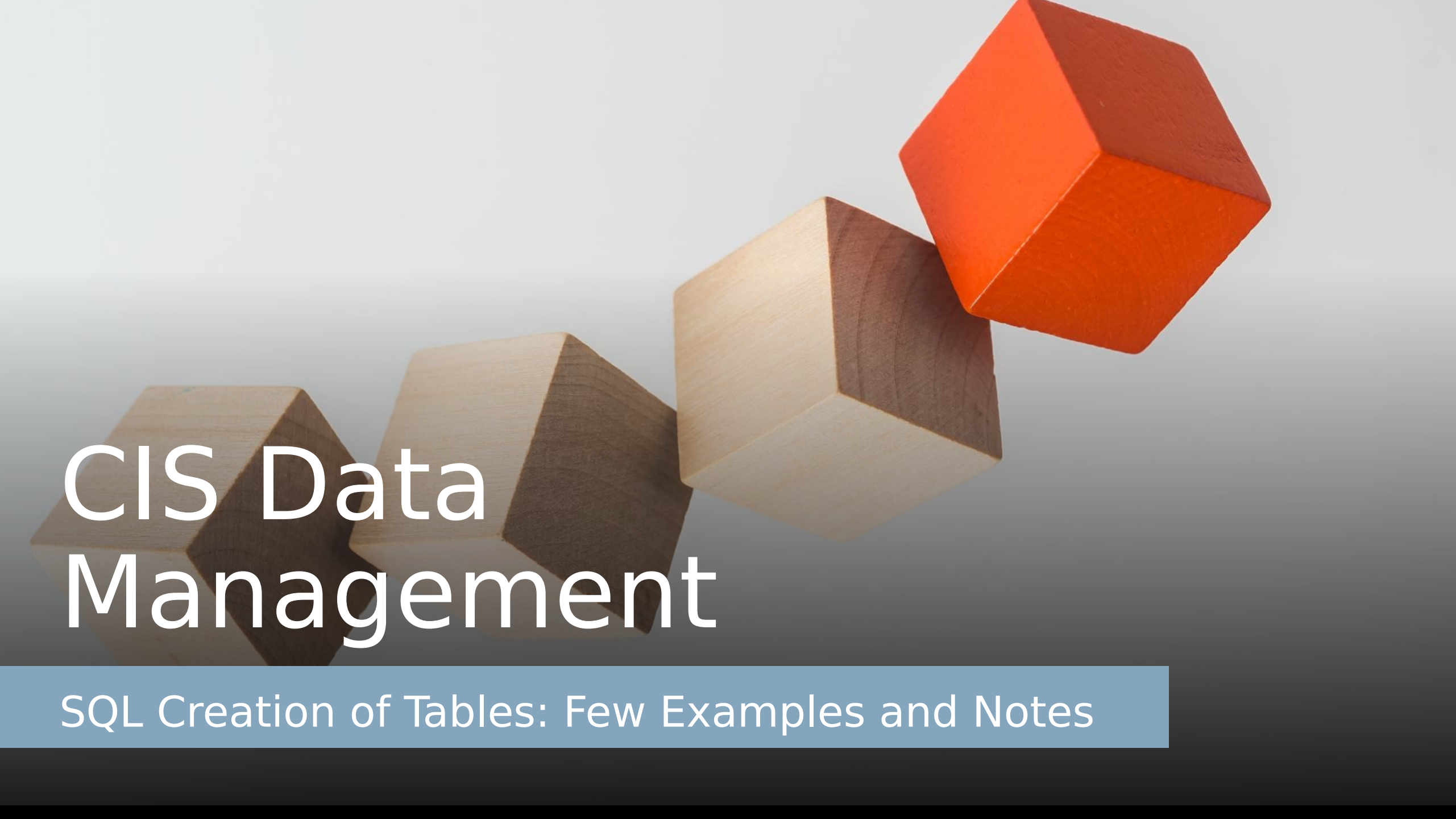
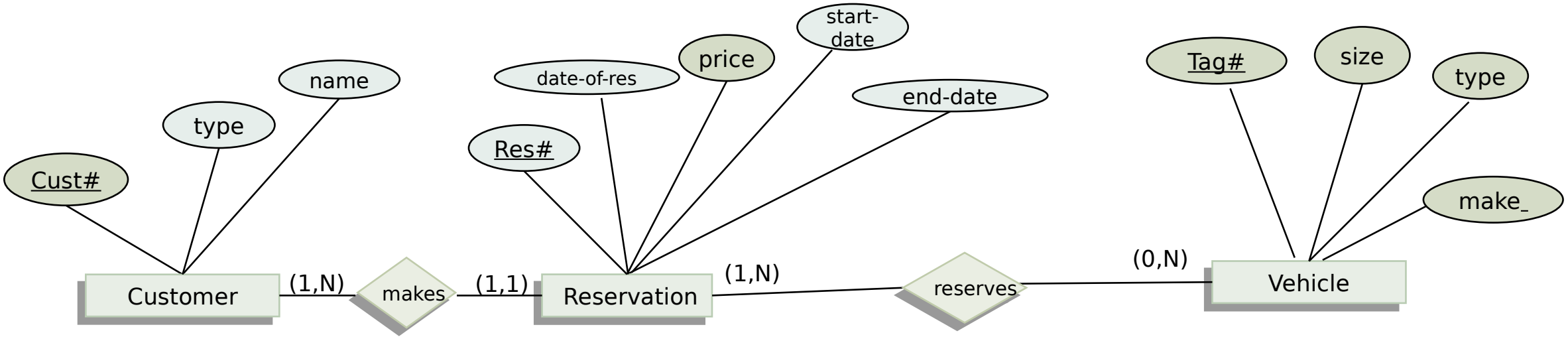


