S03-L02 Unique Indexes

Add unique key to `department` table.

```
ALTER TABLE `department` ADD UNIQUE INDEX `ak_department` (`name`);
```

See a unique key in `salary` table.

`INSERT` **/** `UPDATE`

MySQL and Postgres allow to insert or update dataset in one single query.

- MySQL: INSERT ... ON DUPLICATE KEY UPDATE Syntax
  http://dev.mysql.com/doc/refman/5.7/en/insert-on-duplicate.html
- PostgreSQL: UPSERT https://wiki.postgresql.org/wiki/UPSERT

```
SELECT * /* Check the salary of employee with ID = 499998 */
FROM salary
WHERE 1=1
        AND employee_id = 499998
        AND from_date = '1993-12-27'
        AND to_date = '1994-12-27'
;
```

MySQL:

```
INSERT INTO salary (employee_id, from_date, to_date, insert_dt,
insert_process_code)
VALUES
(499998, '1993-12-27', '1994-12-27', NOW(), 'merge-insert')
ON DUPLICATE KEY UPDATE
   salary.salary_amount = salary.salary_amount * 10,
   salary.update_process_code = 'merge-update'
```

Practice advanced SQL with MySQL

PostgreSQL:

```
WITH upsert AS (
  UPDATE `salary`
  SET salary.salary_amount = salary.salary_amount * 10,
      salary.update_process_code = 'merge-update'
  WHERE 1=1
    AND salary.employee_id = 499998
    AND salary.from_date = '1993-12-27'
    AND salary.to_date = '1994-12-27'

  RETURNING *
)
  INSERT INTO salary (employee_id, from_date, to_date, insert_dt,
insert_process_code)
  VALUES
  (499998, '1993-12-27', '1994-12-27', NOW(), 'merge-insert')
  WHERE NOT EXISTS (
    SELECT * FROM upsert
  )
;
```