Jonalou Tarroza

Individual Final Project
Create a Database System

Parenthetical Method:
EMPLOYEE(EmployeeID, EmployeeFN, EmployeeLN, *PositionID*, *WarehouseID*, Email, Phone, CellPhone, Address, City, State, Zip, SSN, DOB, HireDate, TermDate, Salary, HourlyRate, ReviewDate, Notes)

POSITION(PositionID, Title)

WAREHOUSE(WarehouseID, WarehouseName, Address, City, State, Zip, Phone, ClimateControl, SecurityGate)

DRIVER(DriverID, DriverFN, DriverLN, Address, City, State, Zip, SSN, DOB, HireDate, TermDate, Email, Phone, Rating, MilesDriven, TotalEarnings)

STORAGEUNITS(UnitID, *WarehouseID*, UnitSize, Rent, UnitStatus)

CUSTOMER(CustomerID, CustomerFN, CustomerLN, Address, City, State, Zip, Email, Phone)

CUSTOMERREQUEST(RequestID, *CustomerID*, RequestDate, RequestedService, AdditionalInfo)

JOBDETAIL(JobDetailID, *JobOrderID*, *DriverID*, *VehicleID*, Mileage, Weight)

JOBORDER(JobOrderID, *CustomerID*, *VehicleID, DriverID,* MoveDate, *WarehouseID*, *StatusID*, AddressFr, CityFr, StateFr, AddressTo, CityTo, StateTo, ServiceNeeded, HeavyItems, StoreItem)

JOBSTATUS(StatusID, StatusName)

VEHICLE(VehicleID, *VehicleTypeID*)

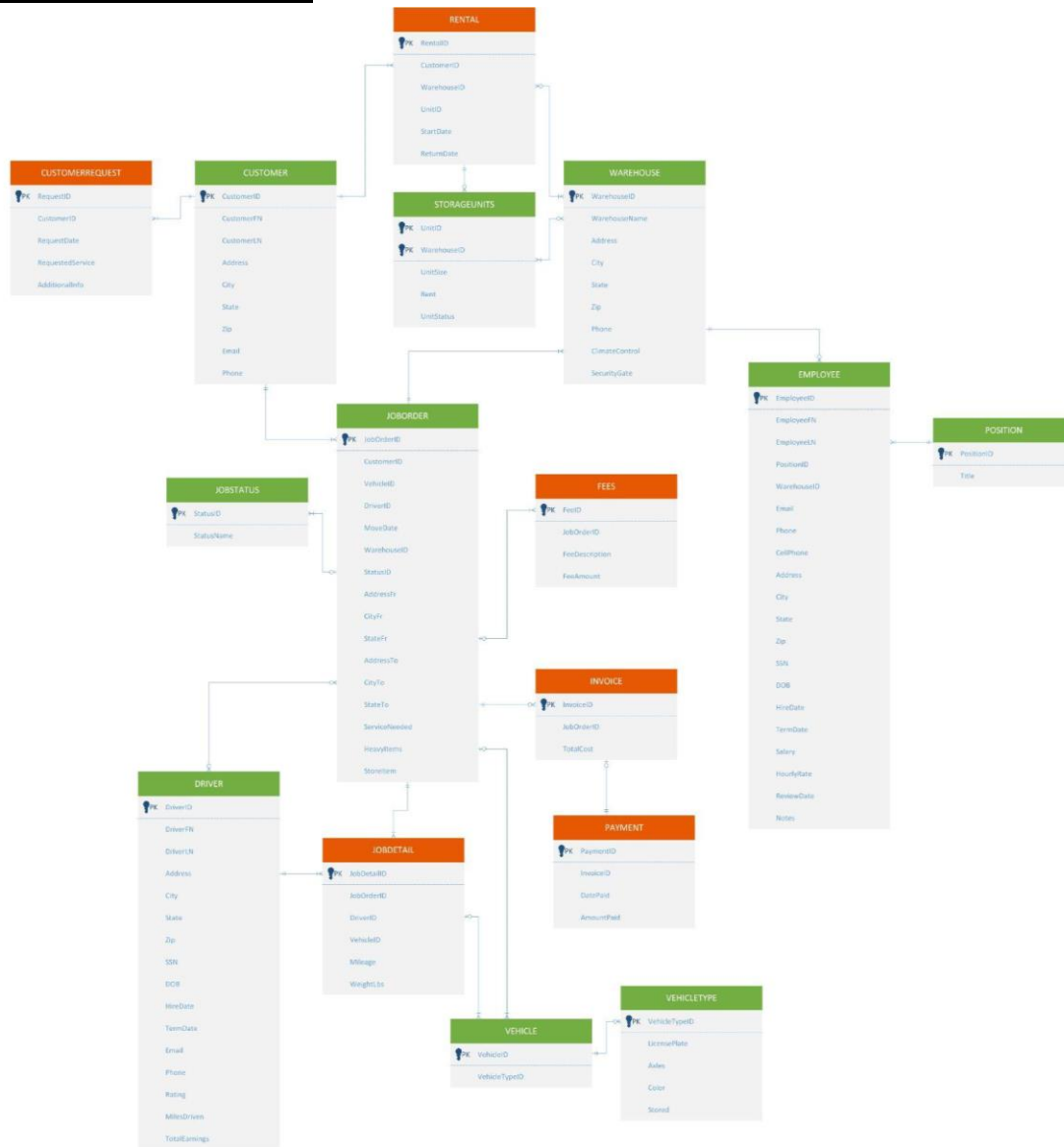VEHICLETYPE(VehiclyTypeID, LicensePlate, Axles, Color, Stored)

FEES(FeeID, *JobID*, FeeDescription, FeeAmount)

RENTAL(RentalID, *CustomerID, WarehouseID, UnitID*, StartDate, ReturnDate)

INVOICE(InvoiceID, *JobID*, TotalCost)

PAYMENT(PaymentID, *InvoiceID*, DatePaid, AmountPaid)

Proposed Database Design Model:

(Weak Entities in Orange; Strong Entities in Green)

Justification:

CUSTOMER and CUSTOMERREQUEST
- Minimum Cardinality: Mandatory to Mandatory
    - A customer must have a request; a request must be made by a customer
- Maximum Cardinality: One to Many
    - A customer can make many requests; a request can be made by (at most) one customer

CUSTOMER and RENTAL
- Minimum Cardinality: Mandatory to Mandatory
    - A customer must rent; a rental must be made by a customer
- Maximum Cardinality: One to Many
    - A customer can have many rentals; a rental can be made by (at most) one customer

CUSTOMER and JOBORDER
- Minimum Cardinality: Mandatory to Mandatory

- A customer must initiate for a job order; a job order must be initiated by a customer
  - Maximum Cardinality: One to Many
    - A customer can initiate many job orders; a job order can be made by (at most) one customer

JOBORDER and WAREHOUSE
- Minimum Cardinality: Mandatory to Mandatory
  - A job order must be sent to a warehouse; a warehouse must receive a job order
- Maximum Cardinality: One to Many
  - A job order can be sent to only one warehouse; a warehouse can receive many job orders

JOBORDER and JOBSTATUS
- Minimum Cardinality: Optional to Mandatory
  - A job order may may have a job status; a job status must correspond to a job order
- Maximum Cardinality: One to Many
  - A job order can have a job status; a job status can correspond to many job orders

JOBORDER and FEES
- Minimum Cardinality: Optional to Mandatory
  - A job order may or may not have fees; a fee must correspond to a job order
- Maximum Cardinality: One to Many
  - A job order can have many fees; a fee can correspond to (at most) one job order

JOBORDER and DRIVER
- Minimum Cardinality: Optional to Optional
  - A job order may have a driver; a driver may have a job order
- Maximum Cardinality: Many to Many
  - A job order can have many drivers assigned; a driver can be assigned to many job orders

JOBORDER and JOBDETAIL
- Minimum Cardinality: Mandatory to Mandatory
  - A job order must have details; details must correspond to a job order
- Maximum Cardinality: One to Many
  - A job order can have many details; job details can correspond to (at most) one order

JOBORDER and INVOICE
- Minimum Cardinality: Mandatory to Optional
  - A job order may have an invoice; an invoice must correspond to a job order
- Maximum Cardinality: One to Many
  - A job order can have many invoices; an invoice can correspond to (at most) one order

JOBORDER and VEHICLE
- Minimum Cardinality: Optional to Mandatory
  - A job order may be assigned to a vehicle; an vehicle must correspond to (at most) one job order
- Maximum Cardinality: One to Many
  - A job order can be assigned to many vehicles; a vehicle can correspond to (at most) one order

JOBDETAIL and VEHICLE
- Minimum Cardinality: Optional to Mandatory
  - A job detail may be associated with a vehicle; an vehicle must correspond to (at most) one job detail
- Maximum Cardinality: One to Many
  - A job detail can be associatedt with many vehicles; a vehicle can correspond to (at most) one job detail

WAREHOUSE and STORAGEUNITS
- Minimum Cardinality: Optional to Mandatory
  - A warehouse may have one or more storage units; a storage unit must correspond to a warehouse

- Maximum Cardinality: Many to Many
    - A warehouse can be assigned to many storage units; a storage unit can correspond to many warehouses

WAREHOUSE and EMPLOYEE
- Minimum Cardinality: Mandatory to Optional
    - A warehouse may have one or more employees; an employee must be assigned to a warehouse
- Maximum Cardinality: One to Many
    - A warehouse can have many employees; an employee can be assigned to (at most) one warehouse

RENTAL and WAREHOUSE
- Minimum Cardinality: Optional to Mandatory
    - A rental can be associated with zero or one warehouse; a warehouse must have one or more rentals
- Maximum Cardinality: Many to Many
    - A warehouse can be associated with many rentals; a rental can be associated with many warehouses

EMPLOYEE and POSITION
- Minimum Cardinality: Mandatory to Mandatory
    - An employee must have a position; a position must be assigned to an employee
- Maximum Cardinality: Many to One
    - An employee can have (at most) one position; a position can be assigned to many employees

INVOICE and PAYMENT
- Minimum Cardinality: Optional to Mandatory
    - An invoice may have a payment; payment must be in an invoice
- Maximum Cardinality: One to One
    - An invoice can have (at most) one payment; payment can be in (at most) one invoice

VEHICLE and VEHICLETYPE
- Minimum Cardinality: Mandatory to Optional
    - A vehicle must have a vehicle type; a vehicle type must be assigned to a vehicle
- Maximum Cardinality: One to Many
    - A vehicle can have (at most) one type; vehicle type can be assigned to many vehicles

Matrices/Tables:

Description: This table provides the information about positions provided in the company with the ID and position title.

