Database Systems Lab

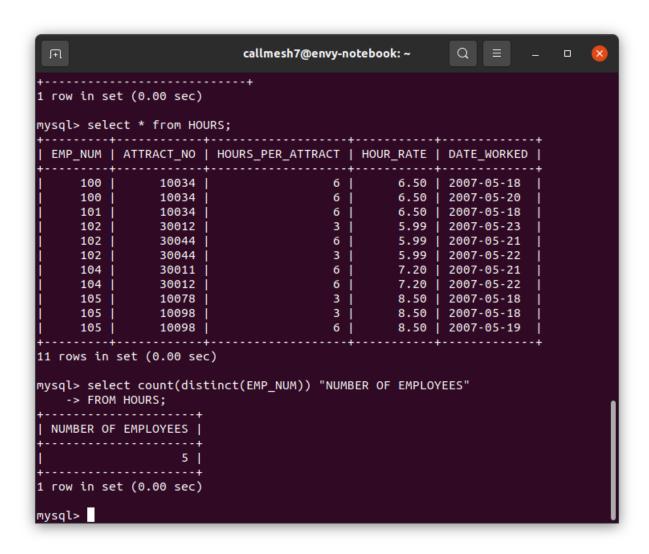**Muhammad Saad Hassan**

P16137 BCS-6B

Lab 4 PRACTICE: JOINING DATABASE TABLES

Submitted to:
>**Sir Muhammad Usman**

Task 4.1:

Write a query that displays the number of distinct employees in the HOURS table. You should label the column "Number of Employees".

Task 4.2:

Enter the following two queries and examine their output. Can you explain why the number of rows returned is different?

SELECT COUNT(*)
FROM ATTRACTION;

> -> This query will count all the entries including NULL entries.

SELECT COUNT(ATTRACT_NAME)
FROM ATTRACTION;

> -> This query will count all the entries excluding NULL entries.

```
mysql> SELECT COUNT(*)
    -> FROM ATTRACTION;
+----------+
| COUNT(*) |
+----------+
|       11 |
+----------+
1 row in set (0.00 sec)

mysql> SELECT COUNT(ATTRACT_NAME)
    -> FROM ATTRACTION;
+---------------------+
| COUNT(ATTRACT_NAME) |
+---------------------+
|                  10 |
+---------------------+
1 row in set (0.01 sec)

mysql>
```

Task 4.3:

Enter the following query which illustrates the use of the MIN and Max functions. Check the query results. SELECT MIN(TICKET_PRICE),max(TICKET_PRICE) FROM TICKET;

```
mysql> SELECT  MIN(TICKET_PRICE),max(TICKET_PRICE)
    -> FROM TICKET;
+-------------------+-------------------+
| MIN(TICKET_PRICE) | max(TICKET_PRICE) |
+-------------------+-------------------+
|             10.99 |             42.10 |
+-------------------+-------------------+
1 row in set (0.00 sec)

mysql>
```

```
mysql> SELECT AVG(LINE_PRICE), SUM(LINE_QTY)
    -> FROM SALES_LINE;
+-----------------+---------------+
| AVG(LINE_PRICE) | SUM(LINE_QTY) |
+-----------------+---------------+
|       54.245161 |            61 |
+-----------------+---------------+
1 row in set (0.00 sec)

mysql> SELECT AVG(LINE_PRICE) "Average LINE_PRICE", SUM(LINE_QTY) "LINE_QTY SUMMATIO
N"  FROM SALES_LINE;
+--------------------+--------------------+
| Average LINE_PRICE | LINE_QTY SUMMATION |
+--------------------+--------------------+
|          54.245161 |                 61 |
+--------------------+--------------------+
1 row in set (0.01 sec)

mysql>
```

Task 4.4:

```
        Enter the query above and check the results against the output. What
happens if you miss out the GROUP BY clause?
```

```
SELECT PARK_CODE, MIN(TICKET_PRICE),MAX(TICKET_PRICE) FROM TICKET
GROUP BY P' at line 1
mysql> SELECT PARK_CODE, MIN(TICKET_PRICE),MAX(TICKET_PRICE) FROM TICKET  GROUP BY PARK_CODE;
+-----------+-------------------+-------------------+
| PARK_CODE | MIN(TICKET_PRICE) | MAX(TICKET_PRICE) |
+-----------+-------------------+-------------------+
| FR1001    |             18.99 |             34.99 |
| SP4533    |             10.99 |             24.99 |
| UK3452    |             10.99 |             42.10 |
| ZA1342    |             12.12 |             28.67 |
+-----------+-------------------+-------------------+
4 rows in set (0.00 sec)

mysql> SELECT PARK_CODE, MIN(TICKET_PRICE),MAX(TICKET_PRICE) FROM TICKET
    -> ;
ERROR 1140 (42000): In aggregated query without GROUP BY, expression #1 of SELECT list contains nonaggregated column
 'themepark.TICKET.PARK_CODE'; this is incompatible with sql_mode=only_full_group_by
mysql>
```

Task 4.5:

Execute the following query and check your results with those shown in Figure 47. Then modify the SELECT statement and change

```
mysql> SELECT THEMEPARK.PARK_CODE, PARK_NAME, ATTRACT_NAME,
    ->
    -> ATTRACT_CAPACITY
    -> FROM THEMEPARK, ATTRACTION
    -> WHERE THEMEPARK.PARK_CODE = ATTRACTION.PARK_CODE;
+-----------+------------+----------------+------------------+
| PARK_CODE | PARK_NAME  | ATTRACT_NAME   | ATTRACT_CAPACITY |
+-----------+------------+----------------+------------------+
| FR1001    | FairyLand  | ThunderCoaster |               34 |
| FR1001    | FairyLand  | SpinningTeacups|               62 |
| FR1001    | FairyLand  | FlightToStars  |               24 |
| FR1001    | FairyLand  | Ant-Trap       |               30 |
| ZA1342    | GoldTown   | NULL           |               40 |
| FR1001    | FairyLand  | Carnival       |              120 |
| UK3452    | PleasureLand | 3D-Lego_Show |              200 |
| UK3452    | PleasureLand | BlackHole2   |               34 |
| UK3452    | PleasureLand | Pirates      |               42 |
| UK3452    | PleasureLand | UnderSeaWord |               80 |
| ZA1342    | GoldTown   | GoldRush       |               80 |
+-----------+------------+----------------+------------------+
11 rows in set (0.00 sec)

mysql>
```

