

SQL Assessment Test 2

Questions and Expected Results

Keep in mind there is usually more than one way to answer these questions.

These questions start off with the basics and then get continually more difficult.

1. How can you retrieve all the information from the cd.facilities table?

- **Expected Result should look similar to this (with more rows):**

Data Output								Explain	Messages	Notifications
	facid [PK] integer	name character varying (100)	membercost numeric	guestcost numeric	initialoutlay numeric	monthlymaintenance numeric				
1	0	Tennis Court 1	5	25	10000	200				
2	1	Tennis Court 2	5	25	8000	200				
3	2	Badminton Court	0	15.5	4000	50				
4	3	Table Tennis	0	5	320	10				

Answer 1:

```
SELECT *
```

```
FROM cd.facilities
```

- You want to print out a list of all of the facilities and their cost to members. How would you retrieve a list of only facility names and costs?








	Data Output	Explain	Messages	Notifications
	name character varying (100)		membercost numeric	
1	Tennis Court 1		5	
2	Tennis Court 2		5	
3	Badminton Court		0	
4	Table Tennis		0	

Answer 2:

```
SELECT name, membercost
```

```
FROM cd.facilities
```

- How can you produce a list of facilities that charge a fee to members?
 - Expected Results should have just 5 rows:

Data Output		Explain	Messages	Notifications		
	facid [PK] integer 	name character varying (100) 	membercost numeric 	guestcost numeric 	initialoutlay numeric 	monthlymaintenance numeric 
1	0	Tennis Court 1	5	25	10000	200
2	1	Tennis Court 2	5	25	8000	200
3	4	Massage Room 1	35	80	4000	3000
4	5	Massage Room 2	35	80	4000	3000
5	6	Squash Court	3.5	17.5	5000	80

Answer 3:

```
select *
```

```
from cd.facilities
```

```
where membercost != 0
```

4. How can you produce a list of facilities that charge a fee to members, and that fee is less than 1/50th of the monthly maintenance cost? Return the facid, facility name, member cost, and monthly maintenance of the facilities in question.

- Result is just two rows:

	Data Output	Explain	Messages	Notifications
	facid [PK] integer	name character varying (100)	membercost numeric	monthlymaintenance numeric
1	4	Massage Room 1	35	3000
2	5	Massage Room 2	35	3000

Answer 4:

```
select facid, name, membercost, monthlymaintenance
from cd.facilities
where membercost != 0
and membercost < monthlymaintenance/50
```

5. How can you produce a list of all facilities with the word 'Tennis' in their name?

- Expected Result is 3 rows**

Data Output		Explain	Messages	Notifications		
	facid [PK] integer	name character varying (100)	membercost numeric	guestcost numeric	initialoutlay numeric	monthlymaintenance numeric
1	0	Tennis Court 1	5	25	10000	200
2	1	Tennis Court 2	5	25	8000	200
3	3	Table Tennis	0	5	320	10

Answer 5:

```
select *
from cd.facilities
where name like '%Tennis%'
```

6. How can you retrieve the details of facilities with ID 1 and 5? Try to do it without using the OR operator.

- **Expected Result is 2 rows**

Data Output		Explain	Messages	Notifications		
	facid [PK] integer	name character varying (100)	membercost numeric	guestcost numeric	initialoutlay numeric	monthlymaintenance numeric
1	1	Tennis Court 2	5	25	8000	200
2	5	Massage Room 2	35	80	4000	3000

Answer 6:

select *

from cd.facilities

where facid in (1,5)

7. How can you produce a list of members who joined after the start of September 2012? Return the memid, surname, firstname, and joindate of the members in question.