POSITION		
Field	**Data Type**	**Field Size**
PositionID	Int	
Title	Char	50

Constraint: Primary Key (PositionID), Not Null (Title)

Description: This table has information of Moving On Inc.'s warehouses as it includes the ID of warehouses, warehouse names, address, phone number, and answers to whether or not they have climate control and a security gate.

WAREHOUSE		
Field	**Data Type**	**Field Size**
WarehouseID	Char	4
WarehouseName	Char	50
Address	Char	100
City	Char	50
State	Char	2
Zip	Int	
Phone	Char	14
ClimateControl	Char	3
SecurityGate	Char	3

Constraint: Primary Key (WarehouseID), Not Null (WarehouseName), Not Null (Address), Not Null (City), Not Null (State), Not Null (Zip), Not Null (Phone), Not Null (ClimateControl), Not Null (SecurityGate)

Description: This table contains information about employees of Moving On Inc., including their Employee ID, name, position, warehouse location, and email.

EMPLOYEE		
Field	**Data Type**	**Field Size**
EmployeeID	Int	
EmployeeFN	Char	50
EmployeeLN	Char	50
PositionID	Int	
WarehouseID	Char	4
Email	Char	100
Phone	Char	14
CellPhone	Char	14

Address	Char	50
City	Char	50
State	Char	2
Zip	Int	
SSN	Char	15
DOB	Date	
HireDate	Date	
TermDate	Date	
Salary	Int	
HourlyRate	Int	
ReviewDate	Date	
Notes	Char	100

Constraint: Primary Key (<u>EmployeeID</u>), Not Null (EmployeeFN), Not Null (EmployeeLN), Not Null (*PositionID)*, Not Null (*WarehouseID)*, Not Null (Email), Not Null (Phone), Not Null (CellPhone), Not Null (Address), Not Null (City), Not Null (State), Not Null (Zip), Not Null (SSN), Not Null (DOB), Not Null (HireDate)

Description: This table describes the drivers of the company with information regarding their ID, name, social security, birthday, date of when the started/ended, email, phone, ratings given by customers, amount of miles driven, and total earnings.

DRIVER		
Field	**Data Type**	**Field Size**
DriverID	Int	
DriverFN	Char	50
DriverLN	Char	50
Address	Char	50
City	Char	50
State	Char	2
Zip	Int	
SSN	Char	15

DOB	Date	
HireDate	Date	
TermDate	Date	
Email	Char	100
Phone	Char	14
Rating	Char	1
MilesDriven	Int	
TotalEarnings	Int	

Constraint: Primary Key (<u>DriverID</u>), Not Null (DriverFN), Not Null (DriverLN), Not Null (Address), Not Null (City), Not Null (State), Not Null (Zip), Not Null (SSN), Not Null (DOB), Not Null (HireDate), Not Null (Email), Not Null (Phone), Not Null (Rating), Not Null (MilesDriven), Not Null (TotalEarnings)

Description: This table consists of customer information including customer ID, their name, address, email, and phone number.

CUSTOMER		
Field	**Data Type**	**Field Size**
CustomerID	Int	
CustomerFN	Char	100
CustomerLN	Char	100
Address	Char	50
City	Char	50
State	Char	2
Zip	Int	
Email	Char	100
Phone	Char	14

Constraint: Primary Key (<u>CustomerID</u>), Not Null (CustomerFN), Not Null (CustomerLN), Not Null (Address), Not Null (City), Not Null (State), Not Null (Zip), Not Null (Email), Not Null (Phone)

Description: This table is the information of storage units including the storage unit ID, warehouse ID, size of the storage unit, amount for rent, and the status of the storage unit.

STORAGEUNITS

Field	Data Type	Field Size
UnitID	Int	
WarehouseID	Char	4
UnitSize	Char	5
Rent	Int	
UnitStatus	Char	20

Constraint: Primary Key (UnitID), Not Null (*WarehouseID)*, Not Null (UnitSize), Not Null (Rent), Not Null (UnitStatus)

Description: This table details the requests made by customers with the request ID, customer ID, date for when the request was made, the requested service, and any additional information.

CUSTOMERREQUEST		
Field	**Data Type**	**Field Size**
RequestID	Char	**8**
CustomerID	Int	
RequestDate	Date	
RequestedService	Char	50
AdditionalInfo	Char	50

Constraint: Primary Key (RequestID), Not Null (*CustomerID)*, Not Null (RequestDate), Not Null (RequestedService), Not Null (AdditionalInfo)

Description: This detail has information of the types of vehicles including the vehicle type number, license plate, number of axles, color of the car, and answers if the vehicle is stored.

VEHICLETYPE		
Field	**Data Type**	**Field Size**
VehicleTypeID	Int	
LicensePlate	Char	8
Axles	Int	
Color	Char	20
Stored	Char	3

Constraint: Primary Key (VehiclyTypeID), Not Null (LicensePlate), Not Null (Axles), Not Null (Color), Not Null (Stored)

Description: This table has information of the vehicles with the vehicle ID and vehicle type ID.

VEHICLE		
Field	**Data Type**	**Field Size**
VehicleID	Int	
VehicleTypeID	Int	

Constraint: Primary Key (VehicleID), Not Null (*VehicleTypeID*)

Description: This table has information of the job order with the job order ID, customer ID, vehicle ID, driver ID, date of moving, warehouse ID, status information, address of start location and new location, and answers service needed/heavy items/stored items.

JOBORDER		
Field	**Data Type**	**Field Size**
JobOrderID	Char	8
CustomerID	Int	
VehicleID	Char	8
DriverID	Int	
MoveDate	Date	
WarehouseID	Char	4
StatusID	Int	
AddressFr	Char	50
CityFr	Char	50
StateFr	Char	2
AddressTo	Char	50
CityTo	Char	50
StateTo	Char	2
ServiceNeeded	Char	20

HeavyItems	Char	3
StoreItem	Char	3

Constraint: Primary Key (JobOrderID), Not Null (*CustomerID)*, Not Null (*VehicleID),* Not Null (*DriverID),* Not Null (MoveDate), Not Null (*WarehouseID)*, Not Null (*StatusID)*, Not Null (AddressFr), Not Null (CityFr), Not Null (StateFr), Not Null (AddressTo), Not Null (CityTo), Not Null (StateTo), Not Null (ServiceNeeded), Not Null (HeavyItems), Not Null (StoreItem)

Description: This table gives details of the job order including the detail ID, job order ID, driver ID, vehicle ID, mileage, and weight of things being moved.

JOBDETAIL		
Field	**Data Type**	**Field Size**
JobDetailID	Char	7
JobOrderID	Char	8
DriverID	Int	
VehicleID	Char	8
Mileage	Int	
WeightLbs	Int	

Constraint: Primary Key (JobDetailID), Not Null (*JobOrderID)*, Not Null (*DriverID)*, Not Null (*VehicleID)*, Not Null (Mileage), Not Null (Weight)

Description: This table provides the status information of a job order with a status ID, and name of the status.

JOBSTATUS		
Field	**Data Type**	**Field Size**
StatusID	Int	
StatusName	Char	20

Constraint: Primary Key (StatusID), Not Null (StatusName)

Description: This table provides information about the fees for job order including the fee ID, job order ID, description of the fee, and fee amount. It is useful for calculating and tracking costs of job orders, providing customers with invoices.

FEES		
Field	**Data Type**	**Field Size**

FeeID	Char	8
JobOrderID	Char	8
FeeDescription	Char	50
FeeAmount	Int	

Constraint: Primary Key (FeeID), Not Null (*JobID)*, Not Null (FeeDescription), Not Null (FeeAmount)

Description: This table gives information of the rentals with the rental ID, customer ID, warehouse ID, and the rental start/end date.

RENTAL		
Field	**Data Type**	**Field Size**
RentalID	Char	8
CustomerID	Int	
WarehouseID	Char	4
UnitID	Int	
StartDate	Date	
ReturnDate	Date	

Constraint: Primary Key (RentalID), Not Null (*CustomerID),* Not Null (*WarehouseID), Not Null (UnitID)*, Not Null (StartDate)

Description: This table has information regarding invoices of customers which includes the invoice ID, job order ID, and total cost. This is useful for customers to track what is being billed to them.

INVOICE		
Field	**Data Type**	**Field Size**
InvoiceID	Char	7
JobOrderID	Char	8
TotalCost	Int	

Constraint: Primary Key (InvoiceID), Not Null (*JobID)*, Not Null (TotalCost)

Description: This table consists of information of all the payments made by customers with payment ID, invoice ID, the date paid, and amount paid. This is for the company to keep track of who paid, who still owes, etc.

