Questionnaire

*ch-questionnaire*

# Introduction

This document describes a code challenge that you must complete as a candidate for the job that you have applied for.

The document is separated in 3 sections:

* **Introduction**, describes the document and the challenge
* **Description**, describes the code challenge in as much detail as possible
* **Deliverables,** describe the items that have to be delivered for this assessment

## About the Challenge

The challenge is categorised and has some specific properties that you can see here:

|  |  |
| --- | --- |
| **Name** | **Value** |
| **Challenge Name** | Questionnaire |
| **Code Name** | ch-questionnaire |
| **Type** | Project |
| **Language(s)** | SQL |

# Description

The goal of this challenge is to create the structure of simple questionnaire/feedback engine. This engine will have its model as follows:

* Responders (the users that will respond to questionnaires)
* Questionnaires
* Questions
* Answers

Requirements:

* Each responder should be able to be identified by their email
* An admin should be able to create different questionnaires with different questions
* Each questionnaire can be filled by multiple responders
* Each question might have an answer, or not
* Each questionnaire might have extra data (metadata) for every need
* Consider that each question will be filled by a number, not text
  + Yes/No
  + Rating from 1 to 10
  + A or B
  + etc.

Your first task is to create the database structure in order to meet the requirements of the above model but also to be able to serve the required functionalities listed below.

## Functionalities

As an admin of the system, I want to be able to:

1. Get all the questionnaires with their questions
2. Get all the questionnaires that were answered in the last month
3. Get all the questionnaires with more than 5 questions answered in the last month
4. Get all the answers for a given questionnaire in the last month
5. Get all the questionnaires that were answered the most in the last month
6. Get the min, max and average for every question in the last month (3 queries)

## Performance

Take into consideration that questionnaires are being responded every single second and there are many responses in the database. Be careful and create the right indices so that your queries are efficient and don’t slow down the server.

# Deliverables

For this task you will have to deliver the following:

* Database structure using DDL/SQL
* SQL Queries for each one of the required functionalities