Joining tables with an alias:

```
mysql> SELECT P.PARK_CODE, PARK_NAME, TICKET_NO, TICKET_TYPE, TICKET_PRICE
    -> FROM THEMEPARK P, TICKET T
    -> WHERE P.PARK_CODE =T.PARK_CODE;
+-----------+---------------+-----------+-------------+--------------+
| PARK_CODE | PARK_NAME     | TICKET_NO | TICKET_TYPE | TICKET_PRICE |
+-----------+---------------+-----------+-------------+--------------+
| SP4533    | AdventurePort |     11001 | Adult       |        24.99 |
| SP4533    | AdventurePort |     11002 | Child       |        14.99 |
| SP4533    | AdventurePort |     11003 | Senior      |        10.99 |
| FR1001    | FairyLand     |     13001 | Child       |        18.99 |
| FR1001    | FairyLand     |     13002 | Adult       |        34.99 |
| FR1001    | FairyLand     |     13003 | Senior      |        20.99 |
| ZA1342    | GoldTown      |     67832 | Child       |        18.56 |
| ZA1342    | GoldTown      |     67833 | Adult       |        28.67 |
| ZA1342    | GoldTown      |     67855 | Senior      |        12.12 |
| UK3452    | PleasureLand  |     88567 | Child       |        22.50 |
| UK3452    | PleasureLand  |     88568 | Adult       |        42.10 |
| UK3452    | PleasureLand  |     89720 | Senior      |        10.99 |
+-----------+---------------+-----------+-------------+--------------+
12 rows in set (0.00 sec)

mysql>
```

