

Exercises: Spring Data Advanced Quering

This document defines the exercise assignments for the ["Spring Data" course @ SoftUni](#).

For the following tasks use the **bookshop_system** database from the previous exercise. Make sure it has proper connections between the tables and it is populated with any sample data.

1. Books Titles by Age Restriction

Write a program that prints **the titles of all books**, for which the **age restriction** matches the given input (minor, teen or adult). **Ignore casing** of the input.

Example

| Input | Output |
|-------|--|
| miNor | A che punto Ã` la note After Many a Summer Dies the Swan Ah ... |
| teEN | All Passion Spent Wide Sea Antic Hay ... |

2. Golden Books

Write a program that prints **the titles of the golden edition books**, which have **less than 5000 copies**.

Example

| Output |
|---|
| Behold the Man Bury My Heart at Wounded Knee The Cricket on the Hearth ... |

3. Books by Price

Write a program that prints **the titles and prices of books** with **price lower than 5** and **higher than 40**.

Example

| Output |
|---|
| A che punto Ã` la note - \$45.78 All the King's Men - \$45.60 An Evil Cradling - \$3.30 |

Beyond the Mexique Bay - \$45.45

...

4. Not Released Books

Write a program that prints **the titles** of all books that are **NOT released** in a given year.

Example

| Input | Output |
|-------|---|
| 2000 | Absalom A che punto Ã¨ la note After Many a Summer Dies the Swan ... |
| 1998 | A che punto Ã¨ la note Ah Wilderness! ... |

5. Books Released Before Date

Write a program that prints **the title, the edition type and the price** of books, which are **released before a given date**. The date will be in the **format dd-MM-yyyy**.

Example

| Input | Output |
|------------|---|
| 12-04-1992 | All Passion Spent PROMO 7.18 Bury My Heart at Wounded Knee GOLD 3.86 A Catskill Eagle NORMAL 15.78 ... |
| 30-12-1989 | Bury My Heart at Wounded Knee GOLD 3.86 Consider the Lilies PROMO 30.89 The Curious Incident of the Dog in the Night-Time NORMAL 23.41 ... |

6. Authors Search

Write a program that prints **the names** of those authors, whose **first name ends with a given string**.

Example

| Input | Output |
|-------|---------------|
| e | George Powell |

| | |
|----|--------------------------------|
| | Jane Ortiz Julie Washington |
| dy | Randy Morales Randy Graham |

7. Books Search

Write a program that prints **the titles of books**, which **contain a given string** (regardless of the casing).

Example

| Input | Output |
|-------|--|
| sK | A Catskill Eagle The Daffodil Sky The Skull Beneath the Skin |
| WOR | Great Work of Time Terrible Swift Sword |

8. Book Titles Search

Write a program that prints **the titles of books**, which are **written by authors**, whose **last name starts with a given string**.

Example

| Input | Output |
|-------|---|
| Ric | Arms and the Man (Amanda Rice) ... Book Title (Authors first and last name) Check results manually in DB, because we insert random Authors for every books. |
| Gr | Cover Her Face (Brenda Griffin) ... Book Title (Authors first and last name) Check results manually in DB, because we insert random Authors for every books. |

9. Count Books

Write a program that prints **the number of books**, whose **title is longer than a given number**.

Example

| Input | Output | Comments |
|-------|--------|---|
| 12 | 174 | There are 174 books with longer title than 12 symbols |

| | | |
|----|---|---|
| 40 | 2 | There are 2 books with longer title than 40 symbols |
|----|---|---|

10. Total Book Copies

Write a program that prints **the total number of book copies by author**. Order the results **descending by total book copies**.

Example

| Output |
|---|
| Randy Graham – 196584 |
| Check results manually in DB, because we insert random Authors for every books. |

11. Reduced Book

Write a program that prints **information (title, edition type, age restriction and price)** for a book **by given title**. When retrieving the book information **select only those fields** and **do NOT include any other information** in the returned result.

Example

| Input | Output |
|-------------------|------------------------------------|
| Things Fall Apart | Things Fall Apart GOLD ADULT 40.02 |

12. * Increase Book Copies

Write a program that **increases the copies of all books released after a given date with a given number**. Print the total amount of book copies that were added.

Input

- On the **first line** – date in the format **dd MMM yyyy**. If a book is released after that date (exclusively), increase its book copies with the provided number from the second line of the input.
- On the **second line** – number of **book copies** each book should be increased with.

Output

- Total number of books** that was added to the database.

Example

| Input | Output | Comments |
|--------------------|--------|--|
| 12 Oct 2005 100 | 6100 | 61 books are released after 12 Oct 2005, so total of 6100 book copies were added |
| 06 Jun 2013 44 | 572 | 13 books are released after 6 Jun 2013, so total of 572 book copies were added |

13. * Remove Books

Write a program that **removes from the database** those **books**, which **copies are lower than a given number**. Print the **number of books that were deleted** from the database.

14. * Stored Procedure

Using Workbench (or other similar tool) **create a stored procedure**, which receives an **author's first and last name** and returns the **total amount of books the author has written**. Then write a **program** that **receives an author's name** and prints the **total number of books** the author has written by **using the stored procedure** you've just created.

Example

| Input | Output |
|------------------|--|
| Amanda Rice | Amanda Rice has written 9 books Check results manually in DB, because we insert random Authors for every books. |
| Christina Jordan | {Author first and last name} has writtent {number of books} books |
| Wanda Morales | {Author first and last name} has writtent {number of books} books |