



ER Project car rental

Spring 2015

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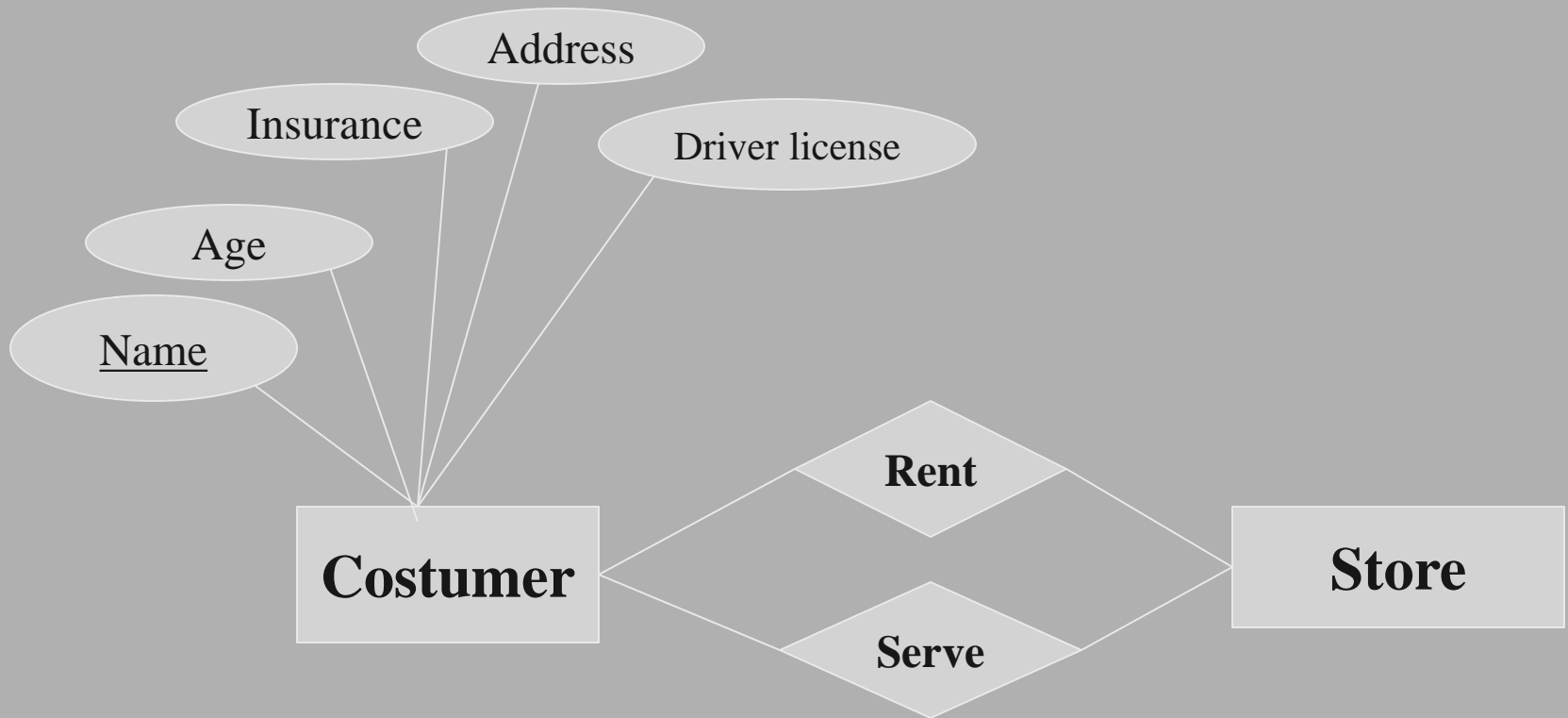
Abdulaziz Aldulaijan

