

SINF90001 Database Systems and Information Modeling

Professor Sean Maynard

Assignment 2: SQL

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1.b. List the names of the venues that end with an 's'. (4 Marks)

```
SELECT VenueName FROM Venue  
WHERE VenueName LIKE '%s';
```

VenueName
Pinkies
Blueies

2 rows returned

2.a. For each show event, list the name of the event and how many times that event name occurs in descending order. (5 Marks)

```
SELECT EventName, count(*) AS NumberOfOccurences FROM ShowEvent  
GROUP BY EventName  
ORDER BY NumberOfOccurences DESC;
```

EventName	NumberOfOccurences
Intimite Times	48
The Symphonies	42
Footy Season	36
The Competition	30
Round the World	24
Cat House Tour	22
Round Hole, S...	20
Comedy Festival	16
Enlighten Tour	16
Magic Times	14
Surprise	14
Hard Press	12

25 rows returned

3.a. Which events start at the earliest time, list the event name and the start time. (7 Marks)

```
SELECT DISTINCT EventName, StartTime FROM ShowEvent  
WHERE StartTime =  
(SELECT MIN(StartTime) FROM ShowEvent);
```

EventName	StartTime
Pathways	11:00:00

1 rows returned

4. List the durations of the top 5 longest events, list the event name and the duration for each (remove duplicated events where the duration is identical) (7 Marks)

```
SELECT DISTINCT EventName, TIMEDIFF(EndTime, StartTime) AS Duration FROM ShowEvent  
ORDER BY Duration DESC, EventName  
LIMIT 5;
```

EventName	Duration
Funny Things	04:45:00
Funny Things	04:30:00
The Symphonies	03:30:00
Blue Water	03:15:00
Last Age Tour	03:00:00

5 rows returned

5. Management is worried that there are orders in the system that weren't completed (i.e. no seats have been booked for the order). Write a query to list any orders in ascending order (order ID, member ID, order status and order date) where there are no seat reservations. (4 Marks)

```
SELECT OrderID, MemberID, OrderStatus, OrderDate FROM TicketOrder
WHERE OrderID NOT IN
      (SELECT OrderID FROM SeatReservation)
ORDER BY OrderID;
```

OrderID	MemberID	OrderStatus	OrderDate
NULL	NULL	NULL	NULL

0 rows returned

6.a. For each ShowEvent of the same name find the average base ticket base price of the ShowEvents that cost less than the average ticket base price of all events; show the event name, and average price (in descending order). (7 marks).

```
SELECT EventName, CAST(AVG(TicketBasePrice) AS DECIMAL(6,2)) AS AveragePrice FROM ShowEvent
GROUP BY EventName
HAVING AveragePrice <
(SELECT AVG(TicketBasePrice) FROM ShowEvent)
ORDER BY AveragePrice DESC;
```

EventName	AveragePrice
Listen To You...	107.00
Enlighten Tour	97.00
Comedy Festival	96.00
Laugh About	96.00
Surprise	96.00
Intimite Times	89.79
Magic Times	87.00
Cat House Tour	81.82
Pathways	59.00
Footy Season	39.00
The Competition	37.00

11 rows returned

7. List the ID, Names and address history of any member who has changed their address more than three times, show the output so a chronological history of the address location is shown for each member. (7 Marks)

```
SELECT DISTINCT MemberID, FirstName, LastName, DateFrom, DateTo, StreetNumber,
StreetName, StreetType, AddressType, AddressTypeIdentifier, MinorMunicipality,
MajorMunicipality, GoverningDistrict, PostalArea, Country FROM Member
NATURAL JOIN Address NATURAL JOIN MemberAddress
WHERE MemberID IN
(SELECT MemberID FROM MemberAddress
GROUP BY MemberID
HAVING count(*)>4)
ORDER BY MemberID, DateFrom;
```

MemberID	FirstName	LastName	DateFrom	DateTo	StreetNumber	StreetName	StreetType	AddressType	AddressTypeIdentifier	MinorMunicipality	MajorMunicipality	GoverningDistrict	PostalArea	Country
11	Melissa	Mathison	2009-04-01	2009-07-04	117	Elgin	Street	NULL	NULL	NULL	Carlton	VIC	3053	Australia
11	Melissa	Mathison	2009-07-04	2009-12-06	28	Great Western	Highway	NULL	NULL	NULL	Valley Heights	NSW	2777	Australia
11	Melissa	Mathison	2009-12-06	2010-11-23	137	Dunns	Road	NULL	NULL	NULL	Mount Martha	VIC	3934	Australia
11	Melissa	Mathison	2010-11-23	2012-08-06	1399-1401	Burke	Road	NULL	NULL	NULL	Kew East	VIC	3102	Australia
11	Melissa	Mathison	2012-08-06	NULL	6	Woollahra	Avenue	NULL	NULL	NULL	Keysborough	VIC	3173	Australia