<table>
<tr><th colspan="3" align="center">PAYMENT</th></tr>
<tr><th>Field</th><th>Data Type</th><th>Field Size</th></tr>
<tr><td>PaymentID</td><td>Char</td><td>6</td></tr>
<tr><td>InvoiceID</td><td>Char</td><td>7</td></tr>
<tr><td>DatePaid</td><td>Date</td><td></td></tr>
<tr><td>AmountPaid</td><td>Int</td><td></td></tr>
</table>

Constraint: Primary Key (PaymentID), Not Null (*InvoiceID)*, Not Null (DatePaid), Not Null (AmountPaid)

Tables and Fields:

EmployeeID	EmployeeFN	EmployeeLN	*PositionID*	*WarehouseID*	Email	Phone	CellPhone	Address	City
1001	David	Bowers	1	CA-1	david.bowers@movinoninc.com	(206) 246-5132	(206) 555-1234	10124 Metropolitan Drive	Seattle
1002	Elena	Martinez	2	NV-1	elena_martinez@movinoninc.com	(206)963-8520	(206) 396-2580	1234 Pine St	Seattle
1003	Marcus	Wong	3	AZ-1	m.wong@movinoninc.com	(206)741-8529	(206) 471-8925	5678 1st Ave	Seattle
1004	Jasmine	Patel	12	CA-1	patel_jasmine@movinoninc.com	(555)852-7412	(555)258-2147	1234 Main St	Phoenix
1005	Nathaniel	Davis	4	NV-1	n.davis@movinoninc.com	(555)963-7410	(555)749-6310	5678 Elm St	Tucson
1006	Chloe	Lee	5	AZ-1	chloelee@movinoninc.com	(555)398-3657	(555)789-3365	9012 Oak St	Mesa

1007	Christopher	Garcia	13	CA-1	chris_garcia@movinoninc.com	(702)763-8722	(702)637-7282	123 Main St	Las Vegas
1008	Natalie	Nguyen	6	NV-1	nnguyen@movinoninc.com	(775)350-8206	(775)503-6028	456 Oak Ave	Reno
1009	Grace	Wright	7	AZ-1	gracewright@movinoninc.com	(702)459-8836	(702)495–1230	789 Elm St	Henderson
1010	Jimin	Park	14	CA-1	jiminpark@movinoninc.com	(213)578-3455	(213)748-3444	123 Main St	Los Angeles
1011	Yeonjun	Choi	8	NV-1	choi.yeonjun@movinoninc.com	(415)267-9932	(415)217-8832	123 Oak Ave	San Francisco
1012	Wonwoo	Jeon	9	AZ-1	j_wonwoo@movinoninc.com	(916)213-3248	(916)267-3248	456 Elm St	Sacramento
1013	Mingyu	Lee	10	CA-1	lee_mingyu@movinoninc.com	(619)814-6636	(619)418-6727	7891 Pine St	San Diego
1014	Olivia	Adams	15	NV-1	oli_adams@movinoninc.com	(555)714-5503	(555)814-6636	213 Main St	Seattle
1015	Mia	Brown	11	AZ-1	mia.brown@movinoninc.com	(555)914-0814	(555)702-5503	123 Pine St	Tacoma

State	Zip	SSN	DOB	HireDate	TermDate	Salary
WA	98117	154-00-3785	9/12/1958	1/22/1998	NULL	72,000

WA	98101	587-67-3421	10/24/1989	10/23/2015	12/31/2020	NULL
WA	98121	324-84-9076	06/11/1994	05/12/2016	06/30/2021	NULL
AZ	85001	998-46-2210	08/02/1987	08/05/2018	NULL	65,000
AZ	85701	772-91-5209	03/17/1992	02/14/2017	10/19/2022	75,000
AZ	85201	629-30-1864	11/29/1990	06/29/2019	NULL	NULL
NV	89101	460-55-7998	07/08/1985	09/01/2016	03/31/2021	NULL
NV	89501	176-83-6329	01/22/1998	12/12/2015	06/14/2020	NULL
NV	89002	305-36-0675	05/06/1991	07/18/2016	03/31/2021	90,000
CA	90001	743-20-4687	10/13/1995	04/05/2018	NULL	NULL
CA	94110	912-68-1303	09/13/1999	11/09/2023	NULL	NULL
CA	95814	547-41-2896	07/17/1996	03/22/2017	03/21/2023	NULL
CA	92103	681-11-8340	04/06/1997	01/16/2015	NULL	NULL

WA	98101	239-75-1958	11/09/1999	10/02/2019	NULL	90,000
WA	98402	401-59-0321	06/29/1986	08/28/2016	07/30/2021	60,000

POSITION(PositionID, Title)

PositionID	Title
1	General Manager
2	Warehouse Manager
3	Administrative Assistant
4	Accountant
5	Maintenance
6	Moving Assistant
7	Information Systems
8	Operations Manager
9	Dispatch Coordinator
10	Customer Service
11	Storage Manager
12	Sales Representative
13	Moving Consultant
14	Warehouse Associate
15	Marketing Manager

WAREHOUSE(WarehouseID, WarehouseName, Address, City, State, Zip, Phone, ClimateControl, SecurityGate)

WarehouseID	WarehouseName	Address	City	State	Zip	Phone	ClimateControl	SecurityGate
CA-1	MovingON California	#3 Industrial Park Way	Fullerton	CA	90621	6572783721	Yes	Yes

NV-1	MovingOn Nevada	8798 Warehouse Rd	Las Vegas	NV	89104	7024568734	No	Yes
AZ-1	MovingOn Arizona	54781 Hixson Pike	Phoenix	AZ	85005	6238972341	Yes	No

DRIVER(DriverID, DriverFN, DriverLN, Address, City, State, rZip, SSN, DOB, HireDate, TermDate, Email, Phone, Rating, MilesDriven, TotalEarnings)

DriverID	DriverFN	DriverLN	Address	City	State	Zip
201	Sarah	George	1234 Main St	Phoenix	AZ	85001
202	Michael	Thompson	5678 Elm St	San Francisco	CA	94109
203	Ashley	Lee	9101 Olive Ave	Las Vegas	NV	89145
204	Daniel	Davis	2468 Maple Dr	Scottsdale	AZ	85250
205	Emily	Rodriguez	1234 Pine St	Los Angeles	CA	90028
206	Jacob	Johnson	1357 Cedar Ave	Reno	NV	89501
207	Kim	Jackson	3698 Oak St	Tucson	AZ	85701
208	Samantha	Park	7531 Walnut Dr	San Diego	CA	92103
209	Isabella	Hernandez	9512 Birch Ave	Henderson	NV	89011
210	Scott	Michael	8642 Cedar St	Mesa	AZ	85203
211	Michael	Lee	1111 Orange Ave	San Jose	CA	95128
212	Benjamin	Frank	4444 Redwood Dr	North Las Vegas	NV	89031
213	Charlie	Brown	1233 Pine St	Flagstaff	AZ	96001
214	Ava	Max	7891 Laurel Ave	Sacramento	CA	95814
215	Kate	Thomas	5555 Oakwood Dr	Sparks	NV	89436

SSN	DOB	HireDate	TermDate	Email	Phone	Rating	MilesDriven	TotalEarnings
135-23-0987	06/17/1992	10/23/2015	NULL	sarahgeorge@movinoninc.com	(602) 683-5428	A	867.2	82869.60
123-45-6789	11/23/1985	10/23/2015	12/31/2020	m_thompson@movinoninc.com	(415) 326-9147	B	392.1	1739.20
012-78-4561	09/12/1987	05/12/2016	06/30/2021	ashley.lee@movinoninc.com	(702) 536-8719	C	120.5	1482.90
963-56-7894	03/08/1990	08/05/2018	NULL	dan_davis@movinoninc.com	(480) 257-1890	D	63.8	1209.40
012-95-7530	05/29/1993	02/14/2017	10/19/2022	em.rod@movinoninc.com	(213) 489-6837	F	25.6	32.50
843-08-9126	07/14/1988	06/29/2019	03/31/2021	jacon_john@movinoninc.com	(775) 674-8426	F	56.3	935.10
333-78-4198	02/03/1995	09/01/2016	03/31/2021	kimjackson@movinoninc.com	(520) 662-9572	D	178.9	1246.70
697-00-4561	12/19/1986	12/12/2015	06/14/2020	park_samantha@movinoninc.com	(619) 467-9215	C	429.6	1573.70
986-00-7894	08/01/1991	07/18/2016	NULL	isabella_hernandez@movinoninc.com	(702) 560-3892	B	732.0	1943.20
317-99-	10/07/199	04/05/201	NULL	scott.mich	(480)	A	985.4	3195.40

1287	4	8		ael@movinoninc.com	941-2873			
991-44-7365	01/22/1989	11/09/2023	NULL	lee_michael@movinoninc.com	(408) 409-7653	A	624.9	2650.80
882-44-6636	04/11/1996	03/22/2017	NULL	frank.benj@movinoninc.com	(702) 534-9681	F	55.9	868.90
982-03-7269	08/28/1999	01/16/2015	NULL	charlie_brown@movinoninc.com	(928) 226-7832	C	291.7	1560.60
157-15-9614	06/02/1997	10/02/2019	03/21/2023	ava.max@movinoninc.com	(916) 671-3485	A	572.9	2227.80
012-22-5578	09/15/1998	08/28/2016	07/30/2021	kate_thomas@movinoninc.com	(775) 354-6839	A	562.8	2087.30