CIS Data Management

SQL Creation of Tables: Few Examples and Notes

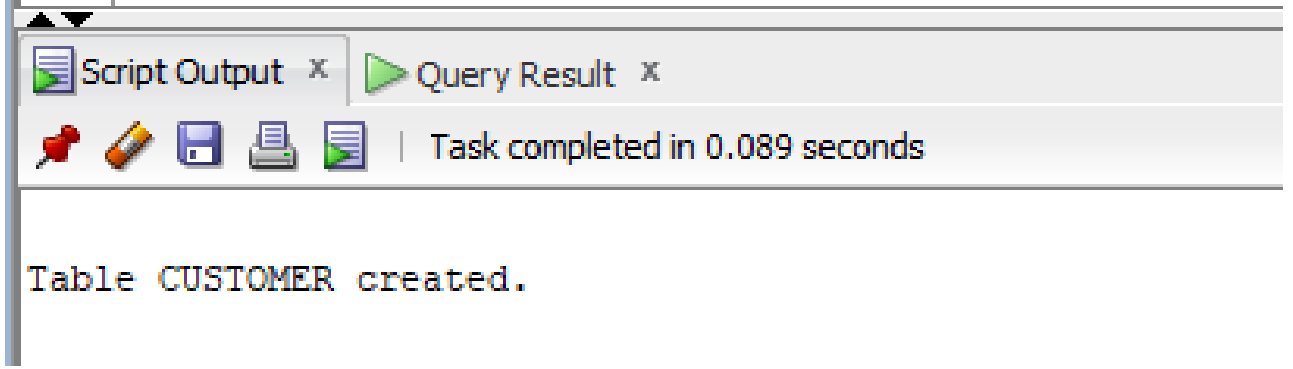
Translation: Conceptual to Relational Model for Vehicle Rental

Reservation: (Res#, price, start-date, end-date, date-of-res, cust#)
Customer: (Cust#, type, name)
Vehicle: (Tag#, size, type, make)
Reserve-Vehicle: (Res#, Tag#)



Create Customer Table

```
CREATE TABLE Customer (
   Cust# Int NOT NULL,
   type varchar2(11) ,
   name varchar2 (20),
   Constraint Customer_PK Primary Key (Cust#)
  );
```

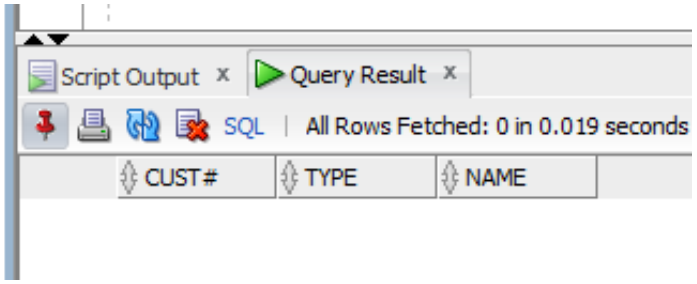


Note: Need to create 4 tables in the relational.
One each for Customer, Reservation, Vehicle, and Reserve-Vehicle.

Relation attributes

```
CREATE TABLE Customer (
    Cust# Int NOT NULL,
    type varchar2(11) ,
    name varchar2 (20),
    Constraint Customer_PK Primary Key (Cust#)
  );
```

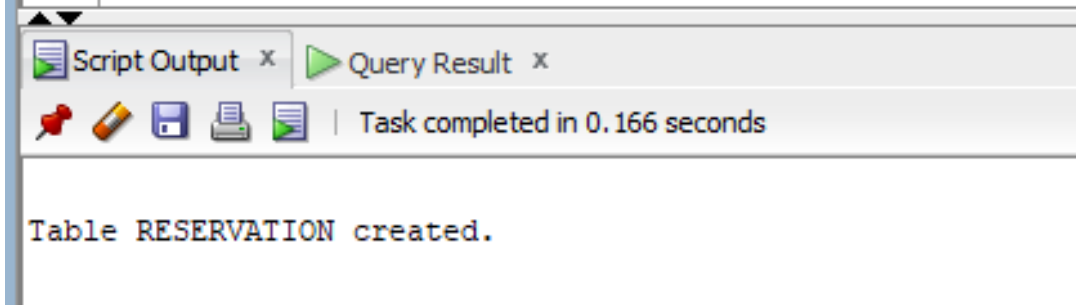
Select* from Customer;



Can use this as a check of the attributes you have defined.

Create Table: Reservation

```
CREATE TABLE Reservation (
 Res# Int NOT NULL,
 price Number(8,2) NOT Null,
 start_date date Null,
 end_date date Null,
 date_of_res date NOT Null,
 Constraint Reservation_PK Primary Key (Res#)
);
```



Do not use hyphens; use underscores

Question: What is missing from this table?

Ans. WE don’t have the foreign key yet.

Drop Table

If you are having problems creating a table and need to, you can drop (delete) the table using the Drop DDL Command:

Drop Table tablename;

E.g.,

Drop Table Customer;

Referencing two keys from other tables

See figure below from the online appx posted under Oracle.
This is for:
Customer-Artist_Int (ArtistID, CustomerID)
Artist: (ArtistID, ...)
Customer: (CustomerID, ...

```
CREATE TABLE CUSTOMER_ARTIST_INT(
       ArtistID            Int              NOT NULL,
       CustomerID          Int              NOT NULL,
       CONSTRAINT    CAIntPK              PRIMARY KEY(ArtistID, CustomerID),
       CONSTRAINT    CAInt_ArtistFK       FOREIGN KEY(ArtistID)
                            REFERENCES ARTIST(ArtistID)
                               ON DELETE CASCADE,
       CONSTRAINT    CAInt_CustomerFK     FOREIGN KEY(CustomerID)
                            REFERENCES CUSTOMER(CustomerID)
                               ON DELETE CASCADE
       );
```

FIGURE 10B-48

Notes:
You do not need “on delete cascade” for this course; just put a comma after (ArtistID),

Note that there is no comma after Foreign Key (ArtistID) and that it goes on to references Artist(artistID),

There are three constraints. The primary key constraint which must have PRIMARY KEY in it. Note the compound key of (ArtistID, CustomerID).

There are two foreign key constraints, one for ArtistID and one for CustomerID.

The names of the constraints are

Insertion of values into a table

```
INSERT INTO CUSTOMER
       (CustomerID, LastName, FirstName, EmailAddress, EncryptedPassword,
        Street, City, State, ZIPorPostalCode, Country, AreaCode, PhoneNumber)
       VALUES (
       1034, 'Frederickson', 'Mary Beth', 'MaryBeth.Frederickson@somewhere.com', 'xc4vgh87',
       '25 South Lafayette', 'Denver', 'CO', '80201', 'USA', '303', '513-8822');
```

FIGURE 10B-59

Create table with foreign key

```
create table EMPLOYEES (
  empno              number not null,
  name               varchar2(50) not null,
  job                varchar2(50),
  manager            number,
  hiredate           date,
  salary             number(7,2),
  commission         number(7,2),
  deptno            number,
  constraint pk_employees primary key (empno),
  constraint fk_employees_deptno foreign key (deptno)
      references DEPARTMENTS (deptno)
);
```

No comma

Question: What is a real-world interpretation of this table?