Figure 38

TASK 1

TASK2

TASK3

```
MariaDB [themepark_online]> SELECT
    -> MIN(TICKET_PRICE),max(TICKET_PRICE)
    ->
    -> FROM TICKET;

+-----+
| MIN(TICKET_PRICE) | max(TICKET_PRICE) |

+-----+
10.99 | 42.10 |

+-----+
1 row in set (0.076 sec)
```

Figure 42

```
MariaDB [themepark_online]> SELECT AVG(LINE_PRICE), SUM(LINE_QTY)
-> FROM SALES_LINE;
+-----+
| AVG(LINE_PRICE) | SUM(LINE_QTY) |
+-----+
| 54.245161 | 61 |
+-----+
1 row in set (0.054 sec)
```

```
4-10-16 | 1994-08-16
                                               ZA1342
                                                                                                                                                                30012 |
| 890-3243
   7.20 |
30012 |
| 324-7845 | ZA1342 |
| 1992-03-15 | 0181
                                                                                                                                                     | Smith | Ger
                                                                                                                                                                                             1 0181
                                                      30012 |
| 324-9134 | FR1001
                                                                                                 -06-15 | 1992-03-15 | 0181
| Ricardo | Marshel
                                              1978-03-19 | 1996-04-25 | 6
Mr | Arshad | Arif
8.50 | 2007-05-18 ||
  8.50 | 2007-05-18 || 102
                                                                                                                                                              675-8993
 8.50 | 2007-05-18 || 102
10078 | 3
| 898-3456 | UK3452 |
| 11-08 | 2001-10-20 | 7253
| Namowa | Mirrelle
8.50 | 2007-05-18 || 106
                                                                                                                                                     1974-10-16 | 1994-08-16 | 018
Mr | Denver | Enrica
                                          | 105 | 10078 |
| 105 | 10078 |
| 504-4434 | ZA1342 |
| 1990-03-14 | 2006-11-08 | 0181
| Mrs | Smith | Gemma
                                                                                                         10078 |
| 890-3243 | FR1001
                                                                                                 | Smith | Ge
8.50 | 2007-05-18 ||
 3.50 | 2007 15 | 3 |
10078 | 3 |
324-9134 | FR1001 | 105
3-19 | 1996-04-25 | 0181
| Arshad | Arif | 196
.50 | 2007-05-18 || 103 | Ms
                                                                                                                                                    1972-06-15 | 1992-03-15 | 018
Ms | Ricardo | Marshel
                                                                                                                                                                                         0181
                                                                                                                                                           | Ricardo | Mar
| 8.50 | 2007-05-18 ||
                                                    10098 |
| 324-4472 | UK3452
                                                                                               105 | 10098 | 3
| 675-8993 | FR1001 |
| 1974-10-16 | 1994-08-16 | 0181
| Mr | Denver | Enrica
                                                                                                                                                          105
                                                                                                      | Denver | En
8.50 | 2007-05-18 ||
                                                  8.50 | 260
10098 |
| 890-3243 | FR1001 |
| 1989-01-05 | 0181
                                                                                             8.50 | 2007-03
105 | 10098 |
| 324-7845 | ZA1342 |
| 1972-06-15 | 1992-03-15 | 0181
| Ricardo | Marshel
                                         | 8.30 | 2007-05-10 |
| 105 | 10098 |
| 324-9134 | FR1001 |
| 1978-03-19 | 1996-04-25 | 0181
| Mr | Arshad | Arif
| 8.50 | 2007-05-19 | 103
                                                                                                     | Ricardo | Mar
8.50 | 2007-05-19 ||
 10098 | 6
324-4472 | UK3452 |
14 | 1990-12-20 | 7253
                                                                                            | 8.50 | 2007-05-19 | | 102

| 105 | 10098 | 6

| 898-3456 | UK3452 |

| 1980-11-08 | 2001-10-20 | 7253

Ms | Namowa | Mirrelle |

| 8.50 | 2007-05-19 || 106 |

| 05 | 10098 | 6 |
                                                                                           105 I
                                        1974-10-16 | 1994-08-16 | 0181
Mr | Denver | Enrica
8.50 | 2007-05-19 || 105
                                                                                                                                                        10098 |
| 504-4434 | ZA1342
                                                                                                                                                | 1990-03-14 | 2006-11-08 | 01
| Mrs | Smith | Gemma
       8 |
243 | FR1001
                                               10098 |
| 324-7845 | ZA1342 |
                                      105
                                                                                                                                                                                                  1968-02
                                                                                                                                                       | Smith | Ge
8.50 | 2007-05-19 |+-
MariaDB [themepark online]> 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
                                                                                               28.67
   rows in set (0.126 sec)
```

