

Lab: Spring Data Advanced Querying

This document defines the lab assignments for the ["Spring Data" course @ 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. ... |

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 | Apple |
| Herbs | Lavender |
| Apple | 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 | Superfruit Nutrition Color Protection & Radiance Volume & Fullness Lavender Keratin Strong Nature Moments Mediterranean Olive Oil & Aloe Vera Nectar Nutrition Fresh it Up! |

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. Delete Ingredients by Name

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

10. Update Ingredients by Price

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

11. Update Ingredients by Names

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