

Enpal.

Assessment Task
BI Dev.(m/w/d)

Test Goals

1. Test the working knowledge of SQL and the ability to convert short business questions into practical implementation

Test Description

Enpal employs craftsmen teams for installing solar panels on rooftops of its customers in *Germany*. Each team has its own base city, specified by the pair of latitude/longitude coordinates. Each team has a certain level of skills, implying that some teams are faster in doing their job than the others (skill level 1 – unlimited number of panels that can be installed per day, skill level 2 – at most 22 panels per day, and skill level 3 – less than 22 panels per day). Also, different teams are available for work at different periods of time.

Households that ordered solar panel installation are defined by their latitude/longitude coordinates as well as the number of solar panels to install on the roof and the date when the installation process should begin.

The task is to find the nearest (according to the *accurate* distance) customer for each craftsmen team, so that (a) a given team is available for work when a customer has time, and (b) this team has necessary skill level to accomplish all work in one day.

You are asked for solving this task in SQL.

Tasks

Task 1: Create and populate with data 3 tables with SQL statements:

1. Bases (team id, latitude, longitude); let us assume there are only 3 base cities.
2. Teams (team id, availability from, availability till, skill level); let us assume that there are 10 teams, and team id ranges from 1 to 10.
3. Customers (customer id, latitude, longitude, no. of panels to install, start date for installation); let us assume there are 30 customers, and customer id ranges from 1 to 30.

Tasks

Task 2: Provide a solution via SQL statements (keep in mind that *the third table does not have a common column with other two tables!*). Your output can look like:

team 1 -> customer 10

team 2 -> customer 23

team 3 -> customer 5

...

team 10 -> customer 3

Tasks

Task 3: Please create a viz in Tableau with the results of the task 2.

Good luck and have fun with it!

