Viikko 3 vertaisarviointitehtävät (5-8)

Käytin tässä kuvankaappauksia, vastaamalla suoraan kysymykseen tai antamalla tulostuksen saamiseen käytettyä käskyä, sen mukaan minkä koin olevan paras tapa vastata kysymykseen

5. a) Osastojen nimet employees -tietokannassa:

- Customer Service
- Development
- Finance
- Human Resources
- Marketing
- Production
- Quality Management
- Research
- Sales

5. b) Nimikkeiden tulostus:

```
mysql> SELECT DISTINCT title
    -> FROM titles;
+--------------------+
| title              |
+--------------------+
| Senior Engineer    |
| Staff              |
| Engineer           |
| Senior Staff       |
| Assistant Engineer |
| Technique Leader   |
| Manager            |
+--------------------+
7 rows in set (0.25 sec)
```

5. c) Suurimman ja pienimmän palkan tulostus:

```
mysql> SELECT MIN(salary) AS lowest_salary,
    ->        MAX(salary) AS highest_salary
    -> FROM salaries;
+---------------+----------------+
| lowest_salary | highest_salary |
+---------------+----------------+
|         38623 |         158220 |
+---------------+----------------+
1 row in set (0.71 sec)
```

5. d) Keskimääräisen palkan tulostus:

```
mysql> SELECT AVG(salary) AS average_salary
    -> FROM salaries;
+-----------------+
| average_salary |
+-----------------+
|     63810.7448 |
+-----------------+
1 row in set (0.65 sec)
```

5. e) Pätkä tulostetta, jossa työntekijät, joiden sukunimi Facello:

```
mysql> SELECT *
    -> FROM employees
    -> WHERE last_name = 'Facello';
+--------+------------+-------------+-----------+--------+------------+
| emp_no | birth_date | first_name  | last_name | gender | hire_date  |
+--------+------------+-------------+-----------+--------+------------+
|  10001 | 1953-09-02 | Georgi      | Facello   | M      | 1986-06-26 |
|  10327 | 1954-04-01 | Roded       | Facello   | M      | 1987-09-18 |
|  12751 | 1964-07-06 | Nahum       | Facello   | M      | 1995-01-09 |
|  15346 | 1959-09-26 | Kirk        | Facello   | F      | 1991-12-07 |
|  15685 | 1958-07-12 | Kasturi     | Facello   | M      | 1992-03-13 |
|  18686 | 1962-02-23 | Kwangyoen   | Facello   | F      | 1985-05-02 |
|  19041 | 1957-05-29 | Billur      | Facello   | F      | 1992-08-03 |
|  21947 | 1954-06-18 | Taisook     | Facello   | F      | 1991-07-30 |
|  23938 | 1955-07-11 | Nahum       | Facello   | M      | 1985-09-15 |
```

5. f) 182886 työntekijää on syntynyt 1950-luvulla

5. g) Työntekijöistä 179973 on miehiä ja 120051 on naisia.

6. Owner -taulun luonti ja sen liittäminen Pet -tauluun

```
CREATE TABLE `owner` (
  owner_id INT AUTO_INCREMENT PRIMARY KEY,
  owner_name VARCHAR(100) NOT NULL UNIQUE
) ENGINE=InnoDB;
```

```
INSERT INTO `owner` (owner_name)
SELECT DISTINCT `owner`
FROM pet
WHERE `owner` IS NOT NULL;
```

```
ALTER TABLE pet
  ADD COLUMN owner_id INT NULL;

UPDATE pet p
JOIN owner o ON p.`owner` = o.owner_name
SET p.owner_id = o.owner_id;
```

```
mysql> SELECT p.name, p.`owner`, p.owner_id, o.owner_name
    -> FROM pet p
    -> LEFT JOIN owner o ON p.owner_id = o.owner_id;
+----------+--------+----------+------------+
| name     | owner  | owner_id | owner_name |
+----------+--------+----------+------------+
| Claws    | Gwen   |        1 | Gwen       |
| Buffy    | Harold |        2 | Harold     |
| Fang     | Benny  |        3 | Benny      |
| Bowser   | Diane  |        4 | Diane      |
| Chirpy   | Gwen   |        1 | Gwen       |
| Whistler | Gwen   |        1 | Gwen       |
| Slim     | Benny  |        3 | Benny      |
| Fluffy   | Harold |        2 | Harold     |
+----------+--------+----------+------------+
8 rows in set (0.00 sec)

mysql> SELECT * FROM pet WHERE owner_id IS NULL;
Empty set (0.00 sec)

mysql> ALTER TABLE pet
    ->   ADD COLUMN pet_id INT AUTO_INCREMENT PRIMARY KEY FIRST;
Query OK, 0 rows affected (0.07 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> DESC pet;
+----------+-------------+------+-----+---------+----------------+
| Field    | Type        | Null | Key | Default | Extra          |
+----------+-------------+------+-----+---------+----------------+
| pet_id   | int         | NO   | PRI | NULL    | auto_increment |
| name     | varchar(20) | YES  |     | NULL    |                |
| owner    | varchar(20) | YES  |     | NULL    |                |
| species  | varchar(20) | YES  |     | NULL    |                |
| sex      | char(1)     | YES  |     | NULL    |                |
| birth    | date        | YES  |     | NULL    |                |
| death    | date        | YES  |     | NULL    |                |
| owner_id | int         | YES  |     | NULL    |                |
+----------+-------------+------+-----+---------+----------------+
8 rows in set (0.00 sec)
```