Cross Join:

```
mysql> SELECT * FROM SALES CROSS JOIN SALES_LINE;
+----------------+-----------+------------+----------------+---------+-----------+----------+-------------+
| TRANSACTION_NO | PARK_CODE | SALE_DATE  | TRANSACTION_NO | LINE_NO | TICKET_NO | LINE_QTY | LINE_PRICE  |
+----------------+-----------+------------+----------------+---------+-----------+----------+-------------+
|          67593 | ZA1342    | 2007-05-18 |          12781 |       1 |     13002 |        2 |       69.98 |
|          67592 | ZA1342    | 2007-05-18 |          12781 |       1 |     13002 |        2 |       69.98 |
|          67591 | ZA1342    | 2007-05-18 |          12781 |       1 |     13002 |        2 |       69.98 |
|          67590 | ZA1342    | 2007-05-18 |          12781 |       1 |     13002 |        2 |       69.98 |
|          67589 | ZA1342    | 2007-05-18 |          12781 |       1 |     13002 |        2 |       69.98 |
|          34541 | UK3452    | 2007-05-18 |          12781 |       1 |     13002 |        2 |       69.98 |
|          34540 | UK3452    | 2007-05-18 |          12781 |       1 |     13002 |        2 |       69.98 |
|          34539 | UK3452    | 2007-05-18 |          12781 |       1 |     13002 |        2 |       69.98 |
|          34538 | UK3452    | 2007-05-18 |          12781 |       1 |     13002 |        2 |       69.98 |
|          34537 | UK3452    | 2007-05-18 |          12781 |       1 |     13002 |        2 |       69.98 |
|          34536 | UK3452    | 2007-05-18 |          12781 |       1 |     13002 |        2 |       69.98 |
|          34535 | UK3452    | 2007-05-18 |          12781 |       1 |     13002 |        2 |       69.98 |
|          34534 | UK3452    | 2007-05-18 |          12781 |       1 |     13002 |        2 |       69.98 |
|          12786 | FR1001    | 2007-05-18 |          12781 |       1 |     13002 |        2 |       69.98 |
|          12785 | FR1001    | 2007-05-18 |          12781 |       1 |     13002 |        2 |       69.98 |
|          12784 | FR1001    | 2007-05-18 |          12781 |       1 |     13002 |        2 |       69.98 |
|          12783 | FR1001    | 2007-05-18 |          12781 |       1 |     13002 |        2 |       69.98 |
|          12782 | FR1001    | 2007-05-18 |          12781 |       1 |     13002 |        2 |       69.98 |
|          12781 | FR1001    | 2007-05-18 |          12781 |       1 |     13002 |        2 |       69.98 |
|          67593 | ZA1342    | 2007-05-18 |          12781 |       2 |     13001 |        1 |       14.99 |
|          67592 | ZA1342    | 2007-05-18 |          12781 |       2 |     13001 |        1 |       14.99 |
|          67591 | ZA1342    | 2007-05-18 |          12781 |       2 |     13001 |        1 |       14.99 |
|          67590 | ZA1342    | 2007-05-18 |          12781 |       2 |     13001 |        1 |       14.99 |
|          67589 | ZA1342    | 2007-05-18 |          12781 |       2 |     13001 |        1 |       14.99 |
|          34541 | UK3452    | 2007-05-18 |          12781 |       2 |     13001 |        1 |       14.99 |
|          34540 | UK3452    | 2007-05-18 |          12781 |       2 |     13001 |        1 |       14.99 |
|          34539 | UK3452    | 2007-05-18 |          12781 |       2 |     13001 |        1 |       14.99 |
|          34538 | UK3452    | 2007-05-18 |          12781 |       2 |     13001 |        1 |       14.99 |
|          34537 | UK3452    | 2007-05-18 |          12781 |       2 |     13001 |        1 |       14.99 |
|          34536 | UK3452    | 2007-05-18 |          12781 |       2 |     13001 |        1 |       14.99 |
|          34535 | UK3452    | 2007-05-18 |          12781 |       2 |     13001 |        1 |       14.99 |
|          34534 | UK3452    | 2007-05-18 |          12781 |       2 |     13001 |        1 |       14.99 |
|          12786 | FR1001    | 2007-05-18 |          12781 |       2 |     13001 |        1 |       14.99 |
|          12785 | FR1001    | 2007-05-18 |          12781 |       2 |     13001 |        1 |       14.99 |
|          12784 | FR1001    | 2007-05-18 |          12781 |       2 |     13001 |        1 |       14.99 |
|          12783 | FR1001    | 2007-05-18 |          12781 |       2 |     13001 |        1 |       14.99 |
|          12782 | FR1001    | 2007-05-18 |          12781 |       2 |     13001 |        1 |       14.99 |
|          12781 | FR1001    | 2007-05-18 |          12781 |       2 |     13001 |        1 |       14.99 |
|          67593 | ZA1342    | 2007-05-18 |          12782 |       1 |     13002 |        2 |       69.98 |
|          67592 | ZA1342    | 2007-05-18 |          12782 |       1 |     13002 |        2 |       69.98 |
|          67591 | ZA1342    | 2007-05-18 |          12782 |       1 |     13002 |        2 |       69.98 |
|          67590 | ZA1342    | 2007-05-18 |          12782 |       1 |     13002 |        2 |       69.98 |
|          67589 | ZA1342    | 2007-05-18 |          12782 |       1 |     13002 |        2 |       69.98 |
|          34541 | UK3452    | 2007-05-18 |          12782 |       1 |     13002 |        2 |       69.98 |
|          34540 | UK3452    | 2007-05-18 |          12782 |       1 |     13002 |        2 |       69.98 |
|          34539 | UK3452    | 2007-05-18 |          12782 |       1 |     13002 |        2 |       69.98 |
|          34538 | UK3452    | 2007-05-18 |          12782 |       1 |     13002 |        2 |       69.98 |
```

```
|   34540 | UK3452 | 2007-05-18 |        67592 |    1 |   67833 |    4 |    114.68 |
|   34539 | UK3452 | 2007-05-18 |        67592 |    1 |   67833 |    4 |    114.68 |
|   34538 | UK3452 | 2007-05-18 |        67592 |    1 |   67833 |    4 |    114.68 |
|   34537 | UK3452 | 2007-05-18 |        67592 |    1 |   67833 |    4 |    114.68 |
|   34536 | UK3452 | 2007-05-18 |        67592 |    1 |   67833 |    4 |    114.68 |
|   34535 | UK3452 | 2007-05-18 |        67592 |    1 |   67833 |    4 |    114.68 |
|   34534 | UK3452 | 2007-05-18 |        67592 |    1 |   67833 |    4 |    114.68 |
|   12786 | FR1001 | 2007-05-18 |        67592 |    1 |   67833 |    4 |    114.68 |
|   12785 | FR1001 | 2007-05-18 |        67592 |    1 |   67833 |    4 |    114.68 |
|   12784 | FR1001 | 2007-05-18 |        67592 |    1 |   67833 |    4 |    114.68 |
|   12783 | FR1001 | 2007-05-18 |        67592 |    1 |   67833 |    4 |    114.68 |
|   12782 | FR1001 | 2007-05-18 |        67592 |    1 |   67833 |    4 |    114.68 |
|   12781 | FR1001 | 2007-05-18 |        67592 |    1 |   67833 |    4 |    114.68 |
|   67593 | ZA1342 | 2007-05-18 |        67593 |    1 |   67833 |    2 |     57.34 |
|   67592 | ZA1342 | 2007-05-18 |        67593 |    1 |   67833 |    2 |     57.34 |
|   67591 | ZA1342 | 2007-05-18 |        67593 |    1 |   67833 |    2 |     57.34 |
|   67590 | ZA1342 | 2007-05-18 |        67593 |    1 |   67833 |    2 |     57.34 |
|   67589 | ZA1342 | 2007-05-18 |        67593 |    1 |   67833 |    2 |     57.34 |
|   34541 | UK3452 | 2007-05-18 |        67593 |    1 |   67833 |    2 |     57.34 |
|   34540 | UK3452 | 2007-05-18 |        67593 |    1 |   67833 |    2 |     57.34 |
|   34539 | UK3452 | 2007-05-18 |        67593 |    1 |   67833 |    2 |     57.34 |
|   34538 | UK3452 | 2007-05-18 |        67593 |    1 |   67833 |    2 |     57.34 |
|   34537 | UK3452 | 2007-05-18 |        67593 |    1 |   67833 |    2 |     57.34 |
|   34536 | UK3452 | 2007-05-18 |        67593 |    1 |   67833 |    2 |     57.34 |
|   34535 | UK3452 | 2007-05-18 |        67593 |    1 |   67833 |    2 |     57.34 |
|   34534 | UK3452 | 2007-05-18 |        67593 |    1 |   67833 |    2 |     57.34 |
|   12786 | FR1001 | 2007-05-18 |        67593 |    1 |   67833 |    2 |     57.34 |
|   12785 | FR1001 | 2007-05-18 |        67593 |    1 |   67833 |    2 |     57.34 |
|   12784 | FR1001 | 2007-05-18 |        67593 |    1 |   67833 |    2 |     57.34 |
|   12783 | FR1001 | 2007-05-18 |        67593 |    1 |   67833 |    2 |     57.34 |
|   12782 | FR1001 | 2007-05-18 |        67593 |    1 |   67833 |    2 |     57.34 |
|   12781 | FR1001 | 2007-05-18 |        67593 |    1 |   67833 |    2 |     57.34 |
|   67593 | ZA1342 | 2007-05-18 |        67593 |    2 |   67832 |    2 |     37.12 |
|   67592 | ZA1342 | 2007-05-18 |        67593 |    2 |   67832 |    2 |     37.12 |
|   67591 | ZA1342 | 2007-05-18 |        67593 |    2 |   67832 |    2 |     37.12 |
|   67590 | ZA1342 | 2007-05-18 |        67593 |    2 |   67832 |    2 |     37.12 |
|   67589 | ZA1342 | 2007-05-18 |        67593 |    2 |   67832 |    2 |     37.12 |
|   34541 | UK3452 | 2007-05-18 |        67593 |    2 |   67832 |    2 |     37.12 |
|   34540 | UK3452 | 2007-05-18 |        67593 |    2 |   67832 |    2 |     37.12 |
|   34539 | UK3452 | 2007-05-18 |        67593 |    2 |   67832 |    2 |     37.12 |
|   34538 | UK3452 | 2007-05-18 |        67593 |    2 |   67832 |    2 |     37.12 |
|   34537 | UK3452 | 2007-05-18 |        67593 |    2 |   67832 |    2 |     37.12 |
|   34536 | UK3452 | 2007-05-18 |        67593 |    2 |   67832 |    2 |     37.12 |
|   34535 | UK3452 | 2007-05-18 |        67593 |    2 |   67832 |    2 |     37.12 |
|   34534 | UK3452 | 2007-05-18 |        67593 |    2 |   67832 |    2 |     37.12 |
|   12786 | FR1001 | 2007-05-18 |        67593 |    2 |   67832 |    2 |     37.12 |
|   12785 | FR1001 | 2007-05-18 |        67593 |    2 |   67832 |    2 |     37.12 |
|   12784 | FR1001 | 2007-05-18 |        67593 |    2 |   67832 |    2 |     37.12 |
|   12783 | FR1001 | 2007-05-18 |        67593 |    2 |   67832 |    2 |     37.12 |
|   12782 | FR1001 | 2007-05-18 |        67593 |    2 |   67832 |    2 |     37.12 |
|   12781 | FR1001 | 2007-05-18 |        67593 |    2 |   67832 |    2 |     37.12 |
+---------+--------+------------+--------------+------+---------+------+-----------+
589 rows in set (0.01 sec)

mysql>
```