TASK 4.4

Figure 46:

```
MariaDB [themepark_online]> SELECT THEMEPARK.PARK_CODE, PARK_NAME, TICKET_NO,
    -> TICKET_TYPE, TICKET_PRICE
   -> FROM THEMEPARK, TICKET
   -> WHERE THEMEPARK.PARK_CODE = TICKET.PARK_CODE
 PARK_CODE | PARK_NAME
                            | TICKET_NO | TICKET_TYPE | TICKET_PRICE |
 FR1001
             FairyLand
                                 13001
                                          Child
                                                               18.99
 FR1001
             FairyLand
                                 13002
                                          Adult
                                                               34.99
 FR1001
             FairyLand
                                 13003
                                          Senior
                                                               20.99
 SP4533
             AdventurePort
                                 11001
                                          Adult
                                                               24.99
 SP4533
             AdventurePort
                                 11002
                                          Child
                                                              14.99
 SP4533
             AdventurePort
                                 11003
                                          Senior
                                                              10.99
 UK3452
             PleasureLand
                                 88567
                                          Child
                                                              22.50
 UK3452
             PleasureLand
                                 88568
                                          Adult
                                                              42.10
 UK3452
             PleasureLand
                                 89720
                                          Senior
                                                              10.99
 ZA1342
            GoldTown
                                 67832
                                          Child
                                                              18.56
 ZA1342
            GoldTown
                                 67833
                                          Adult
                                                               28.67
 ZA1342
            GoldTown
                                 67855
                                          Senior
                                                               12.12
12 rows in set (0.202 sec)
```

Task 4.5

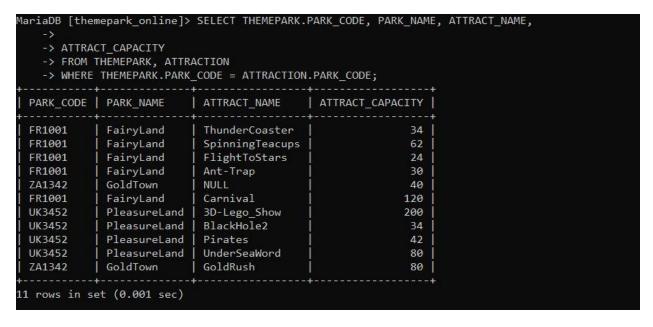


Figure 47:

```
MariaDB [themepark_online]> 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 |
                                            Child
 FR1001
              FairyLand
                                    13001
 FR1001
                                    13002
                                             Adult
                                                                   34.99
                                                                   20.99
 FR1001
              FairyLand
                                    13003
                                             Senior
                                                                   24.99
 SP4533
              AdventurePort
                                    11001
                                            Adult
 SP4533
SP4533
              AdventurePort
                                    11002
                                            Child
                                                                   14.99
              AdventurePort
                                    11003
                                             Senior
                                                                   10.99
                                                                   22.50
 UK3452
              PleasureLand
                                    88567
                                             Child
 UK3452
                                             Adult
              PleasureLand
                                    88568
                                                                   42.10
 UK3452
              PleasureLand
                                                                   10.99
                                    89720
                                             Senior
 ZA1342
              GoldTown
                                    67832
                                            Child
                                                                   18.56
                                                                   28.67
 ZA1342
              GoldTown
                                    67833
                                            Adult
 ZA1342
              GoldTown
                                    67855
                                            Senior
                                                                   12.12
12 rows in set (0.001 sec)
```

Figure 48:

Fig

TRANSACTION_NO	SALE_DATE	LINE_NO	LINE_QTY	LINE_PRICE
12781	 2007-05-18	1	2	69.98
12781	2007-05-18	20 20 20		14.99
12782	2007-05-18	1	2	69.98
12783	2007-05-18	1		41.98
12784	2007-05-18	2		14.99
12785	2007-05-18	1	1	14.99
12785	2007-05-18	2	1	34.99
	2007-05-18		4	139.96
34534	2007-05-18	1	4	168.40
	2007-05-18		1	22.50
	2007-05-18			21.98
	2007-05-18			84.20
	2007-05-18		2	
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	1	18.56
67591	2007-05-18	2	1	12.12
67592	2007-05-18	1 1	4	114.68
67593	2007-05-18	1	2	57.34
67593	2007-05-18	2	2	37.12

