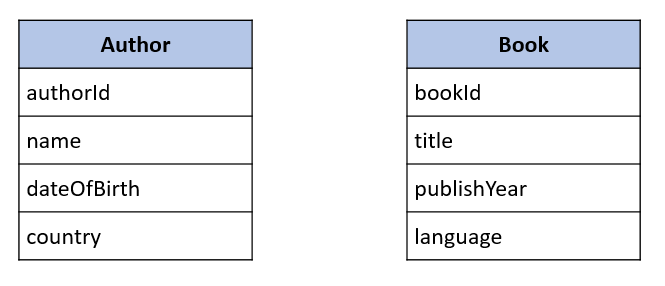
# C2- S4-PRACTICE

*NOTE: check your* ***THEORY slides*** *to answer those questions!*

# EXERCISE 1 – BOOK & AUTHORS

We want to manage books and authors:

* A book has always 1 author only
* An author could write many books.



**Q1** – What is the relation between Book and Author tables?

* The relation between Book and Author tables is Many to One relation.
  + Complete the missing attributes or table to allow this relation

|  |  |
| --- | --- |
| **Book** | |
| bookId | Int(11) PK |
| Title | Varchar(50) |
| Publish Year | Date(30) |
| Language | Varchar(40) |
| authorId | Int(11) FK |

|  |
| --- |
| Author |
| authorId |
| Name |
| dateOfBirth |
| country |

1

\*

**Q2** – For each table, complete the following arrays, by specifying for each attribute:

* + The field type (SQL type) and size
  + Can be null or not?
  + Is a primary key or foreign keys?