Natural Join:

```
mysql> SELECT TRANSACTION_NO, SALE_DATE, LINE_NO, LINE_QTY, LINE_PRICE
    -> FROM SALES NATURAL JOIN SALES_LINE;
+----------------+------------+---------+----------+------------+
| TRANSACTION_NO | SALE_DATE  | LINE_NO | LINE_QTY | LINE_PRICE |
+----------------+------------+---------+----------+------------+
|          12781 | 2007-05-18 |       1 |        2 |      69.98 |
|          12781 | 2007-05-18 |       2 |        1 |      14.99 |
|          12782 | 2007-05-18 |       1 |        2 |      69.98 |
|          12783 | 2007-05-18 |       1 |        2 |      41.98 |
|          12784 | 2007-05-18 |       2 |        1 |      14.99 |
|          12785 | 2007-05-18 |       1 |        1 |      14.99 |
|          12785 | 2007-05-18 |       2 |        1 |      34.99 |
|          12785 | 2007-05-18 |       3 |        4 |     139.96 |
|          34534 | 2007-05-18 |       1 |        4 |     168.40 |
|          34534 | 2007-05-18 |       2 |        1 |      22.50 |
|          34534 | 2007-05-18 |       3 |        2 |      21.98 |
|          34535 | 2007-05-18 |       1 |        2 |      84.20 |
|          34536 | 2007-05-18 |       1 |        2 |      21.98 |
|          34537 | 2007-05-18 |       1 |        2 |      84.20 |
|          34537 | 2007-05-18 |       2 |        1 |      22.50 |
|          34538 | 2007-05-18 |       1 |        2 |      21.98 |
|          34539 | 2007-05-18 |       1 |        2 |      21.98 |
|          34539 | 2007-05-18 |       2 |        2 |      84.20 |
|          34540 | 2007-05-18 |       1 |        4 |     168.40 |
|          34540 | 2007-05-18 |       2 |        1 |      22.50 |
|          34540 | 2007-05-18 |       3 |        2 |      21.98 |
|          34541 | 2007-05-18 |       1 |        2 |      84.20 |
|          67589 | 2007-05-18 |       1 |        2 |      57.34 |
|          67589 | 2007-05-18 |       2 |        2 |      37.12 |
|          67590 | 2007-05-18 |       1 |        2 |      57.34 |
|          67590 | 2007-05-18 |       2 |        2 |      37.12 |
|          67591 | 2007-05-18 |       1 |        1 |      18.56 |
|          67591 | 2007-05-18 |       2 |        1 |      12.12 |
|          67592 | 2007-05-18 |       1 |        4 |     114.68 |
|          67593 | 2007-05-18 |       1 |        2 |      57.34 |
|          67593 | 2007-05-18 |       2 |        2 |      37.12 |
+----------------+------------+---------+----------+------------+
31 rows in set (0.00 sec)

mysql>
```

Join USING:

```
mysql> SELECT TRANSACTION_NO, SALE_DATE, LINE_NO, LINE_QTY, LINE_PRICE
    -> FROM SALES JOIN SALES_LINE USING (TRANSACTION_NO);
+----------------+------------+---------+----------+------------+
| TRANSACTION_NO | SALE_DATE  | LINE_NO | LINE_QTY | LINE_PRICE |
+----------------+------------+---------+----------+------------+
|          12781 | 2007-05-18 |       1 |        2 |      69.98 |
|          12781 | 2007-05-18 |       2 |        1 |      14.99 |
|          12782 | 2007-05-18 |       1 |        2 |      69.98 |
|          12783 | 2007-05-18 |       1 |        2 |      41.98 |
|          12784 | 2007-05-18 |       2 |        1 |      14.99 |
|          12785 | 2007-05-18 |       1 |        1 |      14.99 |
|          12785 | 2007-05-18 |       2 |        1 |      34.99 |
|          12785 | 2007-05-18 |       3 |        4 |     139.96 |
|          34534 | 2007-05-18 |       1 |        4 |     168.40 |
|          34534 | 2007-05-18 |       2 |        1 |      22.50 |
|          34534 | 2007-05-18 |       3 |        2 |      21.98 |
|          34535 | 2007-05-18 |       1 |        2 |      84.20 |
|          34536 | 2007-05-18 |       1 |        2 |      21.98 |
|          34537 | 2007-05-18 |       1 |        2 |      84.20 |
|          34537 | 2007-05-18 |       2 |        1 |      22.50 |
|          34538 | 2007-05-18 |       1 |        2 |      21.98 |
|          34539 | 2007-05-18 |       1 |        2 |      21.98 |
|          34539 | 2007-05-18 |       2 |        2 |      84.20 |
|          34540 | 2007-05-18 |       1 |        4 |     168.40 |
|          34540 | 2007-05-18 |       2 |        1 |      22.50 |
|          34540 | 2007-05-18 |       3 |        2 |      21.98 |
|          34541 | 2007-05-18 |       1 |        2 |      84.20 |
|          67589 | 2007-05-18 |       1 |        2 |      57.34 |
|          67589 | 2007-05-18 |       2 |        2 |      37.12 |
|          67590 | 2007-05-18 |       1 |        2 |      57.34 |
|          67590 | 2007-05-18 |       2 |        2 |      37.12 |
|          67591 | 2007-05-18 |       1 |        1 |      18.56 |
|          67591 | 2007-05-18 |       2 |        1 |      12.12 |
|          67592 | 2007-05-18 |       1 |        4 |     114.68 |
|          67593 | 2007-05-18 |       1 |        2 |      57.34 |
|          67593 | 2007-05-18 |       2 |        2 |      37.12 |
+----------------+------------+---------+----------+------------+
31 rows in set (0.00 sec)

mysql>
```

Join ON:

```
mysql> SELECT SALES.TRANSACTION_NO, SALE_DATE, LINE_NO,  LINE_QTY, LINE_PRICE
    -> FROM SALES JOIN SALES_LINE
    -> ON SALES.TRANSACTION_NO = SALES_LINE.TRANSACTION_NO;
+----------------+------------+---------+----------+------------+
| TRANSACTION_NO | SALE_DATE  | LINE_NO | LINE_QTY | LINE_PRICE |
+----------------+------------+---------+----------+------------+
|          12781 | 2007-05-18 |       1 |        2 |      69.98 |
|          12781 | 2007-05-18 |       2 |        1 |      14.99 |
|          12782 | 2007-05-18 |       1 |        2 |      69.98 |
|          12783 | 2007-05-18 |       1 |        2 |      41.98 |
|          12784 | 2007-05-18 |       2 |        1 |      14.99 |
|          12785 | 2007-05-18 |       1 |        1 |      14.99 |
|          12785 | 2007-05-18 |       2 |        1 |      34.99 |
|          12785 | 2007-05-18 |       3 |        4 |     139.96 |
|          34534 | 2007-05-18 |       1 |        4 |     168.40 |
|          34534 | 2007-05-18 |       2 |        1 |      22.50 |
|          34534 | 2007-05-18 |       3 |        2 |      21.98 |
|          34535 | 2007-05-18 |       1 |        2 |      84.20 |
|          34536 | 2007-05-18 |       1 |        2 |      21.98 |
|          34537 | 2007-05-18 |       1 |        2 |      84.20 |
|          34537 | 2007-05-18 |       2 |        1 |      22.50 |
|          34538 | 2007-05-18 |       1 |        2 |      21.98 |
|          34539 | 2007-05-18 |       1 |        2 |      21.98 |
|          34539 | 2007-05-18 |       2 |        2 |      84.20 |
|          34540 | 2007-05-18 |       1 |        4 |     168.40 |
|          34540 | 2007-05-18 |       2 |        1 |      22.50 |
|          34540 | 2007-05-18 |       3 |        2 |      21.98 |
|          34541 | 2007-05-18 |       1 |        2 |      84.20 |
|          67589 | 2007-05-18 |       1 |        2 |      57.34 |
|          67589 | 2007-05-18 |       2 |        2 |      37.12 |
|          67590 | 2007-05-18 |       1 |        2 |      57.34 |
|          67590 | 2007-05-18 |       2 |        2 |      37.12 |
|          67591 | 2007-05-18 |       1 |        1 |      18.56 |
|          67591 | 2007-05-18 |       2 |        1 |      12.12 |
|          67592 | 2007-05-18 |       1 |        4 |     114.68 |
|          67593 | 2007-05-18 |       1 |        2 |      57.34 |
|          67593 | 2007-05-18 |       2 |        2 |      37.12 |
+----------------+------------+---------+----------+------------+
31 rows in set (0.00 sec)

mysql>
```

