

Assignment #1. Preparation of the DB migration.

- The current situation:** You have tables with the given structure and data. As a DB, you need to use PostgreSQL.

Structure:

Table STUDENTS:

FIELD	TYPE
ST_ID	NUMBER
ST_NAME	STRING(15)
ST_LAST	STRING(15)

Table INTERESTS:

FIELD	TYPE
STUDENT_ID	NUMBER
INTEREST	STRING(15)

Sample Data:

Table STUDENTS:

ST_ID	ST_NAME	ST_LAST
1	Konul	Gurbanova
2	Shahnur	Isgandarli
3	Natavan	Mammadova

Table INTERESTS:

STUDENT_ID	INTEREST
1	Tennis
1	Literature
1	Math
2	Tennis
3	Math
3	Music
2	Football
1	Chemistry
3	Chess

- 2. The Problem:** You need to write a code that performs a proper migration of the database. The migration shall do the following:
- Rename the STUDENTS.ST_ID to STUDENTS.STUDENT_ID (10%)
 - Change the length of STUDENTS.ST_NAME and STUDENTS.ST_LAST from 15 to 30 (10%)
 - Change the name of the INTERESTS.INTEREST to INTERESTS and its type to **array of strings**. Migrate the data (table content) correspondingly (20%). Your INTERESTS table shall look like this after the migration:

STUDENT_ID	INTERESTS
1	{"Tennis","Literature","Math","Chemistry"}
2	{"Tennis","Football"}
3	{"Math","Music","Chess"}

It should be possible to roll back the migration as well (40% in total - same as the migration scores). After running the rollback code (script), all the tables and data shall remain as they were. Feel free to use any strategy or algorithm to deliver the task.

3. Instructions:

1. Use any programming or scripting language you want – Java, C#, Go, Python, Ruby, bash, or pure SQL script. The only requirement is this code/script shall be runnable.
2. You need to have 2 codes: one for the migration another for rollback.
3. Write a very descriptive explanation in README how to run both codes. Imagine you're writing these instructions for the organization that are going to use them to perform the migration. They shall not have any questions regarding the details (20%).
4. Submit your solution here:
 - Join GitHub classroom: <https://classroom.github.com/classrooms/68858841-production-operations-management>
 - Repository for your assignment: <https://classroom.github.com/a/gEyyVqFK>