5 rows returned

8. Generate a list of performers, showing the following columns (performer ID, first name, last name, group name, gender, picture url, category name, news text, url link); sort the list using performer ID. (6 Marks)

```
SELECT Performer.PerformerID, FirstName, LastName, GroupName, Gender, PictureURL, CategoryName, NewsText, URLLink
FROM Performer NATURAL JOIN PerformerCategory
LEFT OUTER JOIN Individual
    ON Performer.PerformerID = Individual.PerformerID
LEFT OUTER JOIN PerformerGroup
    ON Performer.PerformerID = PerformerGroup.PerformerID
LEFT OUTER JOIN PerformerNews
    ON Performer.PerformerID = PerformerNews.PerformerID
ORDER BY PerformerID;
```

PerformerID	FirstName	LastName	GroupName	Gender	PictureURL	CategoryName	NewsText	URLLink
1	Alica	Wonderland	NULL	F	\pictures189730	Comedy	Alica found in...	http://tinyurlname.com/45261958
1	Alica	Wonderland	NULL	F	\pictures189730	Comedy	What can they...	http://tinyurlname.com/86907049
1	Alica	Wonderland	NULL	F	\pictures189730	Comedy	Alica found in...	http://tinyurlname.com/41225
1	Alica	Wonderland	NULL	F	\pictures189730	Comedy	Alica wins co...	http://tinyurlname.com/88584
2	Betty	Ford	NULL	F	\pictures1131600	Comedy	What a Fail - i...	http://tinyurlname.com/204438
2	Betty	Ford	NULL	F	\pictures1131600	Comedy	Funny that, fo...	http://tinyurlname.com/434262
2	Betty	Ford	NULL	F	\pictures1131600	Comedy	We think we'r...	http://tinyurlname.com/21387877
2	Betty	Ford	NULL	F	\pictures1131600	Comedy	They are not j...	http://tinyurlname.com/44714510
3	Adam	Armstrong	NULL	M	\pictures949153	Comedy	They are blac...	http://tinyurlname.com/25009893
4	Beejay	Jones	NULL	F	\pictures36633	Comedy	There back wi...	http://tinyurlname.com/89062350
5	NULL	NULL	Laugh at us	NULL	\pictures1231574	Comedy	The jovi is bac...	http://tinyurlname.com/24756159
6	NULL	NULL	You think you...	NULL	\pictures590658	Comedy	Sell out of all...	http://tinyurlname.com/1299065

60 rows returned

9. List the 5 members (MemberID, FirstName, LastName, Email Address, Number of events seen) who have seen the least number of events. Use the fields member ID, first name, last name, email address and number of events seen in your output and order by the number of events seen from highest to lowest. (9 Marks)

```
SELECT * FROM
```

```
(SELECT Member.MemberID, FirstName, LastName, EmailAddress, count(DISTINCT EventID) AS NumberEventsSeen FROM Member
LEFT JOIN TicketOrder
    ON Member.MemberID = TicketOrder.MemberID
LEFT JOIN SeatReservation
    ON TicketOrder.OrderID=SeatReservation.OrderID
GROUP BY MemberID
ORDER BY NumberEventsSeen
LIMIT 5) AS Table1

ORDER BY NumberEventsSeen DESC;
```

MemberID	FirstName	LastName	EmailAddress	NumberEventsSeen
19	Mel	Gibson	MelGibson@email.net	18
32	Manjeera	Kanjanabutr	mkanjan@tea.com	18
117	Alison	Carroll	acarrol@mail.net.com.au	16
113	Un	Chain	uchain@nohome.fr	14
122	Anne	Nowhere	anw@what.com	0

5 rows returned

10. For each venue, list in alphabetical order the name of the venue and number of unique members who have visited. (6 Marks)

```
SELECT VenueName, count(DISTINCT Member.MemberID) AS NumberMembersVisited FROM Venue
LEFT JOIN SeatReservation
    ON SeatReservation.VenueID = Venue.VenueID
LEFT JOIN TicketOrder
    ON SeatReservation.OrderID = TicketOrder.OrderID
LEFT JOIN Member
    ON Member.MemberID=TicketOrder.MemberID
GROUP BY VenueName
ORDER BY VenueName;
```