Figure 50:

TRANSACTION_NO	SALE_DATE	LINE_NO	LINE_QTY	LINE_PRICE
12781	 2007-05-18	1	2	69.98
	2007-05-18	2	1	14.99
	2007-05-18	1	2	69.98
	2007-05-18	1 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
	2007-05-18	1	2	84.20
34536	2007-05-18	1 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	1	18.56
67591	2007-05-18	2	1	12.12
67592	2007-05-18	1 1	4	114.68
67593	2007-05-18	1	2	57.34
67593	2007-05-18	2	2	37.12

figure 52

	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
١	34539	2007-05-18	1	2	21.98
	34539	2007-05-18	2	2	84.20
ĺ	34540	2007-05-18	1	4	168.40
	34540	2007-05-18	2	1	22.50
	34540	2007-05-18	3	2	21.98
ĺ	34541	2007-05-18	1	2	84.20
	67589	2007-05-18	1	2	57.34
١	67589	2007-05-18	2	2	37.12
İ	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

Figure 53:

```
MariaDB [themepark_online]> 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
             FairyLand
 FR1001
                            Ant-Trap
 ZA1342
             GoldTown
                            NULL
 FR1001
             FairyLand
                            Carnival
                            3D-Lego_Show
 UK3452
             PleasureLand
                            BlackHole2
 UK3452
             PleasureLand
 UK3452
             PleasureLand
                            Pirates
 UK3452
             PleasureLand
                            UnderSeaWord
 ZA1342
             GoldTown
                            GoldRush
11 rows in set (0.084 sec)
```

TASK 4.7:

```
MariaDB [themepark_online]> 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
           | PleasureLand | 3D-Lego_Show
 UK3452
 UK3452
            PleasureLand | BlackHole2
 UK3452
            PleasureLand
                           Pirates
           | PleasureLand | UnderSeaWord
 UK3452
                          GoldRush
           GoldTown
 ZA1342
11 rows in set (0.084 sec)
```

EX4.1

EX4.3

```
MariaDB [themepark_online]> select emp_num , sum(hours_per_attract) from hours group by emp_num;

+------+
| emp_num | sum(hours_per_attract) |

+------+
| 100 | 12 |
| 101 | 6 |
| 102 | 12 |
| 104 | 12 |
| 105 | 12 |

+------+

5 rows in set (0.001 sec)
```

EX4.2

EX4.4

```
MariaDB [themepark_online]> select attract_no, max(hour_rate),min(hour_rate) from hours group by attract_no;

| attract_no | max(hour_rate) | min(hour_rate) |
| 10034 | 6.50 | 6.50 |
| 10078 | 8.50 | 8.50 |
| 10098 | 8.50 | 8.50 |
| 30011 | 7.20 | 7.20 |
| 30012 | 7.20 | 5.99 |
| 30044 | 5.99 | 5.99 |
| 6 rows in set (0.017 sec)
```

EX4.5

```
MariaDB [themepark_online]> select emp_num,attract_no,avg(hours_per_attract) from hours group by emp_num having avg(hours_per_attract)>=5;

| emp_num | attract_no | avg(hours_per_attract) |

| 100 | 10034 | 6.0000 |

| 101 | 10034 | 6.0000 |

| 104 | 30011 | 6.0000 |

3 rows in set (0.001 sec)
```

EX4.7

EMP_LNAME	1	EMP_FNAME	1	attract_no	!	date_worked	ı
Calderdale	H	Emma	ï	10034	Γ	2007-05-18	ı
Calderdale		Emma		10034	٠	2007-05-20	
Ricardo	1	Marshe1		10034	ı	2007-05-18	
Arshad	1	Arif		30012	:	2007-05-23	
Arshad	1	Arif		30044	1	2007-05-21	
Arshad		Arif		30044	٠	2007-05-22	
Denver		Enrica	:	30011	:	2007-05-21	
Denver	1	Enrica		30012		2007-05-22	
Namowa	1	Mirrelle	٠	10078	٠	2007-05-18	
Namowa		Mirrelle		10098	:	2007-05-18	
Namowa		Mirrelle		10098	:	2007-05-19	

