**Lab: Built-in Functions**

This document defines the **lab** **exercise assignments** for the [MySQL course @ Software University.](https://softuni.bg/opencourses/databases-basics-mysql)

Download from the course instance and get familiar with the book\_library database. You will use it in the following exercises.

1. **Find Book Titles**

Write a SQL query to find **books which titles start with "The". Order the result by** id**.** Submit your query statements as **Prepare DB & run queries.**

**select `title` from `books` where substring(`title`,1,3)='The'**

**order by id;**

**Example**

|  |
| --- |
| **title** |
| The Mysterious Affair at Styles |
| The Big Four |
| The Murder at the Vicarage |
| The Mystery of the Blue Train |
| The Ring |
| … |

1. **Replace Titles**

Write a SQL query to find **books which titles start with "The" and replace the substring with 3 asterisks.** Retrieve data about the updated titles. **Order the result by** id**.** Submit your query statements as **Prepare DB & run queries.**

**select replace(`title`,'The','\*\*\*') as `title` from `books` where substring(`title`,1,3)='The'**

**order by id;**

**Example**

|  |
| --- |
| **title** |
| \*\*\* Mysterious Affair at Styles |
| \*\*\* Big Four |
| \*\*\* Murder at the Vicarage |
| \*\*\* Mystery of the Blue Train |
| \*\*\* Ring |
| \*\*\* Alchemist |
| \*\*\* Fifth Mountain |
| \*\*\* Zahir |
| \*\*\* Dead Zone |
| \*\*\* Hobbit |
| \*\*\* Adventures of Tom Bombadil |

1. **Sum Cost of All Books**

Write a SQL query to sum prices of all books. Format the output to **2 digits after decimal point**. Submit your query statements as **Prepare DB & run queries.**

**select round(sum(cost),2) from books;**

1. **Days Lived**

Write a SQL query to calculate the days that an author lived. Your query should return:

* Full Name – the full name of the author.
* Days Lived – days that he/she lived. NULL values mean that the author is still alive.

Submit your query statements as **Prepare DB & run queries.**

**select concat\_ws(' ', first\_name,last\_name) as full\_name, timestampdiff(DAY,born,died) from authors;**

**Example**

|  |  |
| --- | --- |
| **Full Name** | **Days Lived** |
| Agatha Christie | 31164 |
| William Shakespeare | 18990 |
| Danielle Schuelein-Steel | (NULL) |
| Joanne Rowling | (NULL) |
| Lev Tolstoy | 30021 |
| Paulo Souza | (NULL) |
| Stephen King | (NULL) |
| John Tolkien | 29827 |
| Erika Mitchell | (NULL) |

1. **Harry Potter Books**

Write a SQL query to retrieve titles of all the Harry Potter books. **Order the information by** id**.** Submit your query statements as **Prepare DB & run queries.**

**select title from books where substring(`title`,1,12)='Harry Potter';**

**Example**

|  |
| --- |
| **title** |
| Harry Potter and the Philosopher's Stone |
| Harry Potter and the Chamber of Secrets |
| Harry Potter and the Prisoner of Azkaban |
| … |