

Lab: Spring Data Advanced Querying

This document defines the lab assignments for the [“Databases Frameworks” course at Software University](#).

You are **given** a simpler implementation of the **Shampoo Company**. Now it's time to start writing some query methods to retrieve data.

Before you start, insert the data from the “shampoo-company-insert.sql” file!

1. Select Shampoos by Size

Create a method that selects all shampoos with a **given size**, **ordered by shampoo id**.

Example:

Input	Output
MEDIUM	Nature Moments Mediterranean Olive Oil & Aloe Vera MEDIUM 6.50lv. Volume & Fullness Lavender MEDIUM 5.50lv. Rose Shine & Hydration MEDIUM 6.50lv. Color Protection & Radiance MEDIUM 6.75lv. Heavenly Long Long-Hair MEDIUM 7.50lv. Sea Buckthorn Vital MEDIUM 6.50lv. Fresh it Up! MEDIUM 7.65lv. Nectar Nutrition MEDIUM 6.85lv.

2. Select Shampoos by Size or Label

Create a method that selects all shampoos with a **given size or label id**. Sort the result **ascending by price**.

Example:

Input	Output
MEDIUM 10	Volume & Fullness Lavender MEDIUM 5.50lv. Intense-Charm Brunette SMALL 5.50lv. Nature Moments Mediterranean Olive Oil & Aloe Vera MEDIUM 6.50lv. Rose Shine & Hydration MEDIUM 6.50lv. Sea Buckthorn Vital MEDIUM 6.50lv. Color Protection & Radiance MEDIUM 6.75lv. Nectar Nutrition MEDIUM 6.85lv. Heavenly Long Long-Hair MEDIUM 7.50lv. Fresh it Up! MEDIUM 7.65lv. Active-Caffeine SMALL 7.80lv.

3. Select Shampoos by Price

Create a method that selects all shampoos, which price is **higher than a given price**. Sort the result **descending by price**.

Example:

Input	Output
5	Superfruit Nutrition LARGE 13.80lv. Cotton Fresh LARGE 13.60lv. Color Protection & Radiance LARGE 11.50lv. Rose Shine & Hydration LARGE 10.70lv. Nectar Nutrition LARGE 10.50lv.

	Keratin Strong SMALL 8.80lv. Superfruit Nutrition SMALL 8.80lv. Cotton Fresh SMALL 8.80lv. Keratin Strong LARGE 8.80lv. Volume & Fullness Lavender LARGE 8.50lv. ...
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4. Select Ingredients by Name

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

Example:

Input	Output
M	Macadamia Oil Mineral-Collagen Micro Crystals

5. Select Ingredients by Names

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

Example:

Input	Output
Lavender Herbs Apple	Apple Lavender Herbs

6. Count Shampoos by Price

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

Example:

Input	Output
8.50	15

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7. Select Shampoos by Ingredients

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

Example:

Input	Output
Berry Mineral-Collagen	Color Protection & Radiance Fresh it Up! Nectar Nutrition Superfruit Nutrition Color Protection & Radiance Nectar Nutrition Superfruit Nutrition . . .

8. Select Shampoos by Ingredients Count

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

Example:

Input	Output
2	Moroccan Argan Oil & Macadamia Volume & Fullness Lavender Sea Buckthorn Vital Active-Caffeine

9. Select Ingredient Name and Shampoo Brand By Name

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

Input	Output
Silk Comb	1.80
Fresh it up!	1.40

10. Delete Ingredients by name

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

11. Update Ingredients by price

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

12. Update Ingredients by Names

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