7. a) 10 ensimmäistä työntekijää employees -taulusta:

```
mysql> USE employees;
Database changed
mysql> SELECT *
    -> FROM employees
    -> ORDER BY last_name
    -> LIMIT 10;
+--------+------------+------------+-----------+--------+------------+
| emp_no | birth_date | first_name | last_name | gender | hire_date  |
+--------+------------+------------+-----------+--------+------------+
|  11761 | 1964-07-17 | Bartek     | Aamodt    | M      | 1991-06-12 |
|  15427 | 1959-03-06 | Aluzio     | Aamodt    | M      | 1985-03-03 |
|  18182 | 1963-02-23 | Dekang     | Aamodt    | F      | 1988-05-25 |
|  16572 | 1956-11-26 | Matt       | Aamodt    | M      | 1987-06-16 |
|  12791 | 1960-06-16 | Mokhtar    | Aamodt    | M      | 1994-08-14 |
|  12516 | 1958-06-25 | Sreenivas  | Aamodt    | F      | 1990-03-06 |
|  12982 | 1952-12-08 | Sachem     | Aamodt    | F      | 1992-01-11 |
|  17400 | 1962-03-22 | Basim      | Aamodt    | F      | 1991-09-15 |
|  19898 | 1957-03-09 | Vidar      | Aamodt    | M      | 1988-08-06 |
|  17885 | 1954-02-01 | Takanari   | Aamodt    | M      | 1996-08-19 |
+--------+------------+------------+-----------+--------+------------+
10 rows in set (0.18 sec)
```

7. b) Sama, mutta myös etunimen mukaan:

```
SELECT *
FROM employees
ORDER BY last_name, first_name
LIMIT 10;
```

7. c) Viimeiset viisi palkattua työntekijää:

```
SELECT *
FROM employees
ORDER BY hire_date DESC
LIMIT 5;
```

7. d) Suurin palkka:

```
mysql> SELECT e.first_name, e.last_name, s.salary
    -> FROM employees e
    -> JOIN salaries s ON e.emp_no = s.emp_no
    -> ORDER BY s.salary DESC
    -> LIMIT 1;
+------------+-----------+--------+
| first_name | last_name | salary |
+------------+-----------+--------+
| Tokuyasu   | Pesch     | 158220 |
+------------+-----------+--------+
1 row in set (1.86 sec)
```

7. e) Pienin palkka:

```
mysql> SELECT e.first_name, e.last_name, s.salary
    -> FROM employees e
    -> JOIN salaries s ON e.emp_no = s.emp_no
    -> ORDER BY s.salary ASC
    -> LIMIT 1;
+------------+-----------+--------+
| first_name | last_name | salary |
+------------+-----------+--------+
| Olivera    | Baek      |  38623 |
+------------+-----------+--------+
1 row in set (1.81 sec)
```

7. f) Yli 150000 ansaitsevat:

```
SELECT e.first_name, e.last_name, s.salary
FROM employees e
JOIN salaries s ON e.emp_no = s.emp_no
WHERE s.salary > 150000;
```