Ahmed Albader

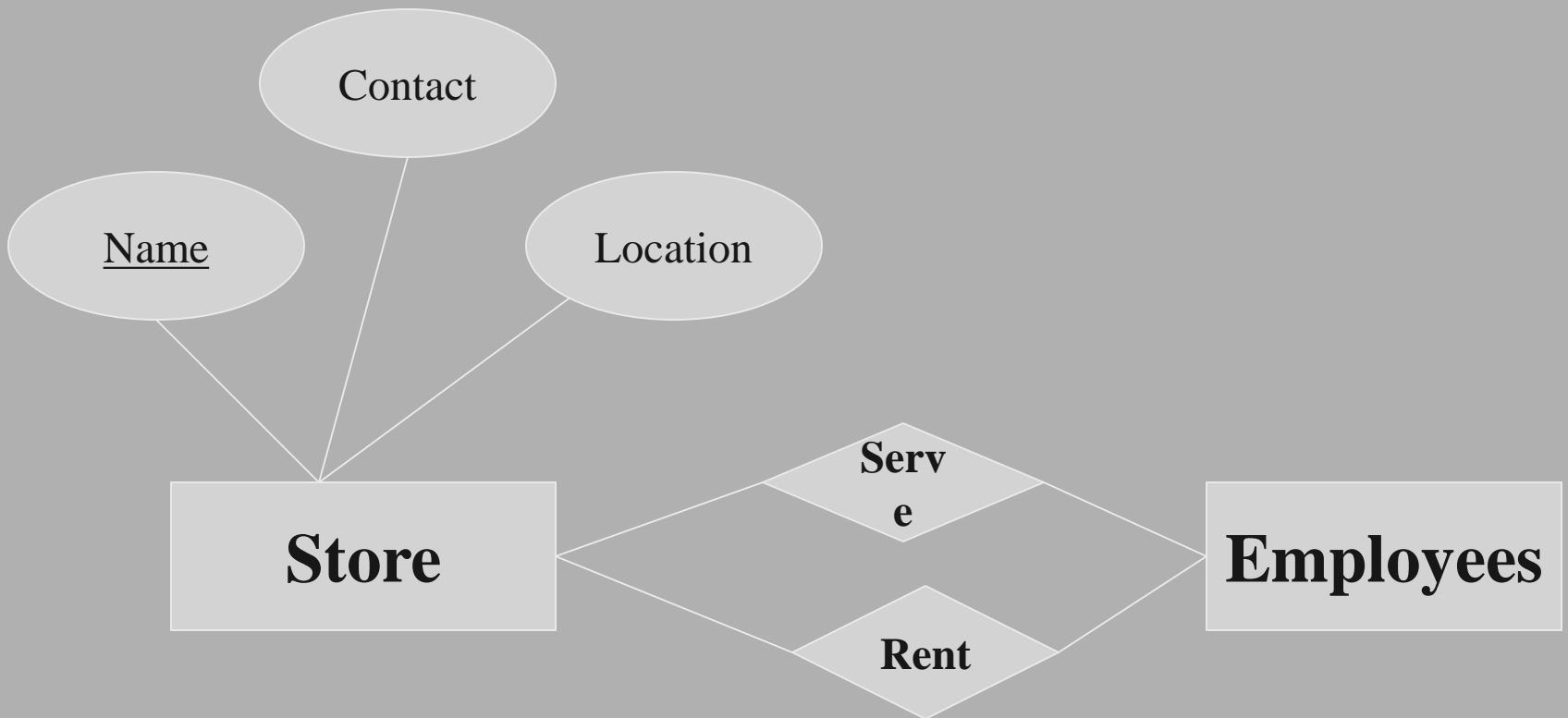
Outline

- Customer.
- Store.
- Employees.
- Cars.

