Instructions

Follow the instructions and get all the user stories below to pass to finish the project.

You start with several files, one of them is games.csv. It contains a comma-separated list of all games of the final three rounds of the World Cup tournament since 2014; the titles are at the top. It includes the year of each game, the round of the game, the winner, their opponent, and the number of goals each team scored. You need to do three things for this project:

Part 1: Create the database

Log into the psql interactive terminal with psql --username=freecodecamp --dbname=postgres and create your database structure according to the user stories below.

Don't forget to connect to the database after you create it.

Part 2: Insert the data

Complete the insert_data.sh script to correctly insert all the data from games.csv into the database. The file is started for you. Do not modify any of the code you start with. Using the PSQL variable defined, you can make database queries like this: $($PSQL "<query_here>"). The tests have a 20 second limit, so try to make your script efficient. The less you have to query the database, the faster it will be. You can empty the rows in the tables of your database with TRUNCATE TABLE games, teams;

Part 3: Query the database

Complete the empty echo commands in the queries.sh file to produce output that matches the expected_output.txt file. The file has some starter code, and the first query is completed for you. Use the PSQL variable defined to complete rest of the queries. Note that you need to have your database filled with the correct data from the script to get the correct results from your queries. Hint: Test your queries in the psql prompt first and then add them to the script file.

Notes:

If you leave your virtual machine, your database may not be saved. You can make a dump of it by entering pg_dump -cC --inserts -U freecodecamp worldcup > worldcup.sql in a bash terminal (not the psql one). It will save the commands to rebuild your database in worldcup.sql. The file will be located where the command was entered. If it's anything inside the project folder, the file will be saved in the VM. You can rebuild the database by entering psql -U postgres < worldcup.sql in a terminal where the .sql file is.

If you are saving your progress on freeCodeCamp.org, after getting all the tests to pass, follow the instructions above to save a dump of your database. Save the worldcup.sql file, as well as the final version of your insert_data.sh and queries.sh files, in a public repository and submit the URL to it on freeCodeCamp.org.

Complete the tasks below

You should create a database named worldcup

You should connect to your worldcup database and then create teams and games tables

Your teams table should have a team_id column that is a type of SERIAL and is the primary key, and a name column that has to be UNIQUE

Your games table should have a game_id column that is a type of SERIAL and is the primary key, a year column of type INT, and a round column of type VARCHAR

Your games table should have winner_id and opponent_id foreign key columns that each reference team_id from the teams table

Your games table should have winner_goals and opponent_goals columns that are type INT

All of your columns should have the NOT NULL constraint

Your two script (.sh) files should have executable permissions. Other tests involving these two files will fail until permissions are correct. When these permissions are enabled, the tests will take significantly longer to run

When you run your insert_data.sh script, it should add each unique team to the teams table. There should be 24 rows

When you run your insert_data.sh script, it should insert a row for each line in the games.csv file (other than the top line of the file). There should be 32 rows. Each row should have every column filled in with the appropriate info. Make sure to add the correct ID's from the teams table (you cannot hard-code the values)

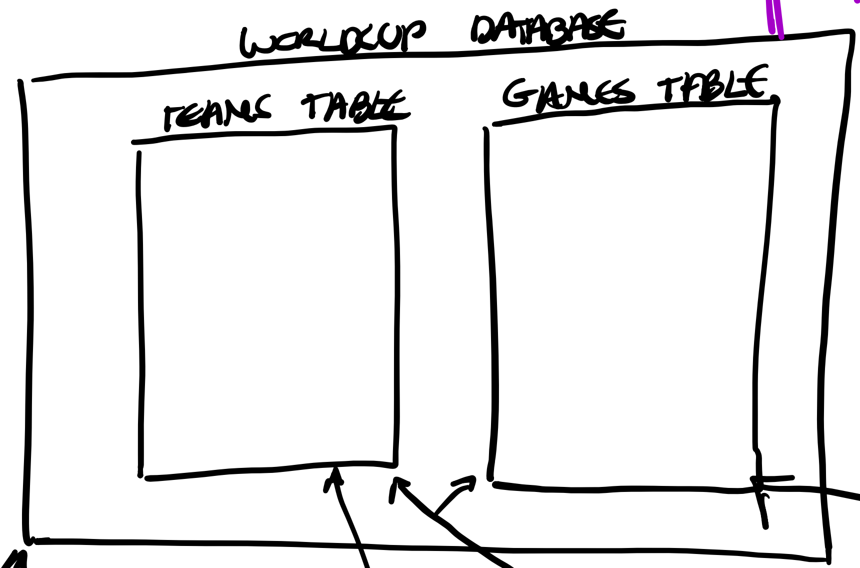
You should correctly complete the queries in the queries.sh file. Fill in each empty echo command to get the output of what is suggested with the command above it. Only use a single line like the first query. The output should match what is in the expected_output.txt file exactly, take note of the number of decimal places in some of the query results