The Outer Join:

LEFT OUTER JOIN:

```
mysql> SELECT THEMEPARK.PARK_CODE, PARK_NAME, ATTRACT_NAME
    -> FROM THEMEPARK LEFT JOIN ATTRACTION ON
    -> THEMEPARK.PARK_CODE = ATTRACTION.PARK_CODE;
+-----------+---------------+-----------------+
| PARK_CODE | PARK_NAME     | ATTRACT_NAME    |
+-----------+---------------+-----------------+
| FR1001    | FairyLand     | ThunderCoaster  |
| FR1001    | FairyLand     | SpinningTeacups |
| FR1001    | FairyLand     | FlightToStars   |
| FR1001    | FairyLand     | Ant-Trap        |
| FR1001    | FairyLand     | Carnival        |
| NL1202    | Efling        | NULL            |
| SP4533    | AdventurePort | NULL            |
| SW2323    | Labyrinthe    | NULL            |
| UK2622    | MiniLand      | NULL            |
| UK3452    | PleasureLand  | 3D-Lego_Show    |
| UK3452    | PleasureLand  | BlackHole2      |
| UK3452    | PleasureLand  | Pirates         |
| UK3452    | PleasureLand  | UnderSeaWord    |
| ZA1342    | GoldTown      | NULL            |
| ZA1342    | GoldTown      | GoldRush        |
+-----------+---------------+-----------------+
15 rows in set (0.00 sec)

mysql>
```

RIGHT OUTER JOIN:

```
mysql> SELECT THEMEPARK.PARK_CODE, PARK_NAME, ATTRACT_NAME
    -> FROM THEMEPARK RIGHT JOIN ATTRACTION ON
    -> THEMEPARK.PARK_CODE = ATTRACTION.PARK_CODE;
+-----------+---------------+-----------------+
| PARK_CODE | PARK_NAME     | ATTRACT_NAME    |
+-----------+---------------+-----------------+
| FR1001    | FairyLand     | ThunderCoaster  |
| FR1001    | FairyLand     | SpinningTeacups |
| FR1001    | FairyLand     | FlightToStars   |
| FR1001    | FairyLand     | Ant-Trap        |
| ZA1342    | GoldTown      | NULL            |
| FR1001    | FairyLand     | Carnival        |
| UK3452    | PleasureLand  | 3D-Lego_Show    |
| UK3452    | PleasureLand  | BlackHole2      |
| UK3452    | PleasureLand  | Pirates         |
| UK3452    | PleasureLand  | UnderSeaWord    |
| ZA1342    | GoldTown      | GoldRush        |
+-----------+---------------+-----------------+
11 rows in set (0.00 sec)

mysql>
```

TASK LAB # 04:

E4.1:

Write a query that displays the average hourly rate that has been paid to all employees. Your query should return €7.03.

```
mysql> SELECT AVG(HOUR_RATE) FROM HOURS;
+----------------+
| AVG(HOUR_RATE) |
+----------------+
|       7.033636 |
+----------------+
1 row in set (0.00 sec)

mysql>
```

E4.2:

Write a query that displays the average attraction age for all attractions where the PARK_CODE is equal to 'UK3452'. Your query should return 7.25 years.

```
mysql> SELECT AVG(ATTRACT_AGE)
    -> FROM ATTRACTION
    -> WHERE PARK_CODE = 'UK3452';
+------------------+
| AVG(ATTRACT_AGE) |
+------------------+
|           7.2500 |
+------------------+
1 row in set (0.00 sec)

mysql>
```

E4.3:

**Display the employee numbers of all employees and the total number of
hours they have worked.**

```
mysql> SELECT EMP_NUM,SUM(HOURS_PER_ATTRACT)AS "TOTAL HOURS"
    -> FROM HOURS
    ->  GROUP BY EMP_NUM
    ->  HAVING SUM(HOURS.HOURS_PER_ATTRACT);
+---------+-------------+
| EMP_NUM | TOTAL HOURS |
+---------+-------------+
|     100 |          12 |
|     101 |           6 |
|     102 |          12 |
|     104 |          12 |
|     105 |          12 |
+---------+-------------+
5 rows in set (0.01 sec)

mysql>
```

E4.4:

**Show the attraction number and the minimum and maximum hourly rate for each
attraction.**

```
mysql>  SELECT ATTRACT_NO,MIN(HOUR_RATE),MAX(HOUR_RATE)
    ->  FROM HOURS
    ->  GROUP BY ATTRACT_NO;
+-------------+-----------------+-----------------+
| ATTRACT_NO | MIN(HOUR_RATE) | MAX(HOUR_RATE) |
+-------------+-----------------+-----------------+
|      10034 |            6.50 |            6.50 |
|      10078 |            8.50 |            8.50 |
|      10098 |            8.50 |            8.50 |
|      30011 |            7.20 |            7.20 |
|      30012 |            5.99 |            7.20 |
|      30044 |            5.99 |            5.99 |
+-------------+-----------------+-----------------+
6 rows in set (0.01 sec)

mysql> █
```

E4.5:

Using the HOURS table, write a query to display the employee number (EMP_NUM), the attraction number (ATTRACT-NO) and the average hours worked per attraction (HOURS_PER_ATTRACT) limiting the result to where the average hours worked per attraction is greater or equal to 5.

```
mysql> SELECT EMP_NUM,ATTRACT_NO, AVG(HOURS_PER_ATTRACT)
    ->  FROM HOURS WHERE HOURS_PER_ATTRACT >= 5
    ->  GROUP BY EMP_NUM,ATTRACT_NO;
+----------+------------+------------------------+
| EMP_NUM | ATTRACT_NO | AVG(HOURS_PER_ATTRACT) |
+----------+------------+------------------------+
|     100 |      10034 |                 6.0000 |
|     101 |      10034 |                 6.0000 |
|     102 |      30044 |                 6.0000 |
|     104 |      30011 |                 6.0000 |
|     104 |      30012 |                 6.0000 |
|     105 |      10098 |                 6.0000 |
+----------+------------+------------------------+
6 rows in set (0.00 sec)

mysql> ▯
```