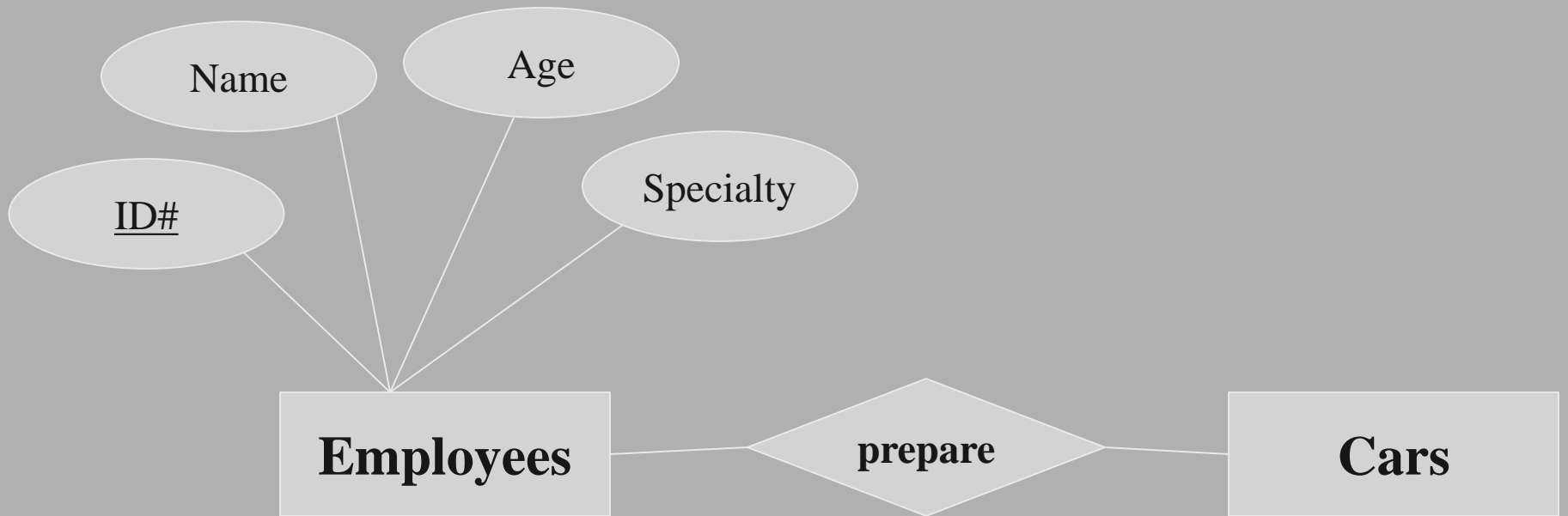
Customer



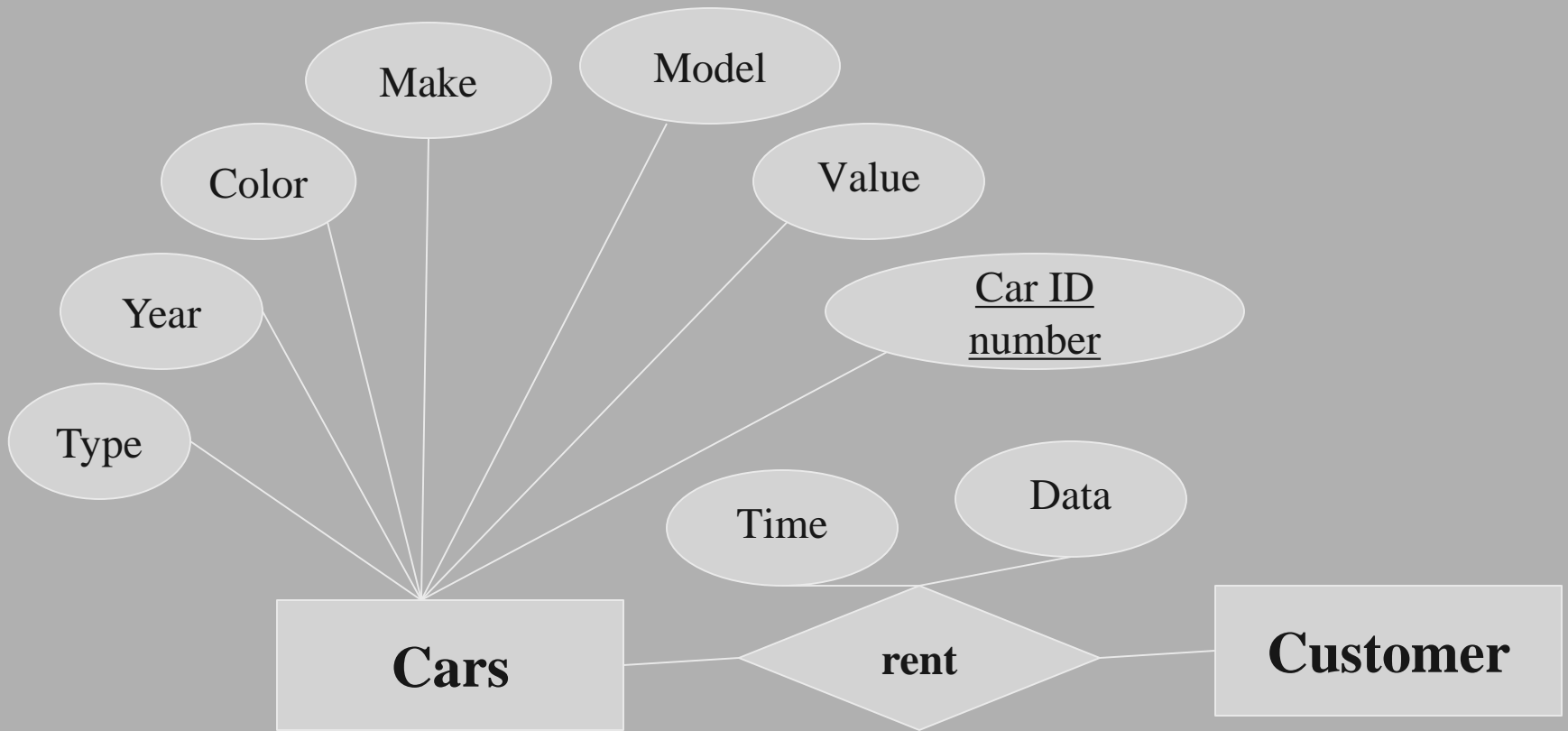
The Store



Employees

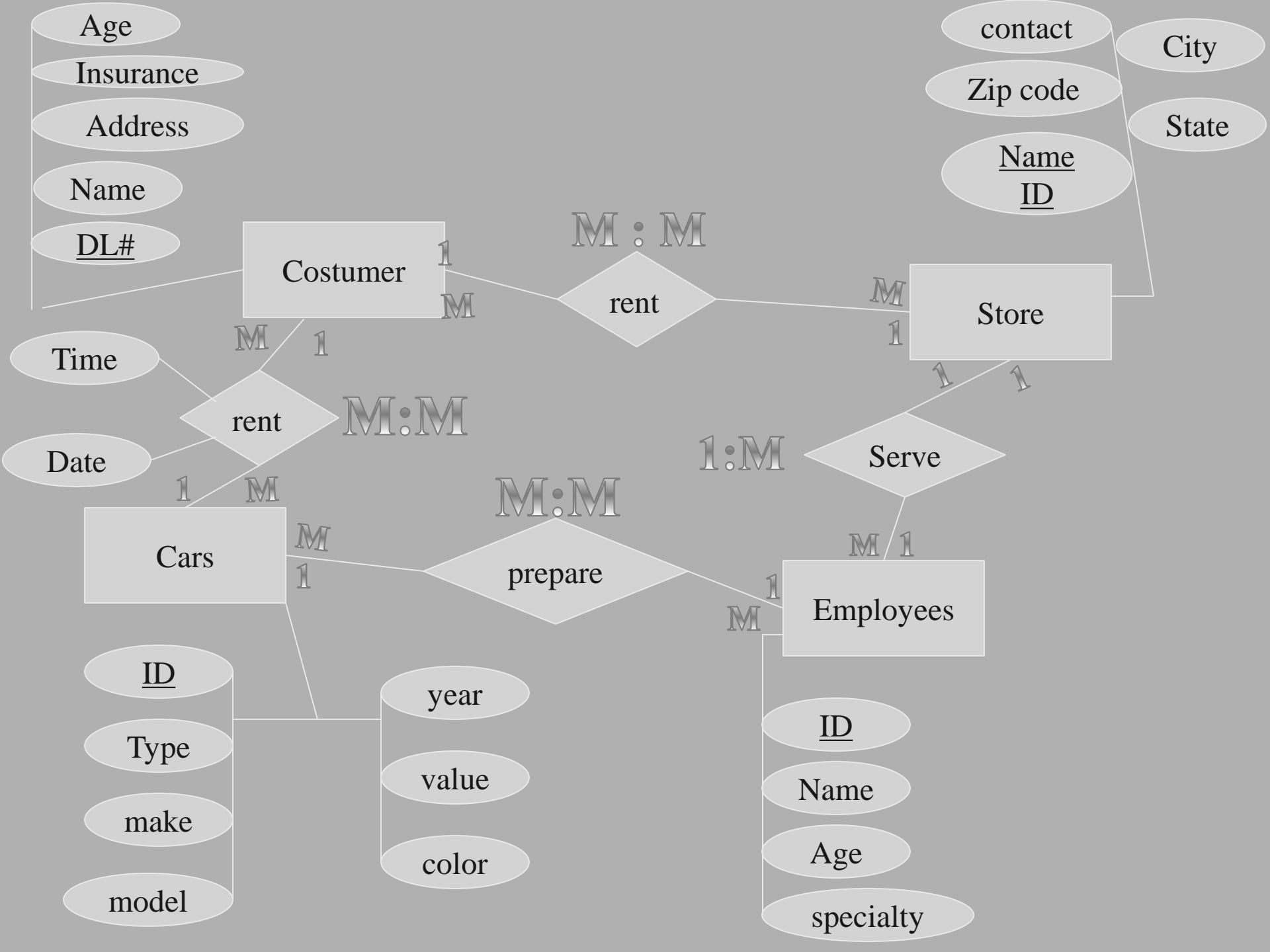


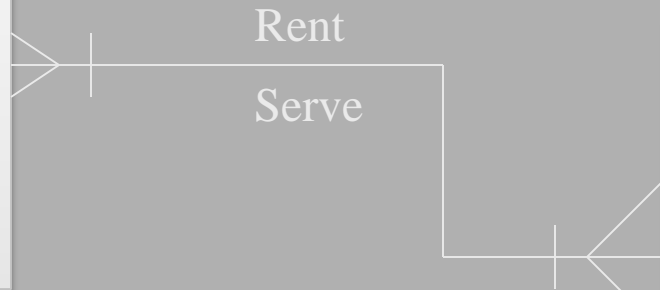
