, works in, Locates, handled by, handles, handles, taken for, for, is, involves, requests, belongs to, done for, placed by, places, generates, covers, has, Check, handles