VenueName	NumberMembersVisited
Blueies	87
Highett Theatre	112
Linda's Lair	76
Picies Club	97
Pinkies	77
Prince Park	121
Sean's Shot Club	90
Station Bar	102
Station Club	95
Suzi's Floor R...	0
The Star Bar	95
Thunderdome	121

12 rows returned

11. Which members (member ID, first name, last name) have not seen an event at a particular given venue? List these members in ascending last name order (ONLY WRITE 1 QUERY). Run the query twice, showing results for the venues “Highett Theatre” in one run and “Thunderdome” in the second run. (8 Marks)

```
SELECT MemberID, FirstName, LastName FROM Member
WHERE MemberID NOT IN
  (SELECT MemberID FROM TicketOrder NATURAL JOIN SeatReservation NATURAL JOIN Venue
   WHERE VenueName = 'Thunderdome')
ORDER BY LastName ASC;
```

Highett Theatre

MemberID	FirstName	LastName
95	Adam	Armstrong
68	Abhishek	Chandler
89	Betty	Ford
106	Yue	George
10	Akiva	Goldsman
107	Prabhu	Jenkins
32	Manjeera	Kanjanabutr
101	Mario	Lee
122	Anne	Nowhere
12	Ann	Peacock
NULL	NULL	NULL

10 rows returned

Thunderdome

MemberID	FirstName	LastName
122	Anne	Nowhere

1 row returned

12. Which performers don't have any tickets sold for an event. List the name of the event, when the event occurs, the name of the venue, and the name(s) of the performer. The output should be in alphabetical order using the name of the event and event date. (7 Marks)

```
SELECT EventName, EventDate, VenueName, FirstName, LastName, GroupName FROM ShowEvent NATURAL JOIN Venue
NATURAL JOIN EventPerformer LEFT OUTER JOIN Individual
    ON EventPerformer.PerformerID=Individual.PerformerID
LEFT OUTER JOIN PerformerGroup
    ON EventPerformer.PerformerID=PerformerGroup.PerformerID
WHERE EventID NOT IN
    (SELECT EventID FROM SeatReservation)
ORDER BY EventName, EventDate;
```

EventName	EventDate	VenueName	FirstName	LastName	GroupName
Hard Press	2013-11-06	Linda's Lair	Ann	Jovi	NULL
Hard Press	2013-12-14	Linda's Lair	Ann	Jovi	NULL
Western Music	2013-11-07	Linda's Lair	NULL	NULL	The Boy Band

3 rows returned

13.a. For each individual ShowEvent (include showevents where no sales have yet been made) calculate the ticket sales, show the event name, event date, start time, and the ticket sales, using the ticket sales to arrange the output in ascending order. (9 Marks)

```
SELECT EventName, EventDate, StartTime, CAST(SUM(TicketBasePrice*PriceMultiplier) AS DECIMAL (8,2)) AS TicketSales
FROM ShowEvent LEFT OUTER JOIN SeatReservation
    ON SeatReservation.EventID=ShowEvent.EventID
LEFT OUTER JOIN VenueRows
    ON SeatReservation.RowNumber=VenueRows.RowNumber
    AND SeatReservation.VenueID=VenueRows.VenueID
GROUP BY ShowEvent.EventID
ORDER BY TicketSales ASC;
```

EventName	EventDate	StartTime	TicketSales
Hard Press	2013-11-06	20:25:00	NULL
Hard Press	2013-12-14	20:25:00	NULL
Western Music	2013-11-07	20:25:00	NULL
Pathways	2013-11-12	11:00:00	448.40
Pathways	2013-06-09	11:00:00	448.40
Pathways	2013-02-18	11:00:00	448.40
Pathways	2013-12-09	11:00:00	448.40
Pathways	2013-06-21	11:00:00	448.40
Pathways	2013-06-12	11:00:00	448.40
Pathways	2013-11-21	11:00:00	448.40
Pathways	2013-11-18	11:00:00	448.40
Surprise	2013-10-28	19:00:00	787.20