STORAGEUNITS(UnitID, *CustomerID*, *WarehouseID*, UnitSize, Rent, UnitStatus)

UnitID	WarehouseID	UnitSize	Rent	UnitStatus
1	CA-1	8 x 8	25.00	Available
1	NV-1	12 x 12	35.00	Occupied
1	AZ-1	12 x 12	45.00	Available
2	CA-1	8 x 8	30.00	Occupied
2	NV-1	12 x 12	35.00	Available
2	AZ-1	12 x 12	45.00	Occupied
3	CA-1	8 x 8	25.00	Available
3	NV-1	9 x 12	30.00	Occupied
3	AZ-1	12 x 12	45.00	Available

4	CA-1	8 x 12	30.00	Occupied
4	NV-1	9 × 12	30.00	Available
4	AZ-1	12 x 18	70.00	Occupied
5	CA-1	8 x 8	25.00	Available
5	NV-1	12 x 12	85.00	Occupied
5	AZ-1	12 × 18	70.00	Available
6	CA-1	8 × 12	30.00	Occupied
6	NV-1	12 x 12	85.00	Available
6	AZ-1	12 x 12	45.00	Occupied
7	CA-1	8 × 10	25.00	Available
7	NV-1	12 × 10	80.00	Occupied
7	AZ-1	12 x12	85.00	Available
8	CA-1	15 x 15	95.00	Occupied

CUSTOMER(CustomerID, CustomerFN, CustomerLN, Address, City, State, Zip, Email, Phone)

Customer ID	Customer FN	Customer LN	Address	City	State	Zip	Email	Phone
87002	Piazza	Real Estate	1789 Eighth Avenue	Spokane	WA	98117	piazza.realestate@gmail.com	(206) 123-0123
24601	Jenny	Kim	1234 Vineyard Ave	Sacramento	CA	95829	jenny.kim@gmail.com	(916) 555-0101
93752	Mark	Lee	1234 Sunset Rd	Henderson	NV	89014	mark_lee@gmail.com	(702) 555-0123
18594	Justin	Grace	1234 Camelback Rd	Phoenix	AZ	85018	justin.grace@yahoo.com	(480) 555-0180
71985	Selena	Baldwin	7892 Las Vegas Blvd	Las Vegas	NV	89109	selena.baldwin432@yahoo.com	(702) 555-0123
37281	Chloe	Bram	5678 University Blvd	Tucson	AZ	85705	chloe_bram@gmail.com	(520) 555-0505

68543	Johnny	Monet	135 Pacific Coast Highway	Malibu	CA	90265	johnnymonet@gmail.com	(310) 555-1212
25714	Ben	Choi	1357 Silverado Ranch Blvd	Enterprise	NV	89123	benchoi@gmail.com	(702) 555-0123
89372	Terry	Kai	135 Shea Blvd	Scottsdale	AZ	85260	terry.kai@gmail.com	(480) 555-2600
62349	Steve	Moi	2468 Magnolia Blvd	Burbank	CA	91505	steve_choi@gmail.com	(818) 555-1717
48197	Daniel	Park	2568 Silverado Ranch Blvd	Enterprise	NV	89123	daniel.park@gmail.com	(702) 555-4567
75923	Louis	Brawn	246 Gilbert Rd	Mesa	AZ	85204	louis_brawn@gmail.com	(480) 555-2040
38957	Angelica	Marie	4568 Rodeo Drive	Beverly Hills	CA	90210	angelica.marie@gmail.com	(310) 555-2222
92754	Kenneth	Tan	4568 South McCarran Blvd	Sparks	NV	89431	kenneth_tan@gmail.com	(775) 555-0123
57219	Lance	Maine	456 Beaver St	Flagstaff	AZ	86001	lancemaine@gmail.com	(928) 555-0101

CUSTOMERREQUEST(RequestID, *CustomerID*, RequestDate, RequestedService, AdditionalInfo)

RequestID	*CustomerID*	RequestDate	RequestedService	AdditionalInfo
REQ12345	87002	09/24/2019	Moving Service	10 ft moving truck
REQ23456	24601	03/02/2017	Storage Service	Store belongings in 1 month
REQ34567	93752	05/18/2020	Both	15 ft moving truck, store belongings in 2 months
REQ45678	18594	07/12/2016	Moving Service	15 ft moving truck

REQ56789	71985	11/20/2021	Storage Service	Store belongings in span of 4 months	
REQ67890	37281	12/09/2015	Both	20 ft moving truck, store in one week	
REQ78901	68543	08/31/2018	Moving Service	25 ft moving truck	
REQ89012	25714	02/17/2022	Storage Service	Store based off fragility	
REQ90123	89372	06/08/2017	Both	Store and move based off fragility	
REQ01234	62349	01/25/2023	Moving Service	25 ft moving truck	
REQ09876	48197	04/09/2016	Storage Service	Store belongings in span of 4 months	
REQ98765	75923	10/05/2022	Both	Store and move based off fragility	
REQ87654	38957	07/23/2019	Moving Service	15 ft moving truck	
REQ76543	92754	09/01/2021	Storage Service	Store belongings in 1 month	
REQ65432	57219	12/30/2015	Both	Store and move based off fragility	

JOBDETAIL(JobDetailID, *JobOrderID*, *DriverID*, *VehicleID*, Mileage, Weight)

JobDetailID	*JobOrderID*	*DriverID*	*VehicleID*	Mileage	Weight
34562	J-98765	201	VEH1057	5 miles	100 lbs
87391	J-54321	202	VEH2096	10 miles	250 lbs
21904	J-24680	203	VEH3145	15 miles	500 lbs
98271	J-13579	204	VEH4163	20 miles	750 lbs
65712	J-24601	205	VEH5218 VEH6372	25 miles	1000 lbs
42658	J-12345	206	VEH7458	30 miles	1250 lbs
75413	J-9876	207	VEH8489	35 miles	1500 lbs
19083	J-5432	208	VEH9510	40 miles	1750 lbs
36571	J-2468	209	VEH0621	45 miles	2000 lbs
58321	J-1357	210	VEH1789	50 miles	2250 lbs

82091	J-2460	211	VEH2815	55 miles	2500 lbs
10957	J-1234	212	VEH3970	60 miles	2750 lbs
65023	J-8765	213	VEH4945	65 miles	3000 lbs
94281	J-4321	214	VEH5987	70 miles	3250 lbs
23789	J-8024	215	VEH5987	75 miles	3500 lbs

JOBORDER(JobOrderID, *CustomerID*, *VehicleID, DriverID,* MoveDate, *WarehouseID*, *StatusID*, AddressFr, CityFr, StateFr, AddressTo, CityTo, StateTo, ServiceNeeded, HeavyItems, StoreItem)

JobOrderID	*CustomerID*	*VehicleID*	*DriverID*	MoveDate	*WarehouseID*	*StatusID*
J-98765	87002	VEH1057	201	09/15/2017	CA-1	101
J-54321	24601	VEH2096	202	07/20/2019	NV-1	205
J-24680	93752	VEH3145	203	05/03/2017	AZ-1	312
J-13579	18594	VEH4163	204	11/18/2018	CA-1	422
J-24601	71985	VEH5218 VEH6372	205	02/22/2022	NV-1	507
J-12345	37281	VEH7458	206	09/14/2016	AZ-1	613
J-9876	68543	VEH8489	207	08/05/2015	CA-1	723
J-5432	25714	VEH9510	208	12/01/2023	NV-1	801
J-2468	89372	VEH0621	209	06/27/2020	AZ-1	916
J-1357	62349	VEH1789	210	03/11/2018	CA-1	1002
J-2460	48197	VEH2815	211	01/19/2021	NV-1	1120
J-1234	75923	VEH3970	212	10/08/2017	AZ-1	1255
J-8765	38957	VEH4945	213	04/23/2022	CA-1	1367
J-4321	92754	VEH5987	214	07/08/2016	NV-1	1422
J-8024	57219	VEH5987	215	11/29/2020	AZ-1	1550

AddressFr	CityFr	StateFr	AddressTo	CityTo	StateTo	ServiceNeeded	HeavyItems	StoreItem
123 Main St	Phoenix	AZ	1234 Main St	Los Angeles	CA	Moving Service	Yes	No
1234 Main St	Los Angeles	CA	1234 Silver St	Las Vegas	NV	Storage Service	No	Yes
123 Nevada Way	Las Vegas	NV	1212 Pine St	Mesa	AZ	Both	Yes	Yes
456 Maple Ave	Scottsdale	AZ	1414 Pine ST	Sacramento	CA	Moving Service	Yes	No
456 Silver St	Reno	NV	5678 Gold Ave	Reno	NV	Storage Service	No	Yes
5678 Maple Ave	San Francisco	CA	1234 Main St	Phoenix	AZ	Both	Yes	Yes
789 Oak St	Tucson	AZ	1234 Vine St	Los Angeles	CA	Moving Service	Yes	No
1010 Elm St	Flagstaff	AZ	9101 Platinum Dr	Mesa	NV	Storage Service	No	Yes
111 First Ave	Seattle	WA	5678 Elm St	Tucson	AZ	Both	Yes	Yes
789 Gold Ave	Henderson, NV 89002	NV	5678 Wilshire Blvd	Beverly Hills	CA	Moving Service	Yes	No
222 Second Ave	Bellevue	WA	2468 Diamond Rd	North Las Vegas	NV	Storage Service	No	Yes

