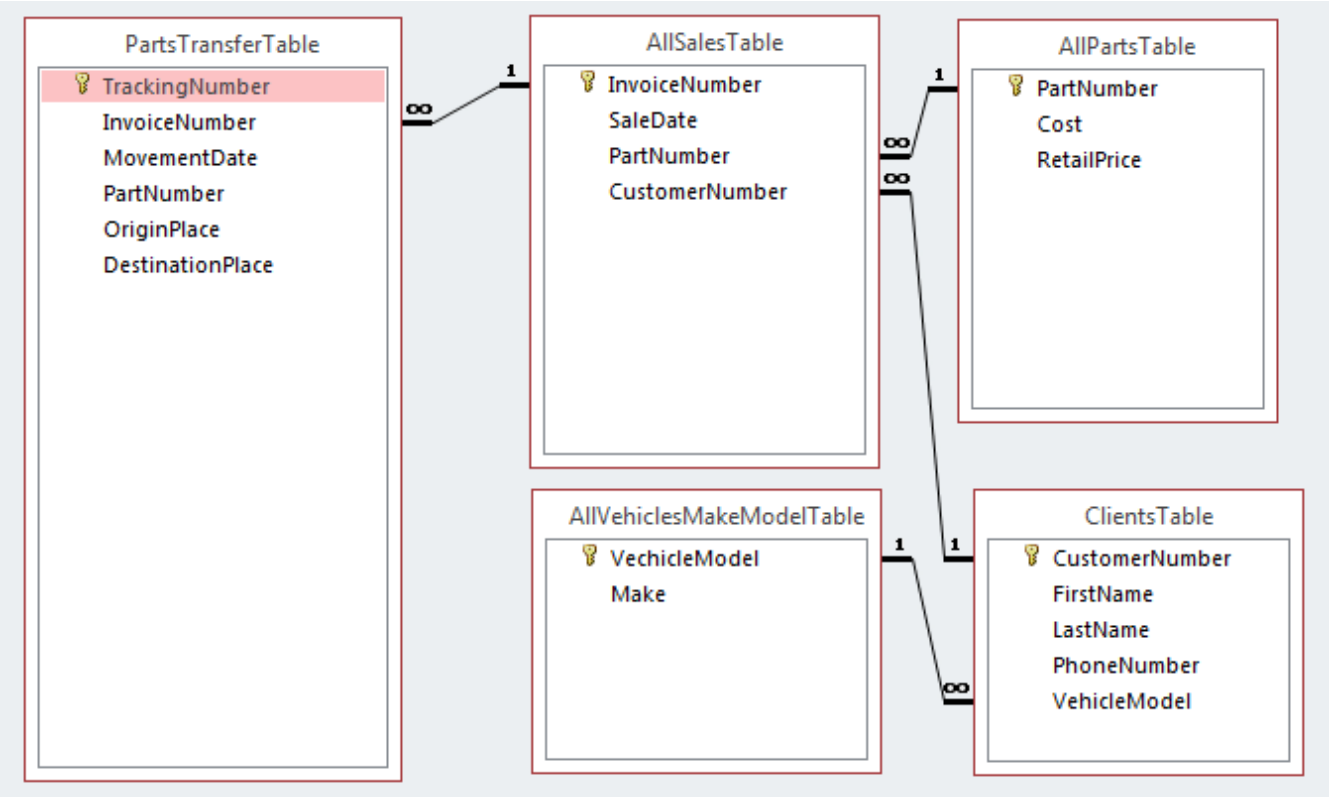
Task 1: Draw an ERD for AutoParts Warehouse indicating the types of relationships between the entities



PartsMovementTransferTable(TrackingNumber, InvoiceNumber, Date, PartNumber, OriginPlace, Destination)

