SQL query exercises: each problem is listed within the SQL code in the comment format. The answers to each question are indented below them.

**EXERCISE 1**

--Create executable queries.

--Start with the command:

USE PVF;

--Usetable Customer\_T

select top 10 \* from Customer\_T;

--to check table structure and columns within a table:

-- Select top 10 \* from tablename;

--Be clear from which table to select which column, whether you need to join tables.

--For Pine Valley furniture, use SQL to answer following questions:

--1. list the number of customers living at each state.

select CustomerState, count(\*)

from Customer\_T

group by CustomerState;

--2. List the salesperons whose names carry a letter L.

select \* from SALESPERSON\_T

where SalespersonName Like '%L%';

--3. Display the ProductID and the total ordered quantity for each product

--for all products ordered. List the most popular product first and

-- the least product last.

select p.ProductID, ProductDescription, sum(orderedquantity) totquan

from Product\_T p Inner Join OrderLine\_T ol

ON p.ProductID = ol.ProductID

Group By p.ProductID, ProductDescription

Order By totquan DESC;

--4. How many work centers does Pine Valley have? Where are they located?

Select \* from WorkCenter\_T;

select WorkCenterLocation, count(\*) from WorkCenter\_T

group by WorkCenterLocation;

--5. List the employees whose names carry a letter L.

select\* from Employee\_T

where EmployeeName Like '%L%';

--6. Display the productline ID and the average standard price  for all products in each product line

select \* from Product\_T

select ProductLineID, AVG(ProductStandardPrice) AVGPrice from Product\_T

Group By ProductLineID;

--show inner join example

select \*

from Product\_T p Inner Join OrderLine\_T ol

ON p.ProductID = ol.ProductID

**EXERCISE 2**

USE Northwind

--list customers from Germany, their names and contact.

select ContactName, Phone, Fax

from Customers

where country = 'Germany';

--List customers with customerID initials  "A" or "W"

select customerID

from customers

where customerID like 'A%' or customerID like 'W%';

--list orders placed by customers from London. List CustomerName, ContactName, --OrderId, OrderDate, ProductID

--create and use table nicknames

--CustomerName not found in any tables

select

ContactName as 'CustomerName',

OrderDate,

ProductID

from customers cust inner join orders od

on cust.CustomerID = od.CustomerID

inner join [Order Details] DET on

DET.OrderID = od.OrderID;

--list orders placed by customers from London. List CustomerName, ContactName, --OrderId, OrderDate, ProductID, Purchase for each product at each order

--to do so, you have to inner join an additional table, Products

select

cust.ContactName as 'CustomerName',

od.OrderDate,

PT.ProductID,

PT.ProductName,

od.OrderID

from customers cust inner join orders od

on cust.CustomerID = od.CustomerID

inner join [Order Details] DET on

DET.OrderID = od.OrderID

inner join Products PT

on DET.ProductID = PT.ProductID;

--list customer purchases from different cities, grouped by city.

select

cust.ContactName,

PT.ProductName,

cust.City

from customers cust inner join orders od

on cust.CustomerID = od.CustomerID

inner join [Order Details] DET on

DET.OrderID = od.OrderID

inner join Products PT

on DET.ProductID = PT.ProductID

group by cust.City, PT.ProductName, cust.ContactName;

--List sales at Each country grouped by country

select

SUM(PT.UnitPrice) as 'Sales',

cust.Country

from customers cust inner join orders od

on cust.CustomerID = od.CustomerID

inner join [Order Details] DET on

DET.OrderID = od.OrderID

inner join Products PT

on DET.ProductID = PT.ProductID

group by cust.Country;

--list sales of each product under the category 'Beverages', grouped by --category.

select

SUM(PT.UnitPrice) as 'Sales',

PT.ProductName

from Products PT inner join Categories CT

on pt.CategoryID = CT.CategoryID

inner join [Order Details] DET

on DET.ProductID = pt.ProductID

where pt.ProductID in

(select ProductID from Products

where CT.CategoryName = 'Beverages')

group by pt.ProductName;