9101 Oak St	San Diego	CA	9101 Pine Ave	Mesa	AZ	Both	No	Yes
1010 Diamond Dr	Carson City	NV	9101 Sunset Blvd	West Hollywood	CA	Moving Service	Yes	No
1212 Elm St	Santa Barbara	CA	3690 Copper Cir	Sparks	NV	Storage Service	No	Yes
1212 Platinum Ave	Sparks	NV	2468 Oak Blvd	Scottsdale	AZ	Both	No	Yes

JOBSTATUS(StatusID, StatusName)

StatusID	StatusName
101	In Progress
205	Complete
312	Rescheduled
422	Canceled
507	Pending
613	On Hold
723	In Progress
801	Complete
916	Rescheduled
1002	Canceled
1120	Pending
1255	On Hold
1367	In Progress
1422	Complete

| 1550 | Rescheduled |

VEHICLE(VehicleID, *VehicleTypeID*)

VehicleID	VehicleTypeID
VEH1057	VAN-001
VEH2096	TRK-002
VEH3145	SUV-003
VEH4163	VAN-004
VEH5218	TRK-005
VEH6372	SUV-006
VEH7458	TRK-007
VEH8489	TRK-008
VEH9510	VAN-009
VEH0621	VAN-010
VEH1789	TRK-011
VEH2815	VAN-012
VEH3970	TRK-013
VEH4945	TRK-014
VEH5987	TRK-015

VEHICLETYPE(VehiclyTypeID, LicensePlate, Axles, Color, Stored)

VehiclyTypeID	LicensePlate	Axles	Color	Stored
VAN-001	F3T2X8R	2	Red	Yes
TRK-002	H6N9S4Z	3	Blue	Yes
SUV-003	J2E4M7D	2	Black	Yes
VAN-004	L8P1T3G	4	Silver	Yes
TRK-005	N5B2F8K	3	White	Yes
VAN-006	E9P2N7S	2	Teal	Yes
TRK-007	Q1U6Z9V	2	Gray	Yes

TRK-008	R4J7E2K	5	Green	No
VAN-009	T9G5N1D	4	Yellow	Yes
VAN-010	V2H8Q6T		Orange	No
TRK-011	X5W7F4M	3	Purple	Yes
VAN-012	Y8D2P6K	2	Brown	Yes
TRK-013	Z1T7R8J	6	Beige	Yes
TRK-014	A5B2F9D	3	Gold	No
TRK-015	C7J3K5L	4	Maroon	Yes

FEES(FeeID, *JobOrderID*, FeeDescription, FeeAmount)

FeeID	*JobOrderID*	FeeDescription	FeeAmount
FEE00123	J-98765	Packing supplies	$100
FEE00234	J-54321	Transportation costs	$2.50
FEE00345	J-24680	Transportation costs	$5
FEE00456	J-13579	Security deposit	$100
FEE00567	J-24601	Application fee	$25
FEE00678	J-12345	Labor cost	$50
FEE00789	J-9876	Packing supplies	$200
FEE00890	J-5432	Packing supplies	$300
FEE00901	J-2468	Transportation costs	$7.50
FEE01012	J-1357	Security deposit	$1000
FEE01123	J-2460	Application fee	$50
FEE01234	J-1234	Labor cost	$200
FEE01345	J-8765	Packing supplies	$100
FEE01456	J-4321	Labor cost	$500
FEE01567	J-8024	Transportation costs	$10

RENTAL(RentalID, *CustomerID, WarehouseID, UnitID*, StartDate, ReturnDate)

RentalID	*CustomerID*	*WarehouseID*	*UnitID*	StartDate	EndDate

RNTL001	87002	CA-1	1	08/12/2017	08/19/2017
RNTL002	24601	NV-1	1	01/23/2019	01/30/2019
RNTL003	93752	AZ-1	1	03/07/2018	03/14/2018
RNTL004	18594	CA-1	2	06/02/2020	06/09/2020
RNTL005	71985	NV-1	2	10/11/2016	10/18/2016
RNTL006	37281	AZ-1	2	12/05/2019	12/12/2019
RNTL007	68543	CA-1	3	05/17/2021	05/24/2021
RNTL008	25714	NV-1	3	02/28/2018	03/07/2018
RNTL009	89372	AZ-1	3	09/14/2017	09/21/2017
RNTL010	62349	CA-1	4	11/06/2022	11/13/2022
RNTL011	48197	NV-1	4	07/19/2021	07/26/2021
RNTL012	75923	AZ-1	4	04/08/2016	04/15/2016
RNTL013	38957	CA-1	5	02/11/2020	02/18/2020
RNTL014	92754	NV-1	5	08/23/2018	08/30/2018
RNTL015	57219	AZ-1	5	11/01/2022	11/08/2022

INVOICE(InvoiceID, *JobID*, TotalCost)

InvoiceID	*JobOrderID*	TotalCost
INV2378	J-98765	750.00
INV5032	J-54321	1200.00
INV9087	J-24680	900.50
INV1564	J-13579	2500.00
INV8023	J-24601	1750.00
INV3412	J-12345	3000.25

INV6790	J-9876	800.75
INV4201	J-5432	1500.00
INV7259	J-2468	2100.50
INV8893	J-1357	1250.25
INV1115	J-2460	1250.25
INV6743	J-1234	1750.50
INV2506	J-8765	950.00
INV8075	J-4321	2800.75
INV9932	J-8024	2200.50

PAYMENT(PaymentID, *InvoiceID*, DatePaid, AmountPaid)

PaymentID	*InvoiceID*	DatePaid	AmountPaid
PAY001	INV2378	07/12/2018	750.00
PAY002	INV5032	02/23/2019	1000.00
PAY003	INV9087	09/15/2022	900.50
PAY004	INV1564	12/30/2016	2000.00
PAY005	INV8023	03/18/2017	1750.00
PAY006	INV3412	06/29/2020	3000.25
PAY007	INV6790	11/05/2019	800.75
PAY008	INV4201	01/08/2023	1000.00
PAY009	INV7259	08/22/2016	2000.50
PAY010	INV8893	05/11/2021	1850.00
PAY011	INV1115	10/01/2018	1250.25
PAY012	INV6743	04/26/2022	1750.50
PAY013	INV2506	08/09/2017	900.00
PAY014	INV8075	11/19/2021	2800.75
PAY015	INV9932	06/02/2019	2200.50

Database Diagram:
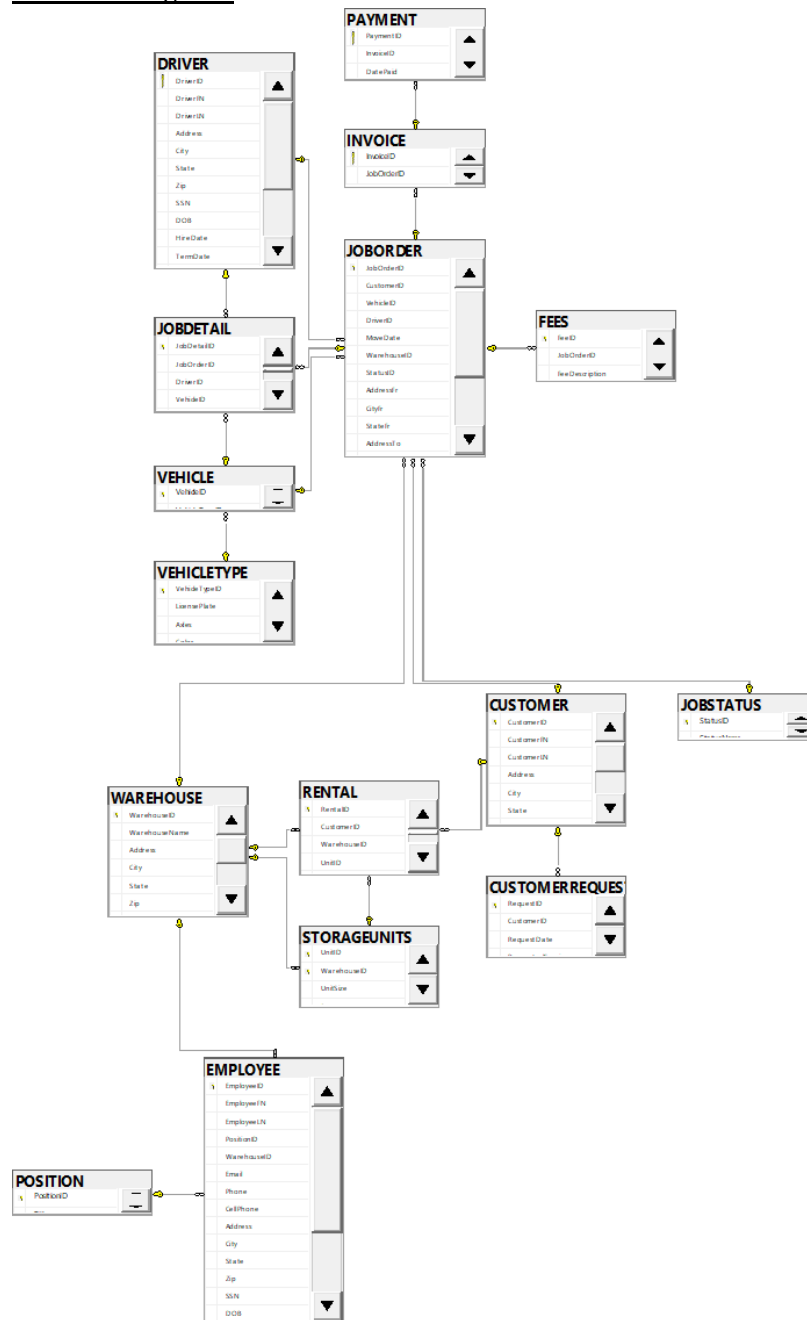
"Dummy" Records from Tables:

Employee Table:

EmployeeID	EmployeeFN	EmployeeLN	PositionID	WarehouseID	Email	Phone	CellPhone	Address	City	State	Zip	SSN	DOB	HireDate	TermDate	Salary	HourlyRate	ReviewDate	Notes
1001	David	Bowers	1	CA-1	david.bowers@movinoninc.com	(206) 246-5132	(206) 555-1234	10124 Metropolitan Drive	Seattle	WA	98117	154-00-3785	1958-09-12	1998-01-22	NULL	72000	NULL	NULL	NULL
1002	Elena	Martinez	2	NV-1	elena_martinez@movinoninc.com	(206)963-8520	(206) 396-2580	1234 Pine St	Seattle	WA	98101	587-67-3421	1989-10-24	2015-10-23	2020-12-31	NULL	25	2015-02-07	Consistent wo
1003	Marcus	Wong	3	AZ-1	m.wong@movinoninc.com	(206)741-8529	(206) 471-8925	5678 1st Ave	Seattle	WA	98121	324-84-9076	1994-06-11	2016-05-12	2021-06-30	NULL	20	NULL	NULL
1004	Jasmine	Patel	12	CA-1	patel_jasmine@movinoninc.com	(555)852-7412	(555)258-2147	1234 Main St	Phoenix	AZ	85001	998-46-2210	1987-08-02	2018-08-05	NULL	65000	NULL	NULL	Works well wit
1005	Nathaniel	Davis	4	NV-1	n.davis@movinoninc.com	(555)963-7410	(555)749-6310	5678 Elm St	Tucson	AZ	85701	772-91-5209	1992-03-17	2017-02-14	2022-10-19	75000	NULL	2017-12-21	Great growth
1006	Chloe	Lee	5	AZ-1	chloelee@movinoninc.com	(555)398-3657	(555)789-3365	9012 Oak St	Mesa	AZ	85201	629-30-1864	1990-11-29	2019-06-29	NULL	NULL	18	NULL	NULL
1007	Christopher	Garcia	13	CA-1	chris_garcia@movinoninc.com	(702)763-8722	(702)637-7282	123 Main St	Las Vegas	NV	89101	460-55-7998	1985-07-08	2016-09-01	2021-03-31	NULL	22	NULL	NULL
1008	Natalie	Nguyen	6	NV-1	nnguyen@movinoninc.com	(775)350-8206	(775)503-6028	456 Oak Ave	Reno	NV	89501	176-83-6329	1998-01-22	2015-12-12	2020-06-14	NULL	15	2019-11-11	Strong work et
1009	Grace	Wright	7	AZ-1	gracewright@movinoninc.com	(702)459-8836	(702)495-1230	789 Elm St	Henderson	NV	89002	305-36-0675	1991-05-06	2016-07-18	2021-03-31	90000	NULL	NULL	NULL
1010	Jimin	Park	14	CA-1	jiminpark@movinoninc.com	(213)578-3455	(213)748-3444	123 Main St	Los Angeles	CA	90001	743-20-4687	1995-10-13	2018-04-05	NULL	NULL	16	NULL	Has positive a
1011	Yeonjun	Choi	8	NV-1	choi.yeonjun@movinoninc.com	(415)267-9932	(415)217-8832	123 Oak Ave	San Francisco	CA	94110	514-05-6727	1999-09-13	2023-11-09	NULL	NULL	14	NULL	NULL
1012	Wonwoo	Jeon	9	AZ-1	j_wonwoo@movinoninc.com	(916)213-3248	(916)267-3248	456 Elm St	Sacramento	CA	95814	547-41-2896	1996-07-17	2017-03-22	2023-03-21	NULL	20	NULL	NULL
1013	Mingyu	Lee	10	CA-1	lee_mingyu@movinoninc.com	(619)814-6636	(619)418-6727	7891 Pine St	San Diego	A	92103	681-11-8340	1997-04-06	2015-01-16	NULL	NULL	18	NULL	Great problem
1014	Olivia	Adams	15	NV-1	oli_adams@movinoninc.com	(555)714-5503	(555)814-6636	213 Main St	Seattle	WA	98101	239-75-1958	1999-11-09	2019-10-02	NULL	90000	NULL	2020-07-30	NULL
1015	Mia	Brown	11	AZ-1	mia.brown@movinoninc.com	(555)914-0814	(555)702-5503	123 Pine St	Tacoma	WA	98402	401-59-0321	1986-06-29	2016-08-28	2021-07-30	60000	NULL	NULL	NULL

Position Table:

PositionID	Title
1	General Manager
2	Warehouse Manager
3	Administrative Assistant
4	Accountant
5	Maintenance
6	Moving Assistant
7	Information Systems
8	Operations Manager
9	Dispatch Coordinator
10	Customer Service
11	Store Manager
12	Sales Representative
13	Moving Consultant
14	Warehouse Associate
15	Marketing Manager

Query executed successfully. MSI (15.0 RTM) MSI\tarro (53) MOVINGONINC 00:00:00 15 rows

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Driver Table:

DriverID	DriverFN	DriverLN	Address	City	State	Zip	SSN	DOB	HireDate	TermDate	Email	Phone	Rating	MilesDriven	TotalEarnings
201	Sarah	George	1234 Main St	Phoenix	AZ	85001	135-23-0987	1992-06-07	2015-10-23	NULL	sarahgeorge@movinoninc.com	(602)683-5428	A	1766600	392000
202	Michael	Thomp...	5678 Elm St	San Fr...	CA	94109	123-45-6789	1985-11-23	2015-10-23	2020-12-31	m_thompson@movinoninc.com	(415)326-9147	B	1104125	245000
203	Ashley	Lee	9101 Olive ...	Las Ve...	NV	89145	012-78-4561	1987-09-12	2016-05-12	2021-06-30	ashley.lee@movinoninc.com	(702)536-8719	B	1104125	245000
204	Daniel	Davis	2468 Mapl...	Scotts...	AZ	85250	963-56-7894	1990-03-08	2018-08-05	NULL	dan_davis@movinoninc.com	(480)257-1890	C	1104125	245000
205	Emily	Rodrig...	1234 Pine St	Los An...	CA	90028	012-95-7530	1993-05-29	2017-02-14	2022-10-19	em.rod@movinoninc.com	(213)489-6837	C	1100000	240000
206	Jacob	Johnson	1357 Cedar...	Reno	NV	89501	843-08-9126	1988-07-14	2019-06-29	2021-03-31	jacon_john@movinoninc.com	(775)674-8426	D	441650	98000
207	Kim	Jackson	3698 Oak St	Tucson	AZ	85701	333-78-4198	1995-02-03	2016-09-01	2021-03-31	kimjackson@movinoninc.com	(520)662-9572	D	1000000	230000
208	Saman...	Park	7531 Waln...	San Di...	CA	92103	697-00-4561	1986-12-19	2015-12-12	2020-06-14	park_samantha@movinoninc...	(619)467-9215	C	1104000	240000
209	Isabella	Herna...	9512 Birch...	Hende...	NV	89011	986-00-7894	1991-08-01	2016-07-18	NULL	isabella_hernandez@movino...	(702)560-3892	B	1545775	343000
210	Scott	Michael	8642 Cedar...	Mesa	AZ	85203	317-99-1287	1994-10-07	2018-04-05	NULL	scott.michael@movinoninc.com	(480)941-2873	A	1105000	240000
211	Michael	Lee	1111 Orang...	San J...	CA	95128	991-44-7365	1989-01-22	2023-11-09	NULL	lee_michael@movinoninc.com	(408)409-7653	A	624	2650
212	Benja...	Frank	4444 Redw...	North ...	NV	89031	882-44-6636	1996-04-11	2017-03-22	NULL	frank.benj@movinoninc.com	(702) 534-96...	F	559	868
213	Charlie	Brown	1233 Pine St	Flagstaff	AZ	96001	982-03-7269	1999-08-28	2015-01-06	2017-05-22	charlie_brown@movinoninc.c...	(928)226-7832	F	291	1560
214	Ava	Max	7891 Laure...	Sacra...	CA	95814	157-15-9614	1997-06-02	2019-10-02	2023-03-21	ava.max@movinoninc.com	(916)671-3485	C	1766600	392000
215	Kate	Thomas	5555 Oakw...	Sparks	NV	89436	012-22-5578	1998-09-15	2016-08-28	2021-07-30	kate_thomas@movinoninc.com	(775)354-6839	A	1105000	245000

Unit Table:

UnitID	WarehouseID	UnitSize	Rent	UnitStatus
1	AZ-1	12x12	45	Available
1	CA-1	8 x 8	25	Available
1	NV-1	12x12	35	Occupied
2	AZ-1	12x12	45	Occupied
2	CA-1	8x8	30	Occupied
2	NV-1	12x12	35	Available
3	AZ-1	12x12	45	Available
3	CA-1	8x8	25	Available
3	NV-1	9x12	30	Occupied
4	AZ-1	12x18	70	Occupied
4	CA-1	8x12	30	Occupied
4	NV-1	9×12	30	Available
5	AZ-1	12×18	70	Available
5	CA-1	8x8	25	Available
5	NV-1	12x12	85	Available
6	AZ-1	12x12	45	Occupied
6	CA-1	8×12	30	Occupied
6	NV-1	12x12	85	Available
7	AZ-1	12x12	85	Available

Query executed successfully. MSI (15.0 RTM) MSI\tarro (53) MOVINGONINC 00:00:00 15 rows