404 rows returned

13.b. Calculate for each event (using the event name) the total sales for that event for all event dates; show the event name and the total sales, ordering by the total sales in descending order. (9 Marks)

```
SELECT EventName, CAST(SUM(TicketBasePrice*PriceMultiplier) AS DECIMAL(10,2)) AS TotalSales
FROM ShowEvent LEFT OUTER JOIN SeatReservation
    ON SeatReservation.EventID=ShowEvent.EventID
LEFT OUTER JOIN VenueRows
    ON SeatReservation.RowNumber=VenueRows.RowNumber
    AND SeatReservation.VenueID=VenueRows.VenueID
GROUP BY EventName
ORDER BY TotalSales DESC;
```

EventName	TotalSales
Footy Season	113068.80
The Symphonies	74220.30
Intimite Times	61029.70
Round the World	49874.80
World Tour	49772.80
Round Hole, S...	48902.00
The Competition	43401.00
Rock Us	43166.40
Cat House Tour	26106.00
Comedy Festival	23040.00
Sky Larks	20860.00
Blue Water	19532.00

25 rows returned

14. List the ShowEvents that are not sold out. Show the event name, event date and start time, how many seats are available and the percentage of seats sold. The output should be sorted by event name and event date. (12 Marks)

```
SELECT EventName, EventDate, StartTime, (SeatCapacity-count(ReservationID)) AS SeatsAvailable,
      CAST((((count(ReservationID))/SeatCapacity)*100) AS DECIMAL(5,2)) AS PercentSeatsSold
      FROM ShowEvent NATURAL JOIN Venue LEFT OUTER JOIN SeatReservation
      ON SeatReservation.EventID=ShowEvent.EventID
      GROUP BY ShowEvent.EventID
      HAVING PercentSeatsSold < 100
      ORDER BY EventName, EventDate;
```

EventName	EventDate	StartTime	SeatsAvailable	PercentSeatsSold
Cat House Tour	2013-11-21	13:00:00	1	92.86
Footy Season	2013-11-09	14:15:00	1	98.46
Footy Season	2013-11-26	14:15:00	1	98.46
Footy Season	2013-12-03	14:15:00	2	96.92
Footy Season	2013-12-06	14:15:00	2	96.92
Footy Season	2013-12-18	14:15:00	1	98.46
Hard Press	2013-11-06	20:25:00	7	0.00
Hard Press	2013-12-05	20:25:00	1	85.71
Hard Press	2013-12-14	20:25:00	7	0.00
Intimite Times	2013-12-03	19:30:00	2	85.71
Intimite Times	2013-12-16	19:30:00	1	91.67
Intimite Times	2013-12-19	19:30:00	1	91.67

20 rows returned

15. Which Members have not seen a particular performer? List in alphabetical order the last name, first name and email address of members. Your query must allow entry of a performer's last name or group name (ONLY WRITE 1 QUERY). Run the query twice, showing results for the performers "Sydney" in one run and "Stephens" in the second run. (13 Marks)

```
SELECT LastName, FirstName, EmailAddress FROM Member
WHERE MemberID NOT IN
    (SELECT MemberID FROM TicketOrder NATURAL JOIN SeatReservation NATURAL JOIN EventPerformer
    LEFT OUTER JOIN Individual
        ON EventPerformer.PerformerID = Individual.PerformerID
    LEFT OUTER JOIN PerformerGroup
        ON EventPerformer.PerformerID = PerformerGroup.PerformerID
    WHERE 'Sydney' IN (LastName, GroupName))
ORDER BY LastName, FirstName, EmailAddress;
```

Sydney

LastName	FirstName	EmailAddress
Carroll	Sujatha	scarrol@quait.org.au
Jenkins	Prabhu	pjenkin@smail.net.com.au
Nowhere	Anne	anw@what.com
Stem		Stem@email.net

4 rows returned

Stephens

LastName	FirstName	EmailAddress
Carroll	Sujatha	scarrol@quait.org.au
Chan	Seung	schan@ice.net.com.au
Cheng	Fu	fcheng@carl.com
Emmerich	Roland	RolandEmmerich@email.net
Fakhruddin	Juan	jfakhru@smail.com
Fakhruddin	Kap	kfakhru@carl.fr
Ford	Betty	bford@ggoen.org
Friedman	Josh	JoshFriedman@email.net
Gan	George	ggan@kig.net.com
Groom	Winston	WinstonGroom@email.net
Hui	Tim	thui@cnt.net.com.au
Jones	Beejay	bjones@oun.fr

23 rows returned