

Section 1

Topics Covered:

- SQL Statement Fundamentals
- GROUP BY Statements
- Aggregate Functions

1. Return the customer IDs of customers who have spent at least \$110 with the staff member who has an ID of 2.

```
SELECT customer_id,SUM(amount)
FROM payment
WHERE staff_id = 2
GROUP BY customer_id
HAVING SUM(amount) > 110;
```

2. How many films begin with the letter J?

```
SELECT COUNT(*) FROM film
WHERE title LIKE 'J%';
```

3. What customer has the highest customer ID number whose name starts with an 'E' and has an address ID lower than 500?

```
SELECT first_name,last_name FROM customer
WHERE first_name LIKE 'E%'
AND address_id <500
ORDER BY customer_id DESC
LIMIT;
```

Section 2

Topics Covered:

- JOINS

- Timestamps and Extract
- Mathematical Functions
- String Function and Operators
- SubQuery
- Self-Join

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

```
SELECT *
```

```
FROM cd.facilities;
```

2. 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?

```
SELECT name, membercost
```

```
FROM cd.facilities;
```

3. How can you produce a list of facilities that charge a fee to members?

```
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.

```
SELECT facid, name, membercost, monthlymaintenance
```

```
FROM cd.facilities
```

```
WHERE membercost > 0 AND (membercost < monthlymaintenance/50.0);
```

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

```
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.

```
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.

```
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.

```
SELECT distinct surname
```

```
FROM cd.members
```

```
ORDER BY surname
```

```
LIMIT 10;
```

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

```
SELECT max(joindate) as latest
```

```
FROM cd.members;
```

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

```
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.

```
SELECT facid, sum(slots) as "Total Slots"
```

```
FROM cd.bookings
```

```
WHERE starttime >= '2012-09-01' AND starttime < '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.

```
SELECT facid, sum(slots) as "Total 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.

```
SELECT bks.starttime as start, facs.name as name  
  
FROM cd.facilities facs  
  
INNER JOIN cd.bookings bks  
  
ON facs.facid = bks.facid  
  
WHERE facs.facid  
  
IN (0,1) AND bks.starttime >= '2012-09-21' AND bks.starttime < '2012-09-22'  
  
ORDER BY bks.starttime;
```

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

```
SELECT bks.starttime  
  
FROM cd.bookings bks  
  
INNER JOIN cd.members mems  
  
ON mems.memid = bks.memid  
  
WHERE mems.firstname='David' AND mems.surname='Farrell';
```