7. g) Myynnissä ja markkinoinnissa työskentelevien määrät:

```
mysql> SELECT d.dept_name, COUNT(de.dept_no) AS employee_count
    -> FROM departments d
    -> JOIN dept_emp de ON d.dept_no = de.dept_no
    -> WHERE d.dept_name IN ('Sales', 'Marketing')
    -> GROUP BY d.dept_name;
+-----------+----------------+
| dept_name | employee_count |
+-----------+----------------+
| Marketing |          20211 |
| Sales     |          52245 |
+-----------+----------------+
2 rows in set (0.07 sec)
```

7. h) Osastonjohtajien tiedot:

```
mysql> SELECT e.first_name, e.last_name, d.dept_name
    -> FROM dept_manager dm
    -> JOIN employees e ON dm.emp_no = e.emp_no
    -> JOIN departments d ON dm.dept_no = d.dept_no;
+-------------+--------------+--------------------+
| first_name  | last_name    | dept_name          |
+-------------+--------------+--------------------+
| Tonny       | Butterworth  | Customer Service   |
| Marjo       | Giarratana   | Customer Service   |
| Xiaobin     | Spinelli     | Customer Service   |
| Yuchang     | Weedman      | Customer Service   |
| DeForest    | Hagimont     | Development        |
| Leon        | DasSarma     | Development        |
| Ebru        | Alpin        | Finance            |
| Isamu       | Legleitner   | Finance            |
| Shirish     | Ossenbruggen | Human Resources    |
| Karsten     | Sigstam      | Human Resources    |
| Margareta   | Markovitch   | Marketing          |
| Vishwani    | Minakawa     | Marketing          |
| Krassimir   | Wegerle      | Production         |
| Rosine      | Cools        | Production         |
| Shem        | Kieras       | Production         |
| Oscar       | Ghazalie     | Production         |
| Peternela   | Onuegbe      | Quality Management |
| Rutger      | Hofmeyr      | Quality Management |
| Sanjoy      | Quadeer      | Quality Management |
| Dung        | Pesch        | Quality Management |
| Arie        | Staelin      | Research           |
| Hilary      | Kambil       | Research           |
| Przemyslawa | Kaelbling    | Sales              |
| Hauke       | Zhang        | Sales              |
+-------------+--------------+--------------------+
24 rows in set (0.00 sec)
```

7. i) Myynnissä ja markkinoinnissa työskentelevien keskipalkka:

```
mysql> SELECT d.dept_name, ROUND(AVG(s.salary), 2) AS avg_salary
    -> FROM departments d
    -> JOIN dept_emp de ON d.dept_no = de.dept_no
    -> JOIN salaries s ON de.emp_no = s.emp_no
    -> WHERE d.dept_name IN ('Sales', 'Marketing')
    -> GROUP BY d.dept_name;
+-----------+------------+
| dept_name | avg_salary |
+-----------+------------+
| Marketing |   71913.20 |
| Sales     |   80667.61 |
+-----------+------------+
2 rows in set (0.95 sec)
```

8. a) DVD -elokuvien kielet:

```
mysql> SELECT name AS language
    -> FROM language
    -> ORDER BY name;
+----------+
| language |
+----------+
| English  |
| French   |
| German   |
| Italian  |
| Japanese |
| Mandarin |
+----------+
6 rows in set (0.00 sec)
```

8. b) Temple -sukunimisten näyttelijöiden elokuvat

```
SELECT f.title
FROM film f
JOIN film_actor fa ON f.film_id = fa.film_id
JOIN actor a ON fa.actor_id = a.actor_id
WHERE a.last_name = 'Temple';
```

8. c) Ghost Groundhog -elokuvassa näytelleet näyttelijät

```
mysql> SELECT a.first_name, a.last_name
    -> FROM actor a
    -> JOIN film_actor fa ON a.actor_id = fa.actor_id
    -> JOIN film f ON fa.film_id = f.film_id
    -> WHERE f.title = 'Ghost Groundhog';
+------------+-----------+
| first_name | last_name |
+------------+-----------+
| DAN        | HARRIS    |
| KENNETH    | TORN      |
| KEVIN      | GARLAND   |
| RUSSELL    | TEMPLE    |
| RENEE      | BALL      |
+------------+-----------+
5 rows in set (0.00 sec)
```

8. d) Tietokannassa on 56 kauhuleffaa

8. e) Kuinka tulostetaan kaikki kauhuleffat

```sql
SELECT f.title
FROM film f
JOIN film_category fc ON f.film_id = fc.film_id
JOIN category c ON fc.category_id = c.category_id
WHERE c.name = 'Horror'
ORDER BY f.title;
```