# Exercises: Shampoo Company

This document defines the **exercise assignments** for the ["Databases Advanced – Hibernate" course @ Software University.](https://softuni.bg/trainings/1444/databases-advanced-hibernate-october-2016)

Now that we have the structure of “Neck and Elbows” we have to retrieve some data:

# Query Methods

## Select Shampoos by Brand

**Create a method that selects all shampoos by brand.**

## Select Shampoos by Brand and Size

**Create a method that selects all shampoos by brand and size.**

## Select Shampoos by Size or Label

**Create a method that selects all shampoos by size or label. Sort ascending by price.**

## Select Shampoos by Price

**Create a method that selects all shampoos higher than a given price. Sort descending by brand.**

## Select Batches by Date

**Create a method that selects all batches after a given date.**

## Select Ingredients without Price

**Create a method that selects all ingredients without price. Sort descending by name and price.**

## Select Ingredients by Name

**Create a method that selects all ingredients which name starts with given letters.**

## Select Ingredients by Names

**Create a method that selects all ingredients which are contained in a given list. Sort ascending by price.**

## Select Batches by Shampoos

**Create a method that selects all batches without shampoos. Sort descending by date.**

## Count Shampoos by Price

**Create a method that counts all shampoos with price lower than a given price.**

# JPQL

## Select Shampoos by Label.

**Create a method that selects all shampoos by label.**

## Select Ingredients by Names.

**Create a method that selects all ingredients by names given in a list. Sort descending by id.**

## Select Shampoos by Ingredients

**Create a method that selects all shampoos with ingredients in a given list.**

## Select Shampoos by Ingredients Count

**Create a method that selects all shampoos with ingredients less than a given number.**

## Select Shampoos by Batch Date

**Create a method that selects all shampoos in a batch with a date before a given date.**

## Select Shampoos by Ingredients Sum of Price

**Create a method that selects all shampoos in with ingredients which sum is less than a given number.**

## Select Shampoos by Batch and Label

**Create a method that selects all shampoos in a batch with a given id and with a label subtitle different than a given string.**

## Select Ingredients by Sum of Price

**Create a method that selects all ingredients and their sum of price which is higher than a given number. Use named query.**

## Select Ingredient Name and Shampoo Brand

**Create a method that selects all ingredients names and their shampoo brands. Use named query.**

## Select Batch Date, Shampoo Label Title

**Create a method that selects batch date and shampoo label title. Use named query.**

## Delete Ingredients by name

**Create a method that deletes ingredients by a given name. Use named query.**

## Update Ingredients by price

**Create a method that increases the price of all ingredients by 10%. Use named query.**

## Update Ingredients by Names

**Create a method that updates all ingredients price which names are in a given list.**