Results (window 1)

20	7	CA-1	8×10	25	Available
21	7	NV-1	12×10	80	Occupied
22	8	CA-1	15x15	95	Occupied

	CustomerID	CustomerFN	CustomerLN	Address	City	State	Zip	Email	Phone
3	25714	Ben	Choi	1357 Silverado Ra...	Enterprise	NV	89123	benchoi@gmail.com	(702) 555-0123
4	37281	Chloe	Bram	5678 University Blvd	Tucson	AZ	85705	chloe_bram@gmail.com	(520) 555-0505
5	38957	Angelica	Marie	4568 Rodeo Drive	Beverly Hills	CA	90210	angelica.marie@gmail.com	(310) 555-2222
6	48197	Daniel	Park	2568 Silverado Ra...	Enterprise	NV	89123	daniel.park@gmail.com	(702) 555-4567
7	57219	Lance	Maine	456 Beaver St	Flagstaff	AZ	86001	lancemaine@gmail.com	(928) 555-0101
8	62349	Steve	Moi	2468 Magnolia Blvd	Burbank	CA	91505	steve_choi@gmail.com	(818) 555-1717
9	68543	Johnny	Monet	135 Pacific Coast ...	Malibu	CA	90265	johnnymonet@gmail.c...	(310) 555-1212
10	71985	Selena	Baldwin	7892 Las Vegas Bl...	Las Vegas	NV	89109	selena.balwin432@ya...	(702) 555-0123
11	75923	Louis	Brawn	246 Gilbert Rd	Mesa	AZ	85204	louis_brawn@gmail.com	(480) 555-2040
12	87002	Piazza	Real Estate	1789 Eighth Avenue	Spokane	WA	98117	piazza.realestate@gm...	(206) 123-0123
13	89372	Terry	Kai	135 Shea Blvd	Scottsdale	AZ	85260	terry.kai@gmail.com	(480) 555-2600
14	92754	Kenneth	Tan	4568 South McCar...	Sparks	NV	89431	kenneth_tan@gmail.co...	(775) 555-0123
15	93752	Mark	Lee	1234 Sunset Rd	Henderson	NV	89014	mark_lee@gmail.com	(702) 555-0123

	RequestID	CustomerID	RequestDate	RequestedService	AdditionalInfo
1	REQ01234	62349	2023-01-25	Moving Service	25 ft moving truck
2	REQ09876	48197	2016-04-09	Storage Service	Store belongings in span of 4 months
3	REQ12345	87002	2019-09-24	Moving Service	10 ft moving truck
4	REQ23456	24601	2017-03-02	Storage Service	Store belongings in 1 month
5	REQ34567	93752	2020-05-18	Both	15 ft moving truck, store belongings ...
6	REQ45678	18594	2016-07-12	Moving Service	15 ft moving truck
7	REQ56789	71985	2021-11-20	Storage Service	Store belongings in span of 4 months
8	REQ65432	57219	2015-12-30	Both	Store and move based off fragility
9	REQ67890	37281	2015-12-09	Both	20 ft moving truck, store in one week
10	REQ76543	92754	2021-09-01	Storage Service	Store belongings in 1 month
11	REQ78901	68543	2018-08-31	Moving Service	25 ft moving truck
12	REQ87654	38957	2019-07-23	Moving Service	15 ft moving truck
13	REQ89012	25714	2022-02-17	Storage Service	Store based off fragility
14	REQ90123	89372	2017-06-08	Both	Store and move based off fragility
15	REQ98765	75923	2022-10-05	Both	Store and move based off fragility

	JobDetailID	JobOrderID	DriverID	VehicleID	Mileage	WeightLbs
1	10957	J-1234	212	VEH2815	60	2750

Query executed successfully.   MSI (15.0 RTM)   MSI\tarro (53)   MOVINGONINC   00:00:00   15 rows

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Results (window 2)

	JobDetailID	JobOrderID	DriverID	VehicleID	Mileage	WeightLbs
1	10957	J-1234	212	VEH2815	60	2750
2	19083	J-5432	208	VEH8489	40	1750
3	21904	J-24680	203	VEH3145	15	500
4	23789	J-8024	215	VEH5987	75	3500
5	34562	J-98765	201	VEH1057	5	100
6	36571	J-2468	209	VEH6510	45	2000
7	42658	J-12345	206	VEH6372	30	1250
8	58321	J-1357	210	VEH0621	50	2250
9	65023	J-8765	213	VEH3970	65	3000
10	65712	J-24601	205	VEH5218	25	1000
11	75413	J-9876	207	VEH7458	35	1500
12	82091	J-2460	211	VEH1789	55	2500
13	87391	J-54321	202	VEH2096	10	250
14	94281	J-4321	214	VEH4945	70	3250
15	98271	J-13579	204	VEH4163	20	750

	JobOrderID	CustomerID	VehicleID	DriverID	MoveDate	WarehouseID	StatusID	AddressFr	CityFr	StateFr	AddressTo	CityTo	StateTo	ServiceNeeded	HeavyItems	StoreItem
1	J-1234	75923	VEH3970	212	2017-10-08	AZ-1	1255	9101 Pine Ave	San Diego	CA	9101 Pine Ave	Mesa	AZ	Both	No	Yes
2	J-12345	37281	VEH6372	206	2016-09-14	AZ-1	613	5678 Mapl...	San Fran...	CA	1234 Main St	Phoenix	AZ	Both	Yes	Yes
3	J-1357	62349	VEH1789	210	2018-03-11	CA-1	1002	789 Gold ...	Henders...	NV	5678 Wilshir...	Beverl...	CA	Moving Service	Yes	No
4	J-13579	18594	VEH4163	204	2018-11-18	CA-1	422	456 Maple...	Scottsdale	AZ	1414 Pine St	Sacra...	CA	Moving Service	Yes	No
5	J-2460	48197	VEH2815	211	2021-01-19	NV-1	1120	222 Secon...	Bellevue	WA	2468 Diamo...	North ...	NV	Storage Servi...	No	Yes
6	J-24601	71985	VEH5218	205	2022-02-22	NV-1	507	456 Silver St	Reno	NV	5678 Gold Ave	Reno	NV	Storage Servi...	Yes	Yes
7	J-2468	89372	VEH0621	209	2020-06-27	AZ-1	916	111 First A...	Seattle	WA	5678 Elm St	Tucson	AZ	Both	Yes	Yes
8	J-24680	93752	VEH3145	203	2017-05-03	AZ-1	312	123 Nevad...	Las Vegas	NV	1212 Pine St	Mesa	AZ	Both	Yes	Yes
9	J-4321	92754	VEH5987	214	2016-07-08	NV-1	1422	1212 Elm St	Santa Ba...	CA	3690 Coppe...	Sparks	NV	Storage Servi...	No	Yes
10	J-5432	24601	VEH8489	208	2023-12-01	NV-1	801	1010 Elm St	Flagstaff	AZ	9101 Platinu...	Mesa	NV	Storage Servi...	No	Yes
11	J-54321	24601	VEH2096	202	2019-07-20	NV-1	205	1234 Main...	Los Ang...	CA	1234 Silver St	Las Ve...	NV	Storage Servi...	No	Yes
12	J-8024	57219	VEH5987	215	2020-11-29	AZ-1	1550	1212 Plati...	Sparks	NV	2468 Oak Blvd	Scotts...	AZ	Both	No	Yes
13	J-8765	38957	VEH4945	213	2022-04-23	CA-1	1367	1010 Dia...	Carson C...	NV	9101 Sunset...	West ...	CA	Moving Service	Yes	No
14	J-9876	68543	VEH7458	207	2015-08-05	CA-1	723	789 Oak St	Tucson	AZ	1234 Vine St	Los An...	CA	Moving Service	Yes	No
15	J-98765	87002	VEH1057	201	2017-09-15	CA-1	101	123 Main St	Phoenix	AZ	1234 Main St	Los An...	CA	Moving Service	Yes	No

	StatusID	StatusName
1	101	In Progress
2	205	Complete
3	312	Reschedul...

Query executed successfully.   MSI (15.0 RTM)   MSI\tarro (53)   MOVINGONINC   00:00:00   15 rows

SQLQuery102.sql - MSI.MOVINGONINC (MSI\tarro (53)) - Microsoft SQL Server Management Studio

15	J-98765	87002	VEH1057	201	2017-09-15	CA-1	101	123 Main St	Phoenix	AZ	1234 Main St	Los An...	CA	Moving Service	Yes	No

	StatusID	StatusName
1	101	In Progress
2	205	Complete
3	312	Reschedul...
4	422	Canceled
5	507	Pending
6	613	On Hold
7	723	In Progress
8	801	Complete
9	916	Reschedul...
10	1002	Canceled
11	1120	Pending
12	1255	On Hold
13	1367	In Progress
14	1422	Complete
15	1550	Reschedul...

