

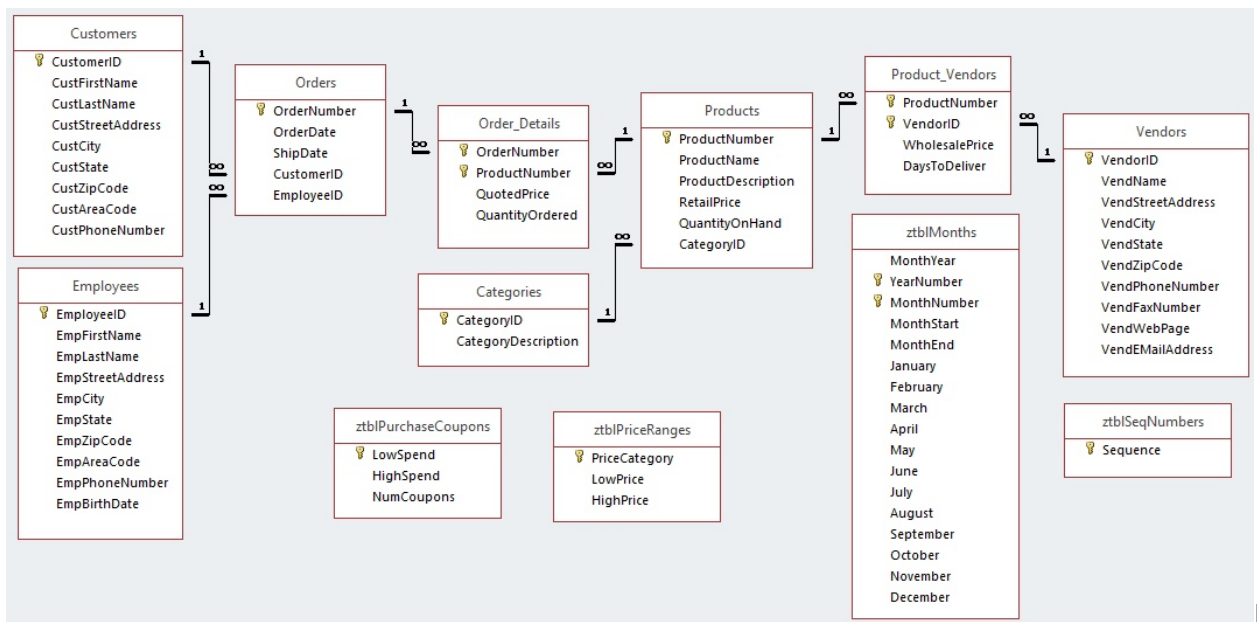
DSO 552: SQL Databases for Business Analysts

Homework 02

Due Date: Wednesday September 18, 2019 (at the end of the day at 11:59pm)

Sales Orders Database

This database is an order entry database for a store/shop that sells bicycles and accessories. The following figure shows the ERD for the database.



1. (1 point) List the vendors (name) that are based in Bellevue, Ballard, and Redmond? Your table should only include 1 variable: name.

```
select vendname
from vendors
where vendcity in ('Bellevue', 'Ballard', 'Redmond')
```

vendname
Shinoman, Incorporated
Nikoma of America
Kona, Incorporated

2. (1 point) Show all product names that cost the shop less than \$100. Your table should include the product name, product wholesalesprice, and the vendor name.

```
select p.productname, v.vendname, pv.wholesaleprice
from products p
join product_vendors pv
on p.productnumber = pv.productnumber and pv.wholesaleprice <100
join Vendors v
```

```
on v.vendorid = pv.vendorid
limit 3;
```

productname	vendname	wholesaleprice
Dog Ear Cyclecomputer	Dog Ear	54.19
Dog Ear Cyclecomputer	Lone Star Bike Supply	57.27
Victoria Pro All Weather Tires	Big Sky Mountain Bikes	44.22

3. (2 points) Find all the customers who have ordered a bicycle helmet in the past. Your table should include three columns: first name, last name, and product name.

```
select distinct c.custfirstname, c.custlastname, p.productname
from customers c
join orders o
on c.customerid = o.customerid
join order_details od
on od.ordernumber = o.ordernumber
join products p
on p.productnumber = od.productnumber
where p.productname like '%helmet%' or p.productname like '%Helmet%'
limit 3;
```

custfirstname	custlastname	productname
Andrew	Cencini	Dog Ear Helmet Mount Mirrors
Andrew	Cencini	Glide-O-Matic Cycling Helmet
Andrew	Cencini	King Cobra Helmet

4. (2 points) Suppose that the shop is out of the product “Shinoman 105 SC Brakes” and they are looking to get it very fast from one of the vendors. Among the all vendors in the database, which vendor is the fastest to supply the shop with the product “Shinoman 105 SC Brakes”? Your table should include four columns: vendor name, vendor state, and vendor phone number.

```
select v.vendname, v.vendstate, v.vendphonenumber, p.productname, pv.daystodeliver
from vendors v
join product_vendors pv
on v.vendorid = pv.vendorid
join products p
on p.productnumber = pv.productnumber
where p.productname = 'Shinoman 105 SC Brakes'
order by p.productnumber, pv.daystodeliver
limit 1;
```

vendname	vendstate	vendphonenumber	productname	daystodeliver
Shinoman, Incorporated	WA	(425) 888-1234	Shinoman 105 SC Brakes	2

5. (1 point) Which products have never been ordered? Your table should only include the names of the products.

```
select p.productname
from products p
left join order_details od
on p.productnumber = od.productnumber
where od.ordernumber is null
```

productname
Victoria Pro All Weather Tires
Ultra-Pro Rain Jacket

6. (1 point) Create a new variable called revenue to show how much revenue the shop generated from each order in January 2018 (use `shipdate` for date comparisons)? Your table should have three columns: ordernumber, shipdate, and the revenue.

```
select o.ordernumber, o.shipdate , od.quotedprice * od.quantityordered
      as revenue
from orders o
join order_details od
on o.ordernumber = od.ordernumber
where o.shipdate between '2018-01-01' and '2018-01-31'
order by o.shipdate
limit 3;
```

ordernumber	shipdate	revenue
579	2018-01-01	1905
579	2018-01-01	6600
579	2018-01-01	5820

7. (2 points) The shop has large numbers of “Shinoman Deluxe TX-30 Pedal” product in their inventory. The shop has decided to do target marketing and reach out to those who have already bought this product before in order to increase sales. Return a list of all customers (firstname, last name, and phone numbers) who have bought this product before. Your table should include three columns: firstname, last name, and phone numbers.

```
select distinct c.custfirstname, c.custlastname, c.CustPhoneNumber
from customers c
join orders o
on o.customerid = c.customerid
join order_details od
on od.ordernumber = o.ordernumber
join products p
on od.productnumber = p.productnumber
where p.productname = 'Shinoman Deluxe TX-30 Pedal'
limit 3;
```

custfirstname	custlastname	custphonenumber
Alaina	Hallmark	555-2631
Andrew	Cencini	555-2601
Angel	Kennedy	555-2571