E 4.6:

Write a CROSS JOIN query which selects all rows from the EMPLOYEE and HOURS tables. How many rows were returned?


```
6 rows in set (0.00 sec)

mysql> SELECT * FROM EMPLOYEE CROSS JOIN HOURS;
+---------+-----------+------------+-----------+------------+---------------+----------------+-----------+-----------+---------+------------+-----------------+-----------+-------------+
| EMP_NUM | EMP_TITLE | EMP_LNAME  | EMP_FNAME | EMP_DOB    | EMP_HIRE_DATE | EMP_AREA_CODE  | EMP_PHONE | PARK_CODE | EMP_NUM | ATTRACT_NO | HOURS_PER_ATTRACT | HOUR_RATE | DATE_WORKED |
+---------+-----------+------------+-----------+------------+---------------+----------------+-----------+-----------+---------+------------+-----------------+-----------+-------------+
|     106 | Mrs       | Smith      | Gemma     | 1968-02-12 | 1989-01-05    | 0181           | 324-7845  | ZA1342    |     100 |      10034 |               6 |      6.50 | 2007-05-18  |
|     105 | Ms        | Namowa     | Mirrelle  | 1990-03-14 | 2006-11-08    | 0181           | 890-3243  | FR1001    |     100 |      10034 |               6 |      6.50 | 2007-05-18  |
|     104 | Mr        | Denver     | Enrica    | 1980-11-08 | 2001-10-20    | 7253           | 504-4434  | ZA1342    |     100 |      10034 |               6 |      6.50 | 2007-05-18  |
|     103 | Ms        | Roberts    | Anne      | 1974-10-16 | 1994-08-16    | 0181           | 898-3456  | UK3452    |     100 |      10034 |               6 |      6.50 | 2007-05-18  |
|     102 | Mr        | Arshad     | Arif      | 1969-11-14 | 1990-12-20    | 7253           | 675-8993  | FR1001    |     100 |      10034 |               6 |      6.50 | 2007-05-18  |
|     101 | Ms        | Ricardo    | Marshel   | 1978-03-19 | 1996-04-25    | 0181           | 324-4472  | UK3452    |     100 |      10034 |               6 |      6.50 | 2007-05-18  |
|     100 | Ms        | Calderdale | Emma      | 1972-06-15 | 1992-03-15    | 0181           | 324-9134  | FR1001    |     100 |      10034 |               6 |      6.50 | 2007-05-18  |
|     106 | Mrs       | Smith      | Gemma     | 1968-02-12 | 1989-01-05    | 0181           | 324-7845  | ZA1342    |     100 |      10034 |               6 |      6.50 | 2007-05-20  |
|     105 | Ms        | Namowa     | Mirrelle  | 1990-03-14 | 2006-11-08    | 0181           | 890-3243  | FR1001    |     100 |      10034 |               6 |      6.50 | 2007-05-20  |
|     104 | Mr        | Denver     | Enrica    | 1980-11-08 | 2001-10-20    | 7253           | 504-4434  | ZA1342    |     100 |      10034 |               6 |      6.50 | 2007-05-20  |
|     103 | Ms        | Roberts    | Anne      | 1974-10-16 | 1994-08-16    | 0181           | 898-3456  | UK3452    |     100 |      10034 |               6 |      6.50 | 2007-05-20  |
|     102 | Mr        | Arshad     | Arif      | 1969-11-14 | 1990-12-20    | 7253           | 675-8993  | FR1001    |     100 |      10034 |               6 |      6.50 | 2007-05-20  |
|     101 | Ms        | Ricardo    | Marshel   | 1978-03-19 | 1996-04-25    | 0181           | 324-4472  | UK3452    |     100 |      10034 |               6 |      6.50 | 2007-05-20  |
|     100 | Ms        | Calderdale | Emma      | 1972-06-15 | 1992-03-15    | 0181           | 324-9134  | FR1001    |     100 |      10034 |               6 |      6.50 | 2007-05-20  |
|     106 | Mrs       | Smith      | Gemma     | 1968-02-12 | 1989-01-05    | 0181           | 324-7845  | ZA1342    |     101 |      10034 |               6 |      6.50 | 2007-05-18  |
|     105 | Ms        | Namowa     | Mirrelle  | 1990-03-14 | 2006-11-08    | 0181           | 890-3243  | FR1001    |     101 |      10034 |               6 |      6.50 | 2007-05-18  |
|     104 | Mr        | Denver     | Enrica    | 1980-11-08 | 2001-10-20    | 7253           | 504-4434  | ZA1342    |     101 |      10034 |               6 |      6.50 | 2007-05-18  |
|     103 | Ms        | Roberts    | Anne      | 1974-10-16 | 1994-08-16    | 0181           | 898-3456  | UK3452    |     101 |      10034 |               6 |      6.50 | 2007-05-18  |
|     102 | Mr        | Arshad     | Arif      | 1969-11-14 | 1990-12-20    | 7253           | 675-8993  | FR1001    |     101 |      10034 |               6 |      6.50 | 2007-05-18  |
|     101 | Ms        | Ricardo    | Marshel   | 1978-03-19 | 1996-04-25    | 0181           | 324-4472  | UK3452    |     101 |      10034 |               6 |      6.50 | 2007-05-18  |
|     100 | Ms        | Calderdale | Emma      | 1972-06-15 | 1992-03-15    | 0181           | 324-9134  | FR1001    |     101 |      10034 |               6 |      6.50 | 2007-05-18  |
|     106 | Mrs       | Smith      | Gemma     | 1968-02-12 | 1989-01-05    | 0181           | 324-7845  | ZA1342    |     102 |      30012 |               3 |      5.99 | 2007-05-23  |
|     105 | Ms        | Namowa     | Mirrelle  | 1990-03-14 | 2006-11-08    | 0181           | 890-3243  | FR1001    |     102 |      30012 |               3 |      5.99 | 2007-05-23  |
|     104 | Mr        | Denver     | Enrica    | 1980-11-08 | 2001-10-20    | 7253           | 504-4434  | ZA1342    |     102 |      30012 |               3 |      5.99 | 2007-05-23  |
|     103 | Ms        | Roberts    | Anne      | 1974-10-16 | 1994-08-16    | 0181           | 898-3456  | UK3452    |     102 |      30012 |               3 |      5.99 | 2007-05-23  |
|     102 | Mr        | Arshad     | Arif      | 1969-11-14 | 1990-12-20    | 7253           | 675-8993  | FR1001    |     102 |      30012 |               3 |      5.99 | 2007-05-23  |
|     101 | Ms        | Ricardo    | Marshel   | 1978-03-19 | 1996-04-25    | 0181           | 324-4472  | UK3452    |     102 |      30012 |               3 |      5.99 | 2007-05-23  |
|     100 | Ms        | Calderdale | Emma      | 1972-06-15 | 1992-03-15    | 0181           | 324-9134  | FR1001    |     102 |      30012 |               3 |      5.99 | 2007-05-23  |
|     106 | Mrs       | Smith      | Gemma     | 1968-02-12 | 1989-01-05    | 0181           | 324-7845  | ZA1342    |     102 |      30044 |               6 |      5.99 | 2007-05-21  |
|     105 | Ms        | Namowa     | Mirrelle  | 1990-03-14 | 2006-11-08    | 0181           | 890-3243  | FR1001    |     102 |      30044 |               6 |      5.99 | 2007-05-21  |
|     104 | Mr        | Denver     | Enrica    | 1980-11-08 | 2001-10-20    | 7253           | 504-4434  | ZA1342    |     102 |      30044 |               6 |      5.99 | 2007-05-21  |
|     103 | Ms        | Roberts    | Anne      | 1974-10-16 | 1994-08-16    | 0181           | 898-3456  | UK3452    |     102 |      30044 |               6 |      5.99 | 2007-05-21  |