	VehicleID	VehicleTypeID
1	VEH0621	VAN-010
2	VEH1057	VAN-001
3	VEH1789	TRK-011
4	VEH2096	TRK-002
5	VEH2815	VAN-012
6	VEH3145	SUV-003
7	VEH3970	TRK-013
8	VEH4163	VAN-004
9	VEH4945	TRK-014
10	VEH5218	TRK-005
11	VEH5987	TRK-015
12	VEH6372	SUV-006
13	VEH7458	TRK-007
14	VEH8489	TRK-008
15	VEH9510	VAN-009

VehicleTypeID	LicensePlate	Axles	Color	Stored

Query executed successfully.   MSI (15.0 RTM)   MSI\tarro (53)   MOVINGONINC   00:00:00   15 rows

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SQLQuery102.sql - MSI.MOVINGONINC (MSI\tarro (53)) - Microsoft SQL Server Management Studio

	VehicleTypeID	LicensePlate	Axles	Color	Stored
1	SUV-003	J2E4M7D	2	Black	Yes
2	SUV-006	E9P2N7S	2	Teal	Yes
3	TRK-002	H6N9S4Z	3	Blue	Yes
4	TRK-005	N5B2F8K	3	White	Yes
5	TRK-007	Q1U6Z9V	2	Gray	Yes
6	TRK-008	R4J7E2K	5	Gre...	No
7	TRK-011	X5W7F4M	6	Pur...	Yes
8	TRK-013	Z1T7R8J	4	Bei...	Yes
9	TRK-014	A5B2F9D	2	Gold	No
10	TRK-015	C7J3K5L	3	Mar...	Yes
11	VAN-001	F3T2X8R	2	Red	Yes
12	VAN-004	L8P1T3G	4	Silver	Yes
13	VAN-009	T9G5N1D	4	Yell...	Yes
14	VAN-010	V2H8Q6T	2	Ora...	No
15	VAN-012	Y8D2P6K	3	Bro...	Yes

	FeeID	JobOrderID	FeeDescription	FeeAmount
1	FEE00123	J-98765	Packing supplies	100
2	FEE00234	J-54321	Transportation costs	2
3	FEE00345	J-24680	Transportation costs	5
4	FEE00456	J-13579	Security deposit	100
5	FEE00567	J-24601	Application fee	25
6	FEE00678	J-12345	Labor cost	50
7	FEE00789	J-9876	Packing supplies	200
8	FEE00890	J-5432	Packing supplies	300
9	FEE00901	J-2468	Transportation costs	7
10	FEE01012	J-1357	Security deposit	1000
11	FEE01123	J-2460	Application fee	50
12	FEE01234	J-1234	Labor cost	200
13	FEE01345	J-8765	Packing supplies	100
14	FEE01456	J-4321	Labor cost	500
15	FEE01567	J-8024	Transportation costs	10

	RentalID	CustomerID	WarehouseID	UnitID	StartDate	ReturnDate
4	RNTL004	18594	CA-1	2	2020-06-02	2020-06-09
5	RNTL005	71985	NV-1	2	2016-10-11	2016-10-18

Query executed successfully.   MSI (15.0 RTM)   MSI\tarro (53)   MOVINGONINC   00:00:00   15 rows

SQL Queries w/ Screenshots:

- **List the balance due to MovinOn from each customer inclusive of moving jobs and rentals for a specific month.**

First screenshot result grids:

			Transportation costs	10
15	FEE01567	J-8024		

	RentalID	CustomerID	WarehouseID	UnitID	StartDate	ReturnDate
4	RNTL004	18594	CA-1	2	2020-06-02	2020-06-09
5	RNTL005	71985	NV-1	2	2016-10-11	2016-10-18
6	RNTL006	37281	AZ-1	2	2019-12-05	2019-12-12
7	RNTL007	68543	CA-1	3	2021-05-17	2021-05-24
8	RNTL008	25714	NV-1	3	2018-02-28	2018-03-07
9	RNTL009	89372	AZ-1	3	2017-09-14	2017-09-21
10	RNTL010	62349	CA-1	4	2022-11-06	2022-11-13
11	RNTL011	48197	NV-1	4	2021-07-19	2021-07-26
12	RNTL012	75923	AZ-1	4	2016-04-08	2016-04-15
13	RNTL013	38957	CA-1	5	2020-02-11	2020-02-18
14	RNTL014	92754	NV-1	5	2018-08-23	2018-08-30
15	RNTL015	57219	AZ-1	5	2022-11-01	2022-11-08

	InvoiceID	JobOrderID	TotalCost
5	INV3412	J-12345	3000
6	INV4201	J-5432	1500
7	INV5032	J-54321	1200
8	INV6743	J-1234	1750
9	INV6790	J-9876	800
10	INV7259	J-2468	2100
11	INV8023	J-24601	1750
12	INV8075	J-4321	2800
13	INV8893	J-1357	1250
14	INV9087	J-24680	900
15	INV9932	J-8024	2200

	PaymentID	InvoiceID	DatePaid	AmountPaid
1	PAY001	INV2378	2018-07-12	750
2	PAY002	INV5032	2019-02-23	1000
3	PAY003	INV9087	2022-09-15	900
4	PAY004	INV1564	2016-12-30	2000
5	PAY005	INV8023	2017-03-18	1750
6	PAY006	INV3412	2020-06-29	3000
7	PAY007	INV6790	2019-05-11	800
8	PAY008	INV4201	2023-01-08	1000

Query executed successfully. MSI (15.0 RTM) MSI\tarro (53) MOVINGONINC 00:00:00 15 rows

	PaymentID	InvoiceID	DatePaid	AmountPaid
8	PAY008	INV4201	2023-01-08	1000
9	PAY009	INV7259	2016-08-22	2000
10	PAY010	INV8893	2021-05-11	1850
11	PAY011	INV1115	2018-01-10	1250
12	PAY012	INV6743	2022-04-26	1750
13	PAY013	INV2506	2017-08-09	900
14	PAY014	INV8075	2021-11-19	2800
15	PAY015	INV9932	2019-06-02	2200

Query executed successfully. MSI (15.0 RTM) MSI\tarro (52) MOVINGONINC 00:00:00 15 rows

Second screenshot (SQLQuery111.sql):

```
SELECT C.CustomerID, C.CustomerFN, C.CustomerLN, SUM(P.AmountPaid) AS BalanceDue
FROM CUSTOMER C, PAYMENT P, RENTAL R
WHERE C.CustomerID = P.PaymentID
    AND P.PaymentID = R.RentalID
    AND R.StartDate >= '2017-08-12'
    AND R.ReturnDate < '2022-11-08'
GROUP BY C.CustomerID, C.CustomerFN, C.CustomerLN
```

CustomerID	CustomerFN	CustomerLN	BalanceDue

Query executed successfully. MSI (15.0 RTM) MSI\tarro (61) MOVINGONINC 00:00:00 0 rows

- **List the amount due to each driver for moving jobs conducted in a specific month.**

- **List the drivers and their corresponding job details**

- **List the revenues for MovinOn in a particular month once drivers and employees have been paid out. Revenues should include both moving jobs and rentals.**


```sql
SELECT
    J.WarehouseID,
    SUM(F.FeeAmount) AS Fees,
    SUM(
        CASE
            WHEN R.RentalID IS NOT NULL THEN su.Rent
            WHEN J.ServiceNeeded = 'Moving' THEN J.HeavyItems * 50
            ELSE 0
        END
    ) AS Revenues
FROM
    JOBORDER J
    JOIN JOBDETAIL jd ON J.JobOrderID = JD.JobOrderID
    JOIN FEES F ON J.JobOrderID = F.JobOrderID
    JOIN RENTAL R ON J.WarehouseID = R.WarehouseID AND J.CustomerID = R.CustomerID
    JOIN STORAGEUNITS su ON R.UnitID = SU.UnitID
GROUP BY
    J.WarehouseID;
```

	WarehouseID	Fees	Revenues
1	AZ-1	816	625
2	CA-1	4500	625
3	NV-1	2631	625

- **List the storage units that have not been leased and are available.**


```sql
SELECT UnitID, UnitSize
FROM STORAGEUNITS
WHERE UnitID NOT IN (SELECT DISTINCT UnitID FROM RENTAL)
```

	UnitID	UnitSize
1	6	12x12
2	6	8x12
3	6	12x12
4	7	12x12
5	7	8x10
6	7	12x10
7	8	15x15

Questions:

- **Why is normalization important when defining a database design?**
  - Normalization is important when defining a database design because it improves the accuracy and performance of the data. There are often data redundancies and inconsistencies that normalization helps remove. The process helps with keeping the data organized in general–keeping the data store efficiently and effectively.
- **How do you validate a proposed database design model before implementation?**
  - To validate a proposed database design model before implementation you would need to carefully review and analyze the model not just by yourself but through communicating with stakeholders to gather feedback. Some methods to validate include checking the requirements of the model, creating the actual model, using normalization, checking with stakeholders, and creating a test version. For any project, it is important to check the requirements, so doing so for validation of a database design model is necessary as well. Some of the requirements to look out for in a model would be looking into key entities and relationships. To create a data model, you may use a diagramming tool like the ERD's we use through Microsoft Visio to represent the database you plan on working with. Since normalization helps improve accuracy of the data it would be necessary to incorporate as validation . Then, reviewing with stakeholders is helpful after the design model is made so you are made aware of the requirements being met or not. Lastly, to fully validate the design, creating a teste version of the database is helpful to see if there are any errors or flaws in your design.
- **What challenges did you face during this database course?**
  - I struggled a lot with writing SQL queries. Starting off this class as a Kinesiology student with no prior experience to SQL–I definitely struggled a lot. I found it very difficult and challenging when creating the syntax to insert data sometimes. Sometimes I would be seeing the errors pop up and fully thinking I did nothing wrong and executing for a very long time only to find the simplest of mistakes like forgetting to add a parentheses or semicolon.
- **What would be your advice to future ISDS 402 students?**
  - My advice to future ISDS 402 students is to be patient and not to be so hard on yourself. Throughout this course, I found myself frustrated with my own abilities and thinking I could never understand anything. However, through time and thanks to the guidance of my group who would give me some pointers/tips when we would work on the group projects–I have been able to adapt and understand more!