



# Data engineer take-home technical test

Every good data engineer knows that an excel sheet must under no circumstance be used as a database. However, this is not the case for microbiological engineers that like to use this easy way of storing data. You can find attached an excel sheet representing microbiological samples and associated images, your goal for this test is to transform it to an easy-to-use database for microbiologists but also data scientists.

We expect you to return as a zip file a project that performs the following features:

- Runs a database of your choice
- Creates a schema you think is relevant according to the data given
- Populates the database with the data given
- Shows in a graph the number of bacteria per membrane VS the average surface occupied by bacteria
- Generates barcodes and an image containing all barcodes ready to print
- Contains a documentation explaining how to run the project and the reasons that motivated your design choices
- Contains a documentation of future developments you would suggest for this use case

Your project be evaluated on:

- How easy it is to run it
- The readability of the code

- The relevance of the different choices you made
- The next step of the interview process is a review of your code when we will ask you questions about the code but also to query the database