|     102 | Mr        | Arshad     | Arif      | 1969-11-14 | 1990-12-20    | 7253           | 675-8993  | FR1001    |     102 |      30044 |               6 |      5.99 | 2007-05-21  |
|     101 | Ms        | Ricardo    | Marshel   | 1978-03-19 | 1996-04-25    | 0181           | 324-4472  | UK3452    |     102 |      30044 |               6 |      5.99 | 2007-05-21  |
|     100 | Ms        | Calderdale | Emma      | 1972-06-15 | 1992-03-15    | 0181           | 324-9134  | FR1001    |     102 |      30044 |               6 |      5.99 | 2007-05-21  |
|     106 | Mrs       | Smith      | Gemma     | 1968-02-12 | 1989-01-05    | 0181           | 324-7845  | ZA1342    |     102 |      30044 |               3 |      5.99 | 2007-05-22  |
|     105 | Ms        | Namowa     | Mirrelle  | 1990-03-14 | 2006-11-08    | 0181           | 890-3243  | FR1001    |     102 |      30044 |               3 |      5.99 | 2007-05-22  |
|     104 | Mr        | Denver     | Enrica    | 1980-11-08 | 2001-10-20    | 7253           | 504-4434  | ZA1342    |     102 |      30044 |               3 |      5.99 | 2007-05-22  |
|     103 | Ms        | Roberts    | Anne      | 1974-10-16 | 1994-08-16    | 0181           | 898-3456  | UK3452    |     102 |      30044 |               3 |      5.99 | 2007-05-22  |
|     102 | Mr        | Arshad     | Arif      | 1969-11-14 | 1990-12-20    | 7253           | 675-8993  | FR1001    |     102 |      30044 |               3 |      5.99 | 2007-05-22  |
|     101 | Ms        | Ricardo    | Marshel   | 1978-03-19 | 1996-04-25    | 0181           | 324-4472  | UK3452    |     102 |      30044 |               3 |      5.99 | 2007-05-22  |
|     100 | Ms        | Calderdale | Emma      | 1972-06-15 | 1992-03-15    | 0181           | 324-9134  | FR1001    |     102 |      30044 |               3 |      5.99 | 2007-05-22  |
|     106 | Mrs       | Smith      | Gemma     | 1968-02-12 | 1989-01-05    | 0181           | 324-7845  | ZA1342    |     104 |      30011 |               6 |      7.20 | 2007-05-21  |
|     105 | Ms        | Namowa     | Mirrelle  | 1990-03-14 | 2006-11-08    | 0181           | 890-3243  | FR1001    |     104 |      30011 |               6 |      7.20 | 2007-05-21  |
|     104 | Mr        | Denver     | Enrica    | 1980-11-08 | 2001-10-20    | 7253           | 504-4434  | ZA1342    |     104 |      30011 |               6 |      7.20 | 2007-05-21  |
|     103 | Ms        | Roberts    | Anne      | 1974-10-16 | 1994-08-16    | 0181           | 898-3456  | UK3452    |     104 |      30011 |               6 |      7.20 | 2007-05-21  |
|     102 | Mr        | Arshad     | Arif      | 1969-11-14 | 1990-12-20    | 7253           | 675-8993  | FR1001    |     104 |      30011 |               6 |      7.20 | 2007-05-21  |
|     101 | Ms        | Ricardo    | Marshel   | 1978-03-19 | 1996-04-25    | 0181           | 324-4472  | UK3452    |     104 |      30011 |               6 |      7.20 | 2007-05-21  |
|     100 | Ms        | Calderdale | Emma      | 1972-06-15 | 1992-03-15    | 0181           | 324-9134  | FR1001    |     104 |      30011 |               6 |      7.20 | 2007-05-21  |
|     106 | Mrs       | Smith      | Gemma     | 1968-02-12 | 1989-01-05    | 0181           | 324-7845  | ZA1342    |     104 |      30012 |               6 |      7.20 | 2007-05-22  |
```

```
-18  |
|       101 | Ms          | Ricardo    | Marshel   | 1978-03-19 | 1996-04-25     | 0181
  | 324-4472  | UK3452    |       105 |       10078 |                3 |     8.50 | 2007-05
-18  |
|       100 | Ms          | Calderdale | Emma      | 1972-06-15 | 1992-03-15     | 0181
  | 324-9134  | FR1001    |       105 |       10078 |                3 |     8.50 | 2007-05
-18  |
|       106 | Mrs         | Smith      | Gemma     | 1968-02-12 | 1989-01-05     | 0181
  | 324-7845  | ZA1342    |       105 |       10098 |                3 |     8.50 | 2007-05
-18  |
|       105 | Ms          | Namowa     | Mirrelle  | 1990-03-14 | 2006-11-08     | 0181
  | 890-3243  | FR1001    |       105 |       10098 |                3 |     8.50 | 2007-05
-18  |
|       104 | Mr          | Denver     | Enrica    | 1980-11-08 | 2001-10-20     | 7253
  | 504-4434  | ZA1342    |       105 |       10098 |                3 |     8.50 | 2007-05
-18  |
|       103 | Ms          | Roberts    | Anne      | 1974-10-16 | 1994-08-16     | 0181
  | 898-3456  | UK3452    |       105 |       10098 |                3 |     8.50 | 2007-05
-18  |
|       102 | Mr          | Arshad     | Arif      | 1969-11-14 | 1990-12-20     | 7253
  | 675-8993  | FR1001    |       105 |       10098 |                3 |     8.50 | 2007-05
-18  |
|       101 | Ms          | Ricardo    | Marshel   | 1978-03-19 | 1996-04-25     | 0181
  | 324-4472  | UK3452    |       105 |       10098 |                3 |     8.50 | 2007-05
-18  |
|       100 | Ms          | Calderdale | Emma      | 1972-06-15 | 1992-03-15     | 0181
  | 324-9134  | FR1001    |       105 |       10098 |                3 |     8.50 | 2007-05
-18  |
|       106 | Mrs         | Smith      | Gemma     | 1968-02-12 | 1989-01-05     | 0181
  | 324-7845  | ZA1342    |       105 |       10098 |                6 |     8.50 | 2007-05
-19  |
|       105 | Ms          | Namowa     | Mirrelle  | 1990-03-14 | 2006-11-08     | 0181
  | 890-3243  | FR1001    |       105 |       10098 |                6 |     8.50 | 2007-05
-19  |
|       104 | Mr          | Denver     | Enrica    | 1980-11-08 | 2001-10-20     | 7253
  | 504-4434  | ZA1342    |       105 |       10098 |                6 |     8.50 | 2007-05
-19  |
|       103 | Ms          | Roberts    | Anne      | 1974-10-16 | 1994-08-16     | 0181
  | 898-3456  | UK3452    |       105 |       10098 |                6 |     8.50 | 2007-05
-19  |
|       102 | Mr          | Arshad     | Arif      | 1969-11-14 | 1990-12-20     | 7253
  | 675-8993  | FR1001    |       105 |       10098 |                6 |     8.50 | 2007-05
-19  |
|       101 | Ms          | Ricardo    | Marshel   | 1978-03-19 | 1996-04-25     | 0181
  | 324-4472  | UK3452    |       105 |       10098 |                6 |     8.50 | 2007-05
-19  |
|       100 | Ms          | Calderdale | Emma      | 1972-06-15 | 1992-03-15     | 0181
  | 324-9134  | FR1001    |       105 |       10098 |                6 |     8.50 | 2007-05
-19  |
+---------+-----------+-----------+-----------+-----------+----------------+-------------
--+-----------+----------+---------+-----------+------------------+----------+-------
-----+
77 rows in set (0.00 sec)

mysql>
```