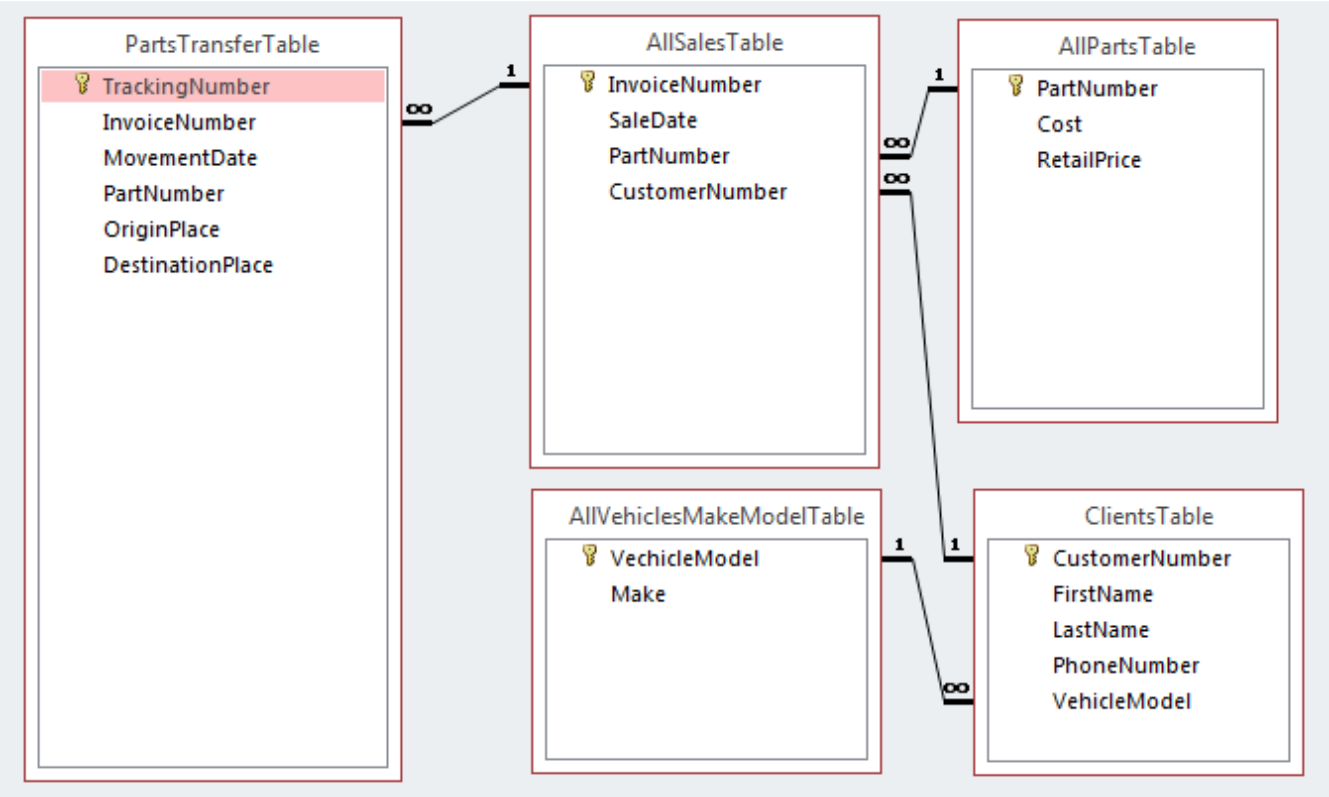
AllSalesTable(InvoiceNumber, DateofSale, PartNumber, CustomerNumber)

AllVehiclesMakeModelTable(VehicleModel,Make)

AllPartsTable(PartNumber, Cost, RetailPrice)

ClientsTable(CustomerNumber, FirstName, LastName, PhoneNumber, VehicleModel)

The 1:M Relationship diagrams are shown below.



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Task 2 : For each of the entities identified, design tables and identify the possible candidate keys, the primary key, a probable foreign key, and potential secondary keys

PartsMovementTransferTable(**TrackingNumber**, *InvoiceNumber*, Date, PartNumber, OriginPlace, Destination)

AllSalesTable(**InvoiceNumber**, DateofSale, *PartNumber*, CustomerNumber)

AllVehiclesMakeModelTable(**VehicleModel**,Make)

AllPartsTable(**PartNumber**, Cost, RetailPrice)

ClientsTable(**CustomerNumber**, FirstName, LastName, PhoneNumber, VehicleModel)

PartsMovementTransferTable (**TrackingNumber**, *InvoiceNumber*, Date, PartNumber, OriginPlace, Destination)

AllSalesTable (**InvoiceNumber**, DateofSale, *PartNumber*, CustomerNumber)

AllVehiclesMakeModelTable(**VehicleModel**,Make)