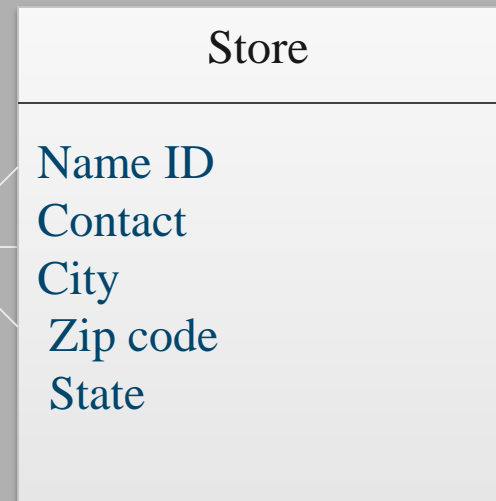
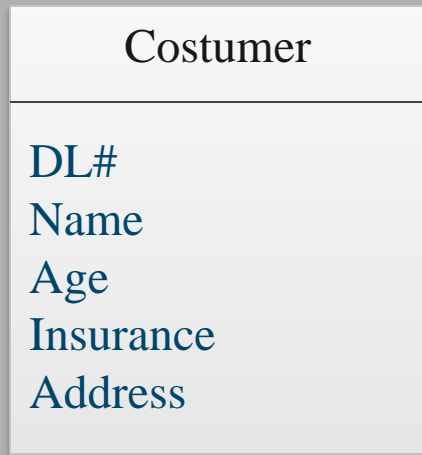
Cars

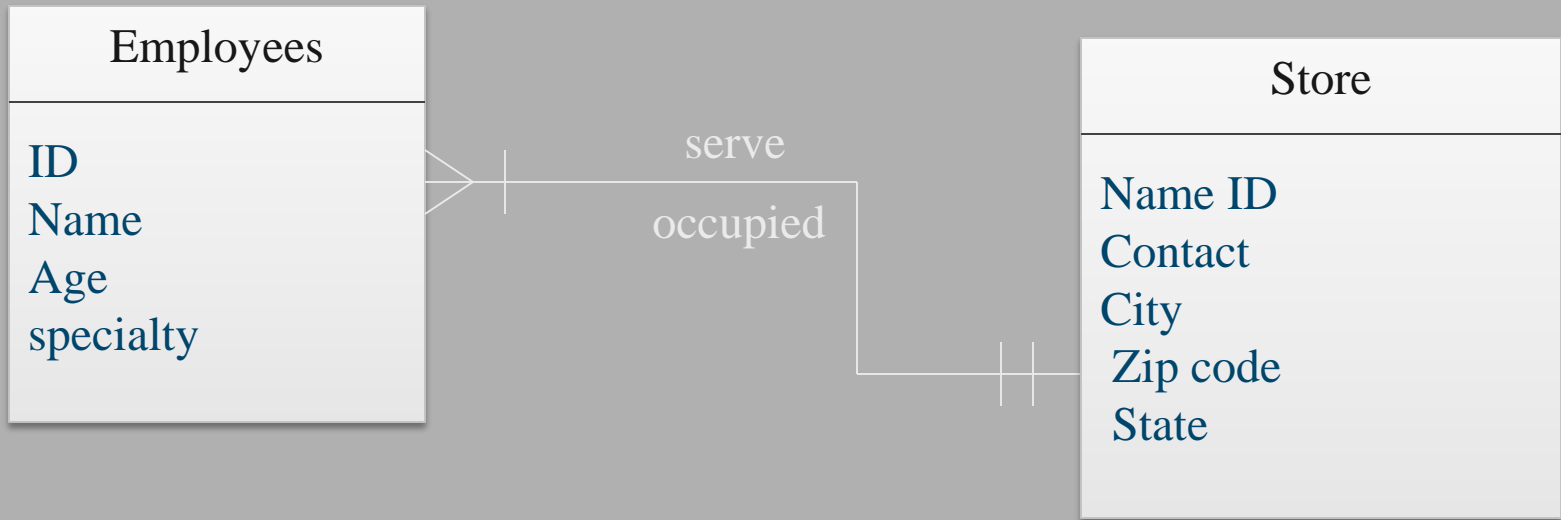


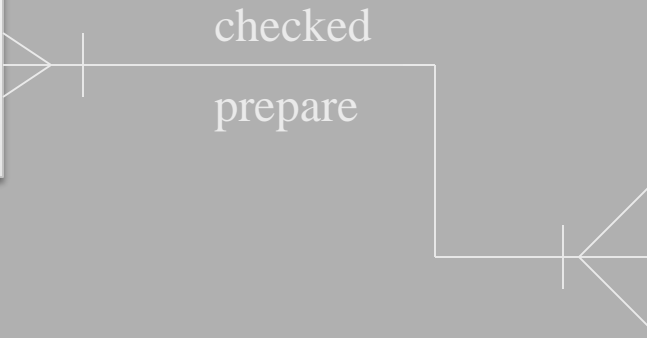
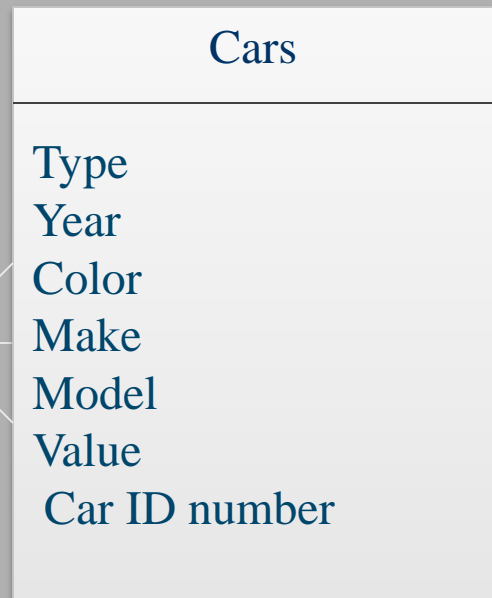
Cars Rental Database