- **Expected Result is 10 rows (not all are shown below)**

	memid [PK] integer	surname character varying (200)	firstname character varying (200)	joindate timestamp without time zone
1	24	Sarwin	Ramnaresh	2012-09-01 08:44:42
2	26	Jones	Douglas	2012-09-02 18:43:05
3	27	Rumney	Henrietta	2012-09-05 08:42:35
4	28	Farrell	David	2012-09-15 08:22:05
5	29	Worthington-Smyth	Henry	2012-09-17 12:27:15
6	30	Purview	Millicent	2012-09-18 19:04:01
7	33	Tupperware	Hyacinth	2012-09-18 19:32:05
8	35	Hunt	John	2012-09-19 11:32:45

Answer 7:

select memid, surname, firstname, joindate

from cd.members

where joindate >= '2012-09-01'

8. How can you produce an ordered list of the first 10 surnames in the members table? The list must not contain duplicates.

- **Expected Result should be 10 rows if you include GUEST as a last name**

	surname character varying (200) 
1	Bader
2	Baker
3	Boothe
4	Butters
5	Coplin
6	Crumpet
7	Dare
8	Farrell
9	Genting
10	GUEST

Answer 8:

```
select distinct(surname)
```

```
from cd.members
```

```
order by surname asc
```

```
limit 10
```

9. You'd like to get the signup date of your last member. How can you retrieve this information?

- **Expected Result**
- **2012-09-26 18:08:45**

Answer 9:

select joindate

from cd.members

order by joindate desc

limit 1

10. Produce a count of the number of facilities that have a cost to guests of 10 or more.

- **Expected Result**
- **6**

Answer 10:




select count(*)

from cd.facilities

where guestcost >= 10

11. Produce a list of the total number of slots booked per facility in the month of September 2012. Produce an output table consisting of facility id and slots, sorted by the number of slots.

- **Expected Result is 9 rows**

	 facid integer		Total Slots bigint	
1		5		122
2		3		422
3		7		426
4		8		471
5		6		540
6		2		570
7		1		588
8		0		591
9		4		648

-

Answer 11:

```
select facid, sum(slots) as "Slots"
from cd.bookings
where starttime between '2012-09-01' and '2012-10-01'
group by facid
order by sum(slots)
```

12. Produce a list of facilities with more than 1000 slots booked. Produce an output table consisting of facility id and total slots, sorted by facility id.

- **Expected Result is 5 rows**

	facid integer		total_slots bigint
1		0	1320
2		1	1278
3		2	1209
4		4	1404
5		6	1104

Answer 12:

```
select facid, sum(slots) as "Slots"
```

```
from cd.bookings
```

```
group by facid having sum(slots) > 1000
```

```
order by facid
```


13. How can you produce a list of the start times for bookings for tennis courts, for the date '2012-09-21'? Return a list of start time and facility name pairings, ordered by the time.

- **Expected Result is 12 rows**

	start timestamp without time zone	name character varying (100)
1	2012-09-21 08:00:00	Tennis Court 1
2	2012-09-21 08:00:00	Tennis Court 2
3	2012-09-21 09:30:00	Tennis Court 1
4	2012-09-21 10:00:00	Tennis Court 2
5	2012-09-21 11:30:00	Tennis Court 2
6	2012-09-21 12:00:00	Tennis Court 1
7	2012-09-21 13:30:00	Tennis Court 1
8	2012-09-21 14:00:00	Tennis Court 2
9	2012-09-21 15:30:00	Tennis Court 1
10	2012-09-21 16:00:00	Tennis Court 2
11	2012-09-21 17:00:00	Tennis Court 1
12	2012-09-21 18:00:00	Tennis Court 2

Answer 13:

```
select b.starttime, name
```

```
from cd.bookings as b
```

```
inner join cd.facilities as f
```

```
on b.facid = f.facid
```

```
where b.starttime between '2012-09-21' and '2012-09-22'
```

```
and f.name like 'Tennis Court%'
```

```
order by b.starttime
```

14. How can you produce a list of the start times for bookings by members named 'David Farrell'?

- **Expected result is 34 rows of timestamps**

Answer 14:

```
select starttime  
from cd.bookings as b  
inner join cd.members as m  
on b.memid = m.memid  
where m.firstname = 'David'  
and m.surname = 'Farrell'
```