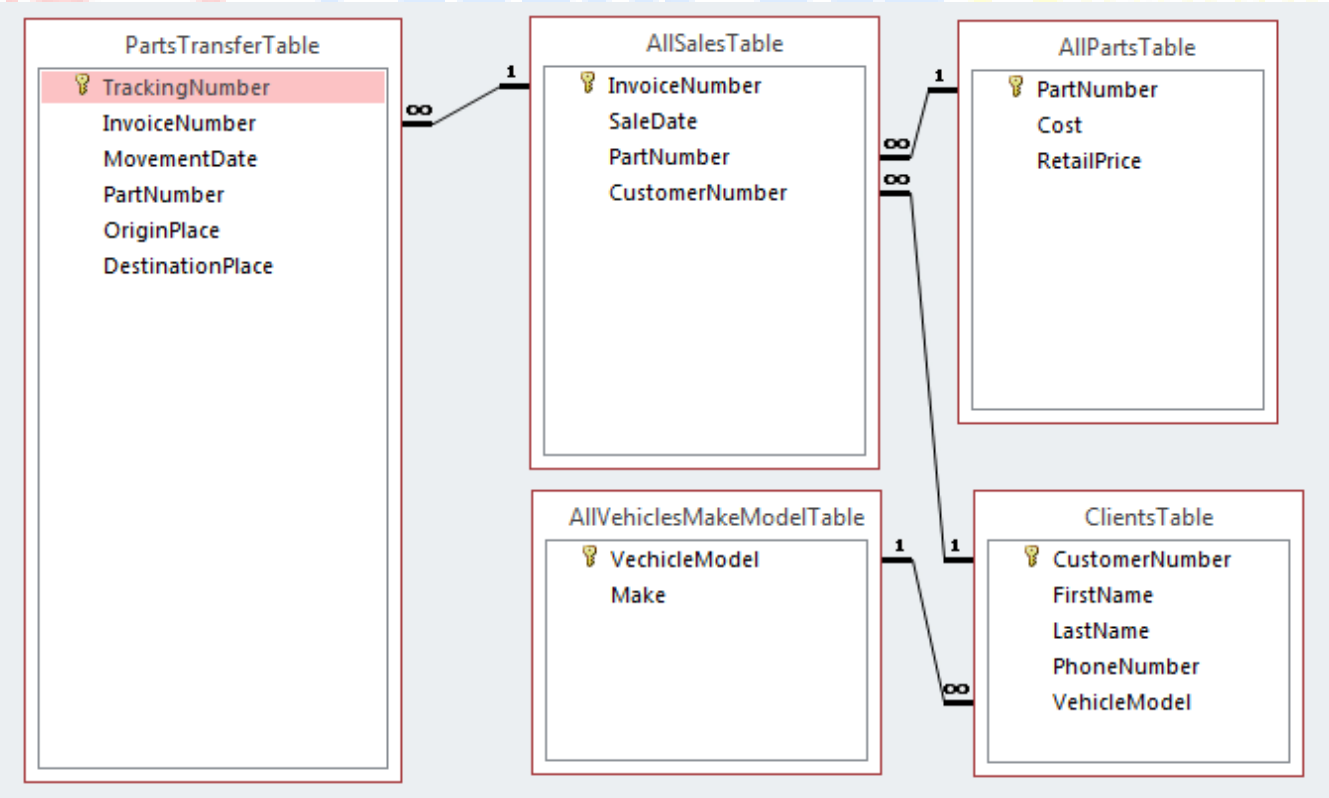
AllPartsTable(**PartNumber**, Cost, RetailPrice)

ClientsTable(**CustomerNumber**, FirstName, LastName, PhoneNumber, VehicleModel)

Primary Key

Foreign Key

Primary Key and Foreign Key connection is shown below.



PRIMARY KEY:

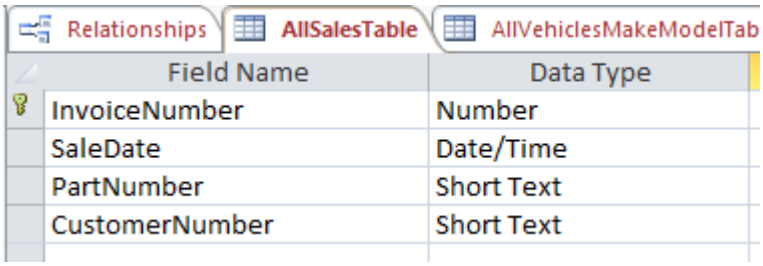
The essential key which is normally eluded as essential catchphrase is a key in the social database that is specific for every record. The fundamental attributes of the essential keys are it can't be invalid qualities and it ought to incorporate an interesting worth for every column of information. It is a one of a kind identifier like driving permit number, vehicle recognizable proof number. The social database ought to dependably have one and stand out essential key. The essential keys typically rise as sections in social database tables. The choice of the essential key in the social database for the most part relies on upon the decision of the director. At the point when the specific needs of the clients transforms it is conceivable to modify the essential key for a given accumulations of information.

Foreign Key:

The remote key is the gathering of fields in a database table which especially recognizes a column on another table. Essentially the outside key is portrayed as a second table however it shows the essential key in the principal table. It is a segment or an arrangement of sections in a social database table that offers an association in the middle of the information present in two tables. It performs cross-reference between tables since it eludes the essential key of another table, consequently executing the association between them. In this manner more number of tables in the social database framework takes after the remote key idea. The possibility of the referential respectability is obtained from the outside key hypothesis. The outside key and their applications are more entangled than the essential keys.

Task 3 : Create fully normalized 3NF table designs for the system

Explain the following Tables



Relationships | AllSalesTable | AllVehiclesMakeModelTable

Field Name	Data Type
VechicleModel	Short Text
Make	Short Text

Relationships | AllSalesTable | AllVehiclesMakeModelTable | AllPartsTable

Field Name	Data Type
PartNumber	Short Text
Cost	Currency
RetailPrice	Currency

Relationships | AllSalesTable | AllVehiclesMakeModelTable | AllPartsTable | ClientsTable

Field Name	Data Type
CustomerNumber	Short Text
FirstName	Short Text
LastName	Short Text
PhoneNumber	Number
VehicleModel	Short Text

Relationships | AllSalesTable | AllVehiclesMakeModelTable | AllPartsTable | ClientsTable | PartsTransferTable

Field Name	Data Type	Descripti
TrackingNumber	AutoNumber	
InvoiceNumber	Number	
MovementDate	Date/Time	
PartNumber	Short Text	
OriginPlace	Short Text	
DestinationPlace	Short Text	

Task 4 : Suggest ways AutoParts Warehouse can use codes to simplify output, input, and data formats.

To reduce the complexities of input, output and data formats. The auto parts warehouse system can utilize the MYSQL query language, MSACCESS and My SQL database management systems. The scripting languages like HTML, PHP and the web application framework like ASP.NET can operate as a front end for the back end graphical user interface. In order to maintain security for the input, output and data formats the username passwords, database security features and form based authentication were build. The database management system is suggested to retrieve the data formats, input and output in an easy way. The database management system is a software application that communicates with the user to capture and examine the data in the database. Basically the database management system is constructed to permit the functions like creation, definition, querying, administration and updation of the databases. It offers a communication between the database and the application programs. It makes sure that the data's are consistently arranged and easily accessible by the users. The database management system is the structural query language. Similar to the other programming languages like C, C++ it has the powerful features like if, control, start, stop are accessible in most of the database management systems.

Oracle got many characteristics like call interface. This characteristics interconnects the advantages of the programming languages like C and the database management systems like SQL. Oracle has provided lot of benefits comparatively with other kinds of database management systems. By means of efficient coding the database operations can be interpreted in many ways such as looping time, processing time, transmission time, entry and exit time and waiting time. coding is considered as an index face of the database.

Hence with the help of all these languages and management system the simplification of data formats, input, output is made by:

1. Precise coding

2. Allowing the extension when it is required

3. Examining the code for support

4. Examining th code for individuality

5. Examining the program code for sortability

6. Verifying the code for clarity

7. Verifying the code for valid meaning

8. Verifying the code for proper decision

9. Verifying the code for regularity

Other than the scripting languages the LAMP is used. It is referred as Linux,Apache,MySQLand PHP. It is more efficiently utilized to construct and install the above said database management system functions. The MySQL is the structured query language which is considered as a non-procedural language. Therefore the non-procedural languages like C,C++ are strong in database operations. The program code is used in the database operations; it consists of groups of numbers and letters that present the data item. The program code can be constructed in a very effective manner so that the input, output and data formats can be simplified

Types of codes:

Different types of codes are used in DBMS design.

1. Sequence codes

Codes are written and executed in some specific order. These codes will not be having any info about the data that available in the database.

2. Block Sequence

These are all numbers and blocks of assigned in different order.

3. Alphabetic Codes

Uses alphabetic category. It is used to distinguish one item from another based on category. Mnemonic codes can be are easily remembered.

4. Allowing for expansion.

The coding scheme must allow expansion of programming codes. Depends on the need both database and coding size may grow once in a year. The software code should allow this.

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