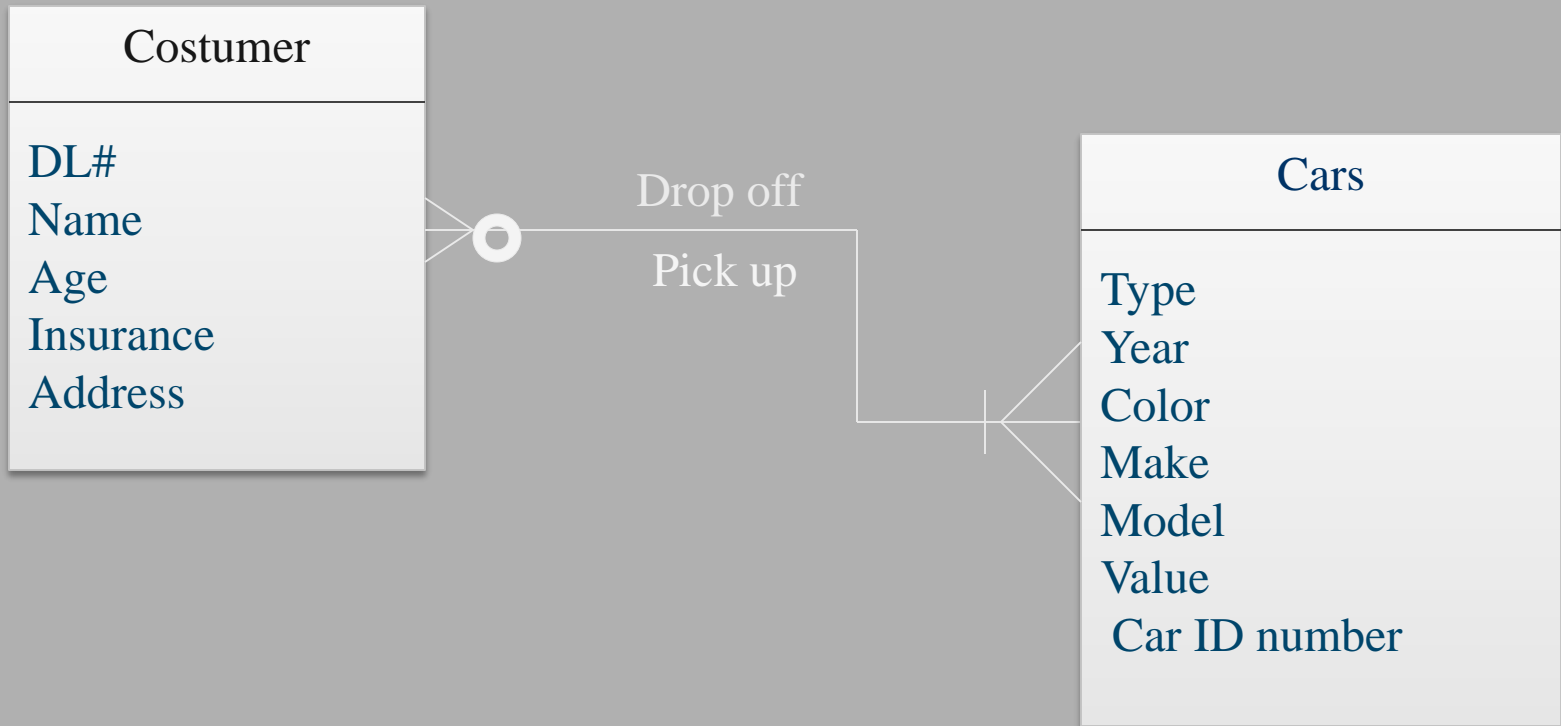
- Store has a name ID, contact, city, zip code and state.
- Customers have a name, an age, insurance, an address, and driver license.
- Employees have an ID, a name, an age and specialty.
- Cars have a type, a year, color, make, model, value and car ID number.
- Each customer has to rent from many stores, and each store rents several customers (M:M).
- The store could be served by many employees, and each employee can serve a store (1:M)
- Each employee prepares many cars, and each car can be prepared by many employees (M:M).
- Each car can rent by many costumers, and each costumer could rent many cars(M:M).