WHAT WE WANT:

TABLES IN THE PSQL DATABASE

↑

MAKING THE TABLES



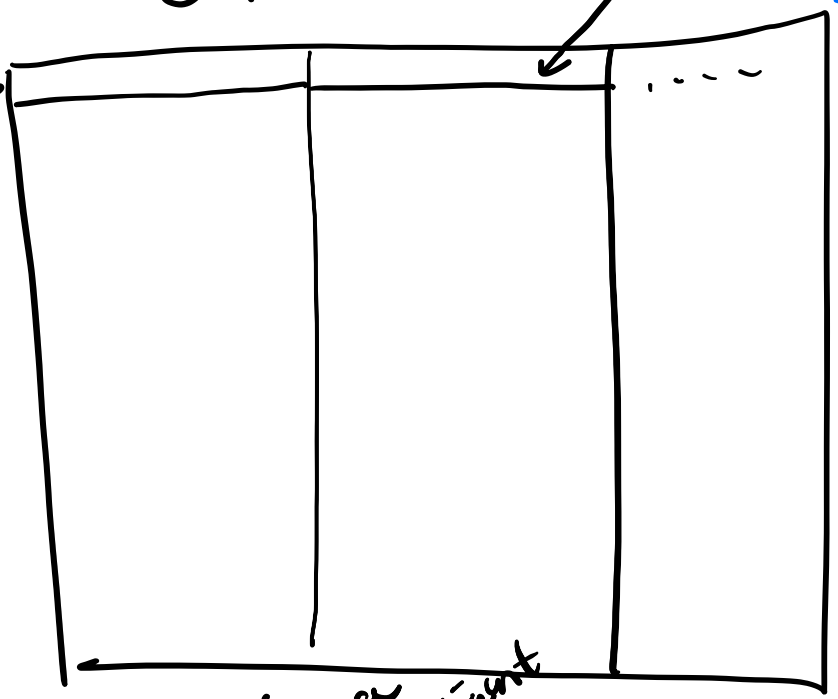
(1) CREATE DATABASE NAMED 'worldcup' + CONNECT TO IT

(2) CREATE TEAMS, GAMES TABLES

(3) TEAMS TABLE

name column
→ this has to be 'unique'