E.4.7:

**Write a query that displays the employees first and last name
(EMP_FNAME and EMP_LNAME), the attraction
number(ATTRACT_NO) and the date worked**

```
mysql> SELECT EMP_FNAME,EMP_LNAME,ATTRACT_NO,DATE_WORKED
    -> FROM EMPLOYEE,HOURS
    -> WHERE EMPLOYEE.EMP_NUM =HOURS.EMP_NUM;
+-----------+-----------+------------+-------------+
| EMP_FNAME | EMP_LNAME | ATTRACT_NO | DATE_WORKED |
+-----------+-----------+------------+-------------+
| Emma      | Calderdale |     10034 | 2007-05-18  |
| Emma      | Calderdale |     10034 | 2007-05-20  |
| Marshel   | Ricardo    |     10034 | 2007-05-18  |
| Arif      | Arshad     |     30012 | 2007-05-23  |
| Arif      | Arshad     |     30044 | 2007-05-21  |
| Arif      | Arshad     |     30044 | 2007-05-22  |
| Enrica    | Denver     |     30011 | 2007-05-21  |
| Enrica    | Denver     |     30012 | 2007-05-22  |
| Mirrelle  | Namowa     |     10078 | 2007-05-18  |
| Mirrelle  | Namowa     |     10098 | 2007-05-18  |
| Mirrelle  | Namowa     |     10098 | 2007-05-19  |
+-----------+-----------+------------+-------------+
11 rows in set (0.00 sec)

mysql>
```

E.4.8:

**Rewrite the query you wrote in E 4.7 so that the attraction name
(ATTRACT_NAME located in the ATTRACTION table) is also displayed**

```
mysql> SELECT EMP_FNAME,EMP_LNAME,ATTRACT_NO,ATTRACT_NAME  FROM EMPLOYEE JOIN HOURS USING(
EMP_NUM) JOIN ATTRACTION USING (ATTRACT_NO);
+------------+------------+------------+----------------+
| EMP_FNAME  | EMP_LNAME  | ATTRACT_NO | ATTRACT_NAME   |
+------------+------------+------------+----------------+
| Emma       | Calderdale |      10034 | ThunderCoaster |
| Emma       | Calderdale |      10034 | ThunderCoaster |
| Marshel    | Ricardo    |      10034 | ThunderCoaster |
| Arif       | Arshad     |      30012 | Pirates        |
| Arif       | Arshad     |      30044 | UnderSeaWord   |
| Arif       | Arshad     |      30044 | UnderSeaWord   |
| Enrica     | Denver     |      30011 | BlackHole2     |
| Enrica     | Denver     |      30012 | Pirates        |
| Mirrelle   | Namowa     |      10078 | Ant-Trap       |
| Mirrelle   | Namowa     |      10098 | Carnival       |
| Mirrelle   | Namowa     |      10098 | Carnival       |
+------------+------------+------------+----------------+
11 rows in set (0.00 sec)

mysql>
```

E4.9:

**Display the park names and total sales for Theme Parks who are located in
the country 'UK' or 'FR'**

```
mysql> SELECT PARK_NAME,TICKET_PRICE AS "TOTAL SALE"
    -> FROM THEMEPARK CROSS JOIN TICKET
    -> WHERE PARK_COUNTRY = 'UK' OR 'FR';
+--------------+------------+
| PARK_NAME    | TOTAL SALE |
+--------------+------------+
| PleasureLand |      24.99 |
| MiniLand     |      24.99 |
| PleasureLand |      14.99 |
| MiniLand     |      14.99 |
| PleasureLand |      10.99 |
| MiniLand     |      10.99 |
| PleasureLand |      18.99 |
| MiniLand     |      18.99 |
| PleasureLand |      34.99 |
| MiniLand     |      34.99 |
| PleasureLand |      20.99 |
| MiniLand     |      20.99 |
| PleasureLand |      18.56 |
| MiniLand     |      18.56 |
| PleasureLand |      28.67 |
| MiniLand     |      28.67 |
| PleasureLand |      12.12 |
| MiniLand     |      12.12 |
| PleasureLand |      22.50 |
| MiniLand     |      22.50 |
| PleasureLand |      42.10 |
| MiniLand     |      42.10 |
| PleasureLand |      10.99 |
| MiniLand     |      10.99 |
+--------------+------------+
24 rows in set, 1 warning (0.00 sec)

mysql>
```

E4.10:

**List the sale date, line quantity and line price of all transactions on the 18
th May 2007.**

```
mysql> SELECT SALE_DATE,LINE_QTY,LINE_PRICE
    -> FROM SALES,SALES_LINE
    -> WHERE SALE_DATE = '2007-05-18';
+------------+----------+------------+
| SALE_DATE  | LINE_QTY | LINE_PRICE |
+------------+----------+------------+
| 2007-05-18 |        2 |      69.98 |
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****************** T H E   E N D ***************************