CSCI3287 Database Systems

Homework # 3 – SQL

Problem 1

SELECT city
    FROM customers
    where country = 'Australia'
    order by 1;

city
Chatswood
Glen Waverly
Melbourne
North Sydney
South Brisbane

Problem 2

select employeenumber, lastname, firstname, extension
    from employees
    where officecode = 6;

employeenumber	lastname	firstname	extension
1088	Patterson	William	x4871
1611	Fixter	Andy	x101
1612	Marsh	Peter	x102
1619	King	Tom	x103

Problem 3

select ProductCode, ProductName, productline , ProductVendor, quantityinstock,
from products
where quantityinstock between 4000 and 5000;

ProductCode	ProductName	productline	ProductVendor	quantityinstock
S18_2238	1998 Chrysler Plymouth Prowler	Classic Cars	Gearbox Collectibles	4724
S18_2625	1936 Harley Davidson El Knucklehead	Motorcycles	Welly Diecast Productions	4357
S18_2949	1913 Ford Model T Speedster	Vintage Cars	Carousel DieCast Legends	4189
S18_3029	1999 Yamaha Speed Boat	Ships	Min Lin Diecast	4259
S24_1444	1970 Dodge Coronet	Classic Cars	Highway 66 Mini Classics	4074
S24_3191	1969 Chevrolet Camaro Z28	Classic Cars	Exoto Designs	4695
S24_4258	1936 Chrysler Airflow	Vintage Cars	Second Gear Diecast	4710
S72_1253	Boeing X-32A JSF	Planes	Motor City Art Classics	4857

Homework # 3 – SQL

Problem 4

select Productcode, ProductName, productvendor, buyprice, MSRP
from products
where MSRP = (
        select max(msrp) from products)

Productcode	ProductName	productvendor	buyprice	MSRP
S10_1949	1952 Alpine Renault 1300	Classic Metal Creations	98.58	214.30

Problem 5

select ProductName, MSRP, BuyPrice, (MSRP - BuyPrice) as Margin
        from products
        order by Margin limit 1;

ProductName	MSRP	BuyPrice	Margin
1939 Chevrolet Deluxe Coupe	33.19	22.57	10.62

Problem 6

Select distinct country, count(*) as customers
        from customers
        group by country
            having count(*) > 5
  order by 2 desc;

country	customers
USA	36
Germany	13
France	12
Spain	7

Problem 7

Select p.productcode, productname, count(ordernumber) as OrderCount
        from products p join orderdetails o
        on p.productcode = o.productcode
  group by productcode, productname
  order by 3 desc limit 1;

productcode	productname	OrderCount
S18_3232	1992 Ferrari 360 Spider red	53

Problem 8

Select concat(m.firstname," ",m.lastname) as ManagerName,
      concat(e.firstname," ",e.lastname) as EmployeeName
      from employees e, employees m
  where e.reportsto = m.employeenumber
  order by 1;

ManagerName	EmployeeName
Anthony Bow	Leslie Thompson
Anthony Bow	Julie Firrelli
Anthony Bow	Steve Patterson
Anthony Bow	Foon Yue Tseng
Anthony Bow	George Vanauf
Anthony Bow	Leslie Jennings
Diane Murphy	Mary Patterson
Diane Murphy	Jeff Firrelli
Gerard Bondur	Larry Bott
Gerard Bondur	Barry Jones
Gerard Bondur	Loui Bondur
Gerard Bondur	Gerard Hernand…
Gerard Bondur	Pamela Castillo
Gerard Bondur	Martin Gerard
Mami Nishi	Yoshimi Kato
Mary Patterson	William Patterson
Mary Patterson	Gerard Bondur
Mary Patterson	Mami Nishi
Mary Patterson	Anthony Bow
William Patterson	Andy Fixter
William Patterson	Peter Marsh
William Patterson	Tom King

Problem 9

Select employeenumber, lastname, firstname
from employees
where reportsto is null;

employeenumber	lastname	firstname
1002	Murphy	Diane

Problem 10

Select productname
    from products

```
        where productline = "Classic Cars"
        and productname like "196%"
order by productname;
```

productname
1961 Chevrolet Impala
1962 LanciaA Delta 16V
1965 Aston Martin DB5
1966 Shelby Cobra 427 S/C
1968 Dodge Charger
1968 Ford Mustang
1969 Chevrolet Camaro Z28
1969 Corvair Monza
1969 Dodge Charger
1969 Dodge Super Bee
1969 Ford Falcon