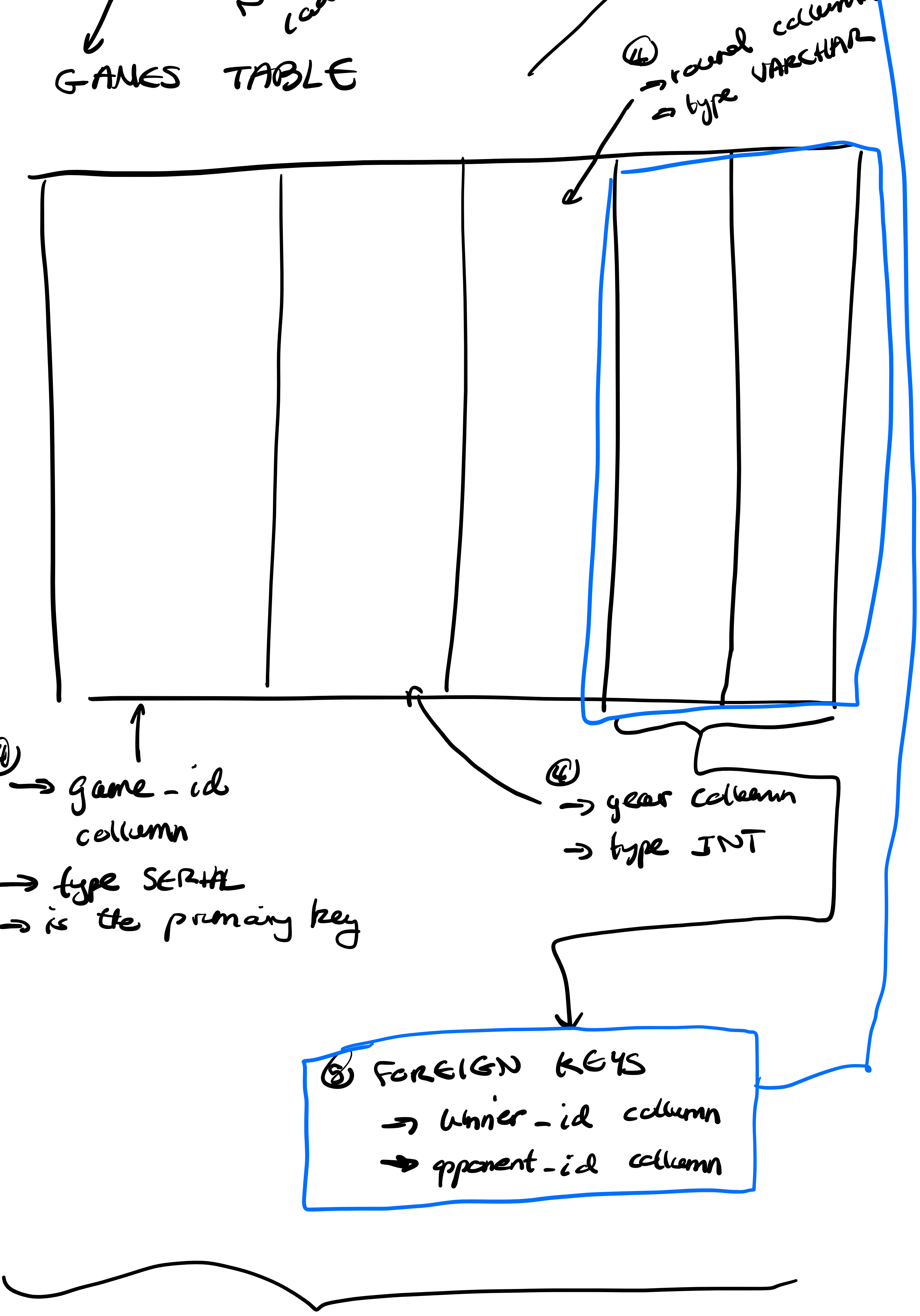
team_id column
→ a type of SERIAL
→ is the primary key



} → i.e, adding x 2 columns

(7) All collums should have a …et NULL constraint
(…d this in)

④ GAMES TABLE



④ → round column
→ type VARCHAR

④ → game_id column
→ type SERIAL
→ is the primary key

④ → year column
→ type INT

⑧ FOREIGN KEYS
→ winner_id column
→ opponent_id column

6, x2 more columns

a) winner_goals ← INT type

b) opponent_goals ← INT type

TO POPULATE THE TABLES WITH DATA

THE TWO .SH FILES

→ (8) They need executable file permissions - to be able to run (or error) → the tasks will take longer to run once those .sh files have executable permissions

→ (9) insert_data.sh ← This should get the teams from the project csv file into the teams sql database

→ when you run it

→ This should add 24 rows to the project team table

(10) → one row for each row in the project csv file (games.csv)

→ this adds 32 rows total

→ the table should be full once populated

→ (11) queries.sh → we fill this file with the SQL commands for data we want to extract

→ the output in this should be the same as in the project expected_output.txt file

→ Take note of the decimal places in some of the query results