EX 4.8

EMP_FNAME	EMP_LNAME	: ATTRACT_NO	1	ATTRACT_NAME
Emma	Calderdale	10034		ThunderCoaster
Emma	! Calderdale	10034		ThunderCoaster
Marshe 1	Ricardo	10034		ThunderCoaster
Arif	Arshad	30012		Pirates
Arif	Arshad	30044		UnderSeaWord
Arif	! Arshad	30044		UnderSeaWord
Enrica	Denver	30011		BlackHole2
Enrica	Denver	30012		Pirates
Mirrelle	! Nanowa	10078		Ant-Trap
Mirrelle	: Namowa	10098		Carnival
Mirrelle	! Namowa	10098		Carnival

EX 4.10

```
| 324-9134 | FR1001 |
| 1978-03-19 | 1996-04-25 | 0181
| Mr | Arshad | Arif
| 6.50 | 2007-05-18 || 103
                                6.50 | 2007 | 5
100 | 10034 |
| 898-3456 | UK3452 |
1980-11-08 | 2001-10-20 | 7253
| Namova | Mirrelle
                                                                                                                                                                                                                                                                                                                                    | Roberts | An
6.50 | 2007-05-18 ||
                                                                                                                                                                                             10034 |
| 504-4434 | ZA1342
                                                  6.50 | 200,
18034 |
| 324-9134 | FR1001 |
| 1996-04-25 | 0181
                         | J04-4454 | ZAI342 |
| 1990-03-14 | 2006-11-08 | 0181
| Mrs | | Smith | Gemma
| 6.50 | 2007-05-20 || 100
| 01 | 10034 |
                       102
                                                                                                               504-4434
                                                                                                                                                                                                                                                                                                                                    ZA1342
    7.20 | 2007 6.
30012 |
| 324-7845 | ZA1342 |
-06-15 | 1992-03-15 | 0181
| Ricardo | Marshel
| 102
                                                                                                                                                                                                                                                                                                                                                                                                     1968-02-12 | 1989-01-05 | 6
Ms | Calderdale | Emma
8.50 | 2007-05-18 ||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        101 | Ms
                                                                                                                                                                                                                                                            | 8.50 | 2007-05-18 ||
| 105 | 10078 |
| 675-8993 | FR1001 |
| 1974-10-16 | 1994-08-16 | 018
| Mr | Denver | Enrica
| 8.50 | 2007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 1007-05-18 || 100
   | Ricardo | Marshel
8.50 | 2007-05-18 || 102
10078 || 3
| 898-3456 | UK3452 |
11-08 | 2001-10-20 | 7253
| Namova | Mirrelle
8.50 | 2007-05-18 || 106
10078 | 3
                                                                                                                                                                                                                                                          | 8.50 | 200 | 5.15
| 105 | 10078 |
| 324-7845 | ZA1342 |
| 1972-06-15 | 1992-03-15 | 0181
| Ms | Ricardo | Marshel
| 8.50 | 2007-05-18 || 102
8.50 | 2007-05-18 || 100

10078 | 3

| 324-9134 | FR1001 | 3

33-19 | 1996-04-25 | 0181 | Arsif

8.50 | 2007-05-18 || 103

10098 | 3

| 504-4434 | ZA1342 | 3

| 3-14 | 2006-11-08 | 0181 | Smith | Gemma | 100

| 50 | 2007-05-18 || 100 | 10098 |
                                                                                                                                                                                                                                                                                                                                                                                            | 8.50 | 2007-05-18 || 105 | 10698 |
| 10698 | 10898 | 1083452 |
| 1980-11-08 | 2001-10-20 | 7253
| Ms | Namowa | Mirrelle
| 8.50 | 2007-05-18 || 100
                                                                                                                                                                                                                                                       10098 | 3
| 890-3243 | FR1001 |
| 92-12 | 1989-01-05 | 0181
                                                                                                                                                                                                                                                  | 8.50 | 2007-05-18 || 105
| 10098 | 3
| 324-7845 | ZA1342 |
| 1972-06-15 | 1992-03-15 | 0181
| Ms | Ricardo | Marshel
| 8.50 | 2007-05-19 | 102
                                                                                                            1968-02-12 | 1989-01-05 | 018
Ms | Calderdale | Emma
8.50 | 2007-05-19 || 1
                                                                                                                                                                                                                                                                                                                                                                                        0098 | 6
-4472 | UK3452 |
| 1990-12-20 | 7253
| Roberts | Anne
                                                                                                                                                                                                                                                                                                                                                                                      8.50 | 2007-05-19 ||

1095 | 10098 |

| 504-4434 | ZA1342 | 1

1990-03-14 | 2006-11-08 | 01

Mrs | Smith | Gemma

8.50 | 2007-05-19 |+----
            .
0098 |
-3243 | FR1001
```

77 rows: Answer to that question