Problem 11

```
select   monthname(orderdate) as ordermonth ,
                extract(year from orderdate) as orderyear,
        count(ordernumber)
from  orders
group by orderyear, ordermonth
order by 3 desc limit 2;
```

ordermonth	orderyear	count(ordernumber)
November	2004	33
November	2003	30

Problem 12

```
select lastname, firstname
from employees e left outer join customers c
on e.employeenumber = c.salesrepemployeenumber
where customername is null
and jobtitle = "Sales Rep";
```

lastname	firstname
King	Tom
Kato	Yoshimi

Problem 13

select customername , country
       from customers c left outer join orders o
           on c.customernumber = o.customernumber
       where o.customernumber is null
           and country = 'Switzerland';

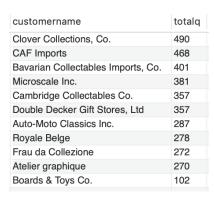| customername	
BG&E Collectables	
Precious Collectables	

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Problem 14

select customername, sum(quantityordered) as totalquantity
from customers c
       join orders o
         on c.customernumber = o.customernumber
         join orderdetails d
           on o.ordernumber = d.ordernumber
group by customername
having totalquantity < 500
order by 2 desc;

customername	totalq
Clover Collections, Co.	490
CAF Imports	468
Bavarian Collectables Imports, Co.	401
Microscale Inc.	381
Cambridge Collectables Co.	357
Double Decker Gift Stores, Ltd	357
Auto-Moto Classics Inc.	287
Royale Belge	278
Frau da Collezione	272
Atelier graphique	270
Boards & Toys Co.	102

Problem 15

```
create table if not exists LowCustomers (
        Customernumber int not null,
        ContactDate DATE not null,
        OrderTotal decimal(9,2) not null default 0,
        constraint PKLowCustomers primary key (CustomerNumber)
        );
```

No answer set

Problem 16

```
insert into LowCustomers
        select c.customernumber, CURRENT_date, SUM(priceEach * Quantityordered)
                from Customers c, Orders o, OrderDetails d
                where c.Customernumber = o.Customernumber
                and o.Ordernumber = d.Ordernumber
                group by c.Customernumber
                having SUM(priceEach * Quantityordered) < 50000;
```

No answer set

Problem 17

```
select * from lowcustomers order by 3 desc;
```

Customernumber	ContactDate	OrderTotal
447	2020-02-12	49967.78
189	2020-02-12	49898.27
344	2020-02-12	46751.14
211	2020-02-12	45480.79
475	2020-02-12	43748.72
487	2020-02-12	42570.37
347	2020-02-12	41506.19
173	2020-02-12	32198.69
415	2020-02-12	31310.09
489	2020-02-12	29586.15
456	2020-02-12	29230.43
381	2020-02-12	29217.18
473	2020-02-12	25358.32
103	2020-02-12	22314.36
198	2020-02-12	21554.26
219	2020-02-12	7918.60

Problem 18

alter table lowcustomers
add column OrderCount integer ;

No answer set

Problem 19

update lowcustomers
set ordercount = floor((rand()*18));

No answer set

Problem 20

select * from lowcustomers
order by 4 desc;

(NOTE: dates and ordercount will vary…)

Customernumber	ContactDate	OrderTotal	OrderCount
189	2020-02-12	49898.27	17
347	2020-02-12	41506.19	17
344	2020-02-12	46751.14	16
173	2020-02-12	32198.69	15
219	2020-02-12	7918.60	15
489	2020-02-12	29586.15	15
487	2020-02-12	42570.37	14
211	2020-02-12	45480.79	13
447	2020-02-12	49967.78	13
473	2020-02-12	25358.32	13
456	2020-02-12	29230.43	11
103	2020-02-12	22314.36	7
198	2020-02-12	21554.26	6
381	2020-02-12	29217.18	3
415	2020-02-12	31310.09	1
475	2020-02-12	43748.72	0

Problem 21

Drop table lowcustomers;

No answer set