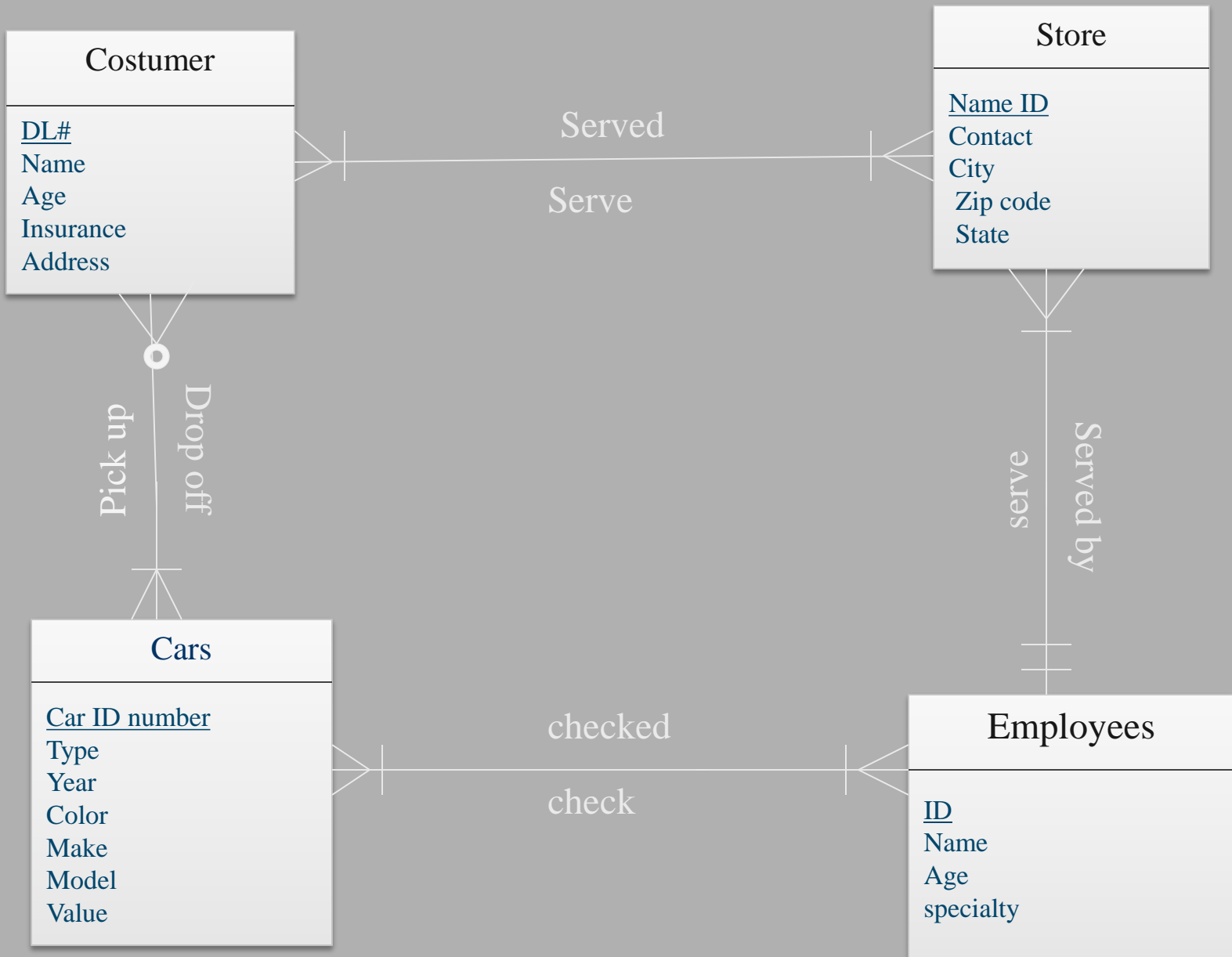












Customer

<u>DL#</u>	Name	Age	Insurance	Address
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Store

<u>Name ID</u>	Contact	City	Zip code	State
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CustomerStore

<u>DL#</u>	<u>Name ID</u>	Date
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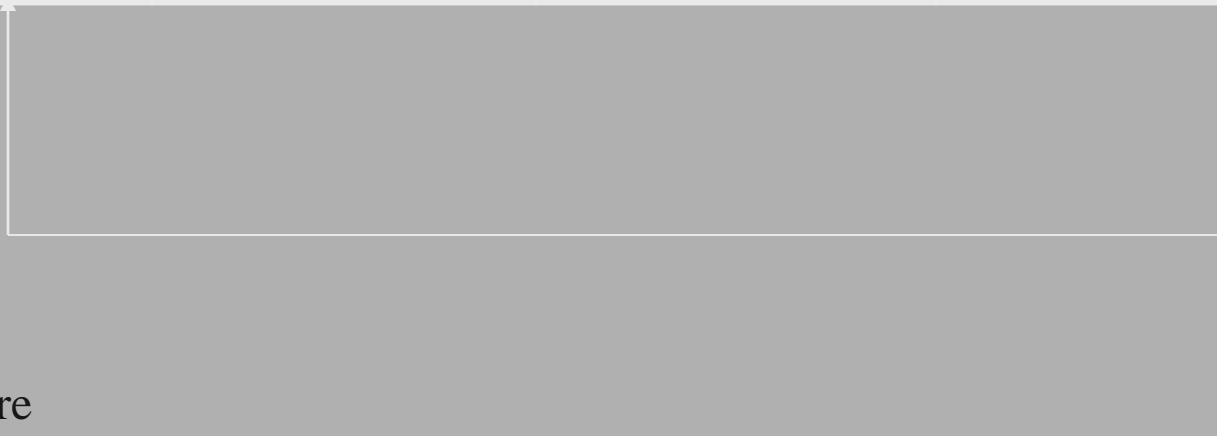


Employees

<u>ID</u>	Name	Age	specialty
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Store

<u>Name ID</u>	Contact	City	Zip code	State	ID
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Employees

<u>ID</u>	Name	Age	specialty
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Cars

<u>Car ID</u>	Type	Year	Make	Model	Value	Color
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EmployeesCars

<u>ID</u>	<u>Car ID</u>	Distribution
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Cars

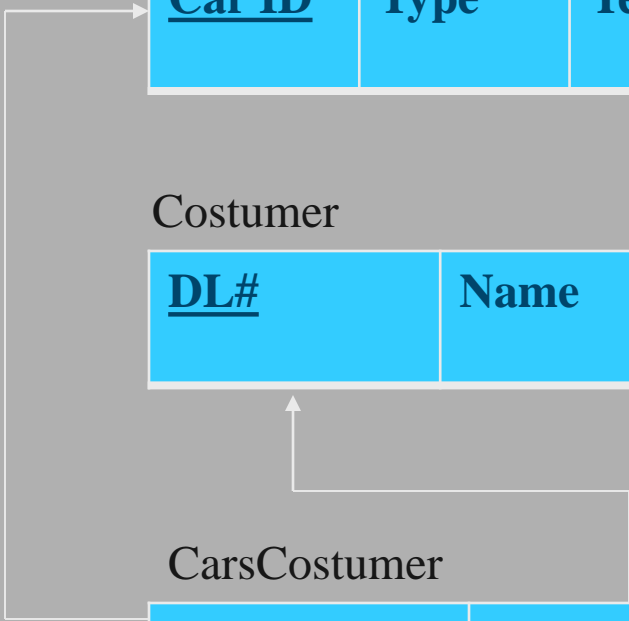
<u>Car ID</u>	Type	Year	Make	Model	Value	Color
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Costumer

<u>DL#</u>	Name	Age	Insurance	Address
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CarsCostumer

<u>Car ID</u>	<u>DL#</u>	Rented
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Customer

<u>DL#</u>	Name	Age	Insurance	Address
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Store

<u>Name ID</u>	Contact	City	Zip code	State	ID
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CustomerStore

<u>DL#</u>	<u>Name ID</u>	Date
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Employees

<u>ID</u>	Name	Age	specialty
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Cars

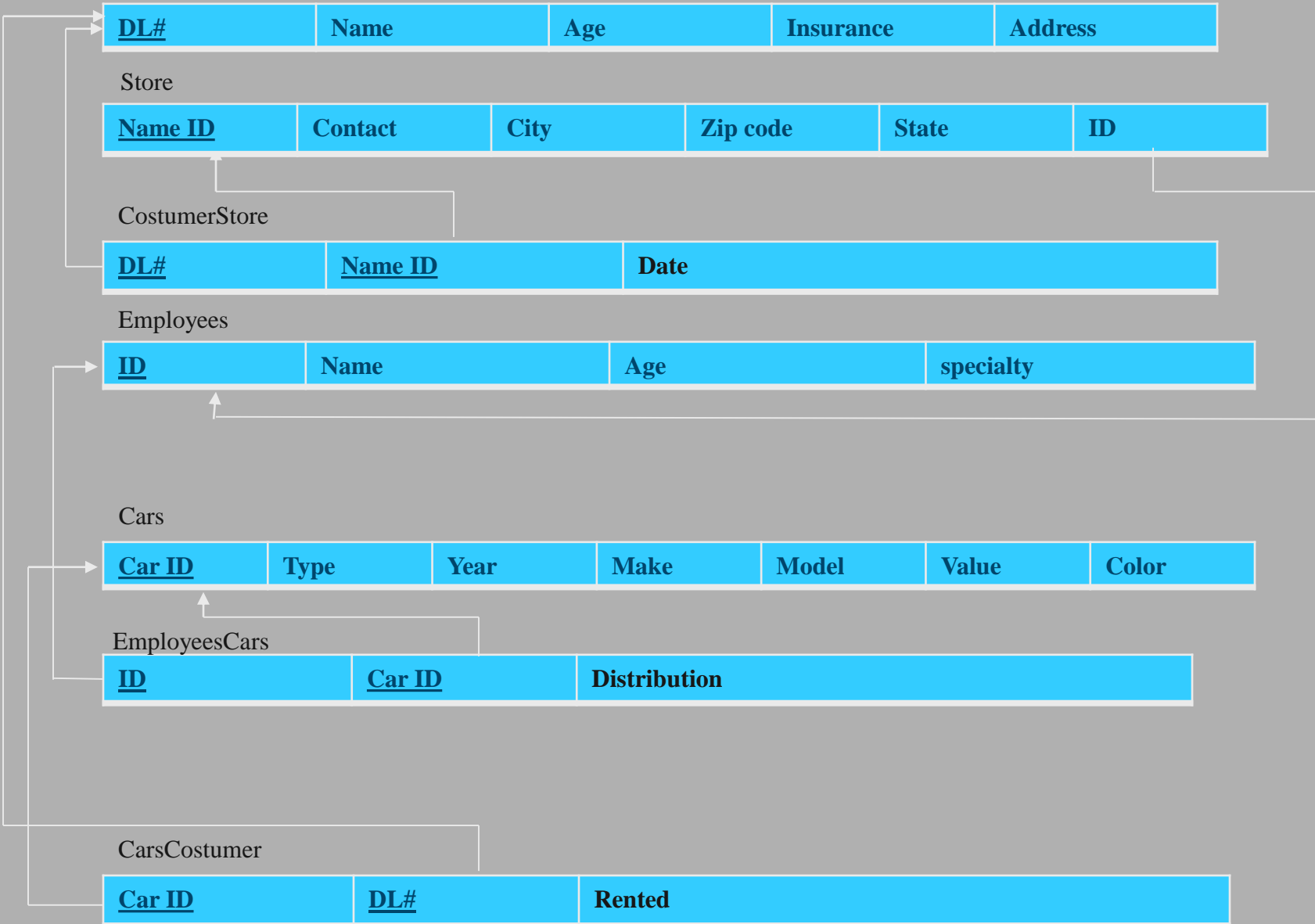
<u>Car ID</u>	Type	Year	Make	Model	Value	Color
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EmployeesCars

<u>ID</u>	<u>Car ID</u>	Distribution
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CarsCustomer

<u>Car ID</u>	<u>DL#</u>	Rented
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Customer

A result of applying the customer on the database

The screenshot displays the IBM Data Studio interface for database administration. The main window shows the 'Tables' view for the 'SAMPLE1' database. The 'Customer' table is selected, and its properties are detailed in the bottom pane.

Schema	Name	Perce...	Row Count	Log Mode	Primary Key	Partition ...	Regular Table:
DB2ADMIN	ACT	0			PK_ACT		USERSPACE1
DB2ADMIN	CATALOG	0			PK_CATALOG		IBMDB2SAMP
DB2ADMIN	CL_SCHED	0					USERSPACE1
DB2ADMIN	CUSTOMER	0			PK_CUSTOMER		IBMDB2SAMP
DB2ADMIN	Cars	0	0		Car_PK		IBMDB2SAMP
DB2ADMIN	Costumer	0	0		Costumer_PK		IBMDB2SAMP
DB2ADMIN	DEPARTMENT	0			PK_DEPARTM...		USERSPACE1
DB2ADMIN	EMPLOYEE	0			PK_EMPLOYEE		USERSPACE1
DB2ADMIN	EMPMDC	0	10000				IBMDB2SAMP
DB2ADMIN	EMPPROJECT	0					USERSPACE1
DB2ADMIN	EMP_PHOTO	0			PK_EMP_PHOTO		USERSPACE1

Columns	Name	Primary ...	Domain	Data Type	Length	Scale	Not Null
Privileges	DL#	<input checked="" type="checkbox"/>		INTEGER			<input checked="" type="checkbox"/>
Distribution Key	Name	<input type="checkbox"/>		VARCHAR	5		<input type="checkbox"/>
Data Partitions	Age	<input type="checkbox"/>		INTEGER			<input type="checkbox"/>
Table Spaces	Insurance	<input type="checkbox"/>		XML			<input type="checkbox"/>
MDC	Address	<input type="checkbox"/>		INTEGER			<input type="checkbox"/>

Store

A result of applying the Store on the database

The screenshot displays the IBM Data Studio interface for a database named 'SAMPLE1'. The 'Administration Explorer' on the left shows the database structure, including a table named 'Store' under the 'DB2ADMIN' schema. The 'Table Properties' pane at the bottom shows the following details for the 'Store' table:

Columns	Name	Primary ...	Domain	Data Type	Length	Scale	Not Null
Privileges	Name ID	<input checked="" type="checkbox"/>		VARCHAR	5		<input checked="" type="checkbox"/>
Distribution Key	Contact	<input type="checkbox"/>		INTEGER			<input type="checkbox"/>
Data Partitions	City	<input type="checkbox"/>		VARCHAR	5		<input type="checkbox"/>
Table Spaces	Zip code	<input type="checkbox"/>		INTEGER			<input type="checkbox"/>
MDC	State	<input type="checkbox"/>		CHAR	5		<input type="checkbox"/>

The 'Properties' pane also shows the 'General' tab with the table name 'Store' and the connection 'localhost - DB2 - SAMPLE1'. The 'Table Properties' pane shows the table is a 'Regular Table' with a 'Primary Key' of 'Store_PK' and a 'Partition ...' of 'IBMDB2SAMP'.

Employees

A result of applying the Employees on the database

The screenshot displays the IBM Data Studio interface. The main window shows a list of tables in the SAMPLE1 database. The 'Employees' table is highlighted, and its structure is shown in the Properties pane below. The table has four columns: ID (INTEGER, Primary Key), Name (VARCHAR, Length 5), Age (INTEGER), and Specialty (CHAR, Length 5). The Properties pane also shows other table attributes like Distribution Key, Data Partitions, Table Spaces, MDC, Relationships, Statistics, and Documentation.

Schema	Name	Perce...	Row Count	Log Mode	Primary Key	Partition ...	Regular Table:
DB2ADMIN	CUSTOMER	0			PK_CUSTOMER		IBMDB2SAMP
DB2ADMIN	Cars	0	0		Car_PK		IBMDB2SAMP
DB2ADMIN	Costumer	0	0		Costumer_PK		IBMDB2SAMP
DB2ADMIN	DEPARTMENT	0			PK_DEPARTM...		USERSPACE1
DB2ADMIN	EMPLOYEE	0			PK_EMPLOYEE		USERSPACE1
DB2ADMIN	EMPMDC	0	10000				IBMDB2SAMP
DB2ADMIN	EMPPROJECT	0					USERSPACE1
DB2ADMIN	EMP_PHOTO	0			PK_EMP_PHO...		USERSPACE1
DB2ADMIN	EMP_RESUME	0			PK_EMP_RESU...		USERSPACE1
DB2ADMIN	Employees	0	0		Employees_PK		IBMDB2SAMP

Columns	Name	Primary ...	Domain	Data Type	Length	Scale	Not Null
Distribution Key	ID	<input checked="" type="checkbox"/>		INTEGER			<input checked="" type="checkbox"/>
Data Partitions	Name	<input type="checkbox"/>		VARCHAR	5		<input type="checkbox"/>
Table Spaces	Age	<input type="checkbox"/>		INTEGER			<input type="checkbox"/>
MDC	Specialty	<input type="checkbox"/>		CHAR	5		<input type="checkbox"/>

Cars

A result of applying the Cars on the database

The screenshot displays the IBM Data Studio interface for a database named 'SAMPLE1'. The 'Administration Explorer' on the left shows the database structure, including 'All Databases', 'localhost', 'DB2', and 'SAMPLE1 (DB2 for Linux)'. The 'Task Launcher' in the center shows a list of tables, with 'Cars' selected. The 'Properties' pane at the bottom shows the details of the 'Cars' table, including its columns and their data types.

Schema	Name	Perce...	Row Count	Log Mode	Primary Key	Partition ...	Regular Table:
DB2ADMIN	ACT	0			PK_ACT		USERSPACE1
DB2ADMIN	CATALOG	0			PK_CATALOG		IBMDB2SAMP
DB2ADMIN	CL_SCHED	0					USERSPACE1
DB2ADMIN	CUSTOMER	0			PK_CUSTOMER		IBMDB2SAMP
DB2ADMIN	Cars	0	0		Car_PK		IBMDB2SAMP
DB2ADMIN	Costumer	0	0		Costumer_PK		IBMDB2SAMP
DB2ADMIN	DEPARTMENT	0			PK_DEPARTM...		USERSPACE1
DB2ADMIN	EMPLOYEE	0			PK_EMPLOYEE		USERSPACE1
DB2ADMIN	EMPMDC	0	10000				IBMDB2SAMP
DB2ADMIN	EMPPROJECT	0					USERSPACE1

Privileges	Name	Primary ...	Domain	Data Type	Length	Scale	Not Null
Distribution Key	Car ID	<input checked="" type="checkbox"/>		INTEGER			<input checked="" type="checkbox"/>
Data Partitions	Type	<input type="checkbox"/>		VARCHAR	32		<input type="checkbox"/>
Table Spaces	Year	<input type="checkbox"/>		INTEGER			<input type="checkbox"/>
MDC	Color	<input type="checkbox"/>		VARCHAR	5		<input type="checkbox"/>
Relationships	Make	<input type="checkbox"/>		INTEGER			<input type="checkbox"/>
Statistics	Model	<input type="checkbox"/>		CHAR	5		<input type="checkbox"/>
Documentation	Value	<input type="checkbox"/>		CHAR	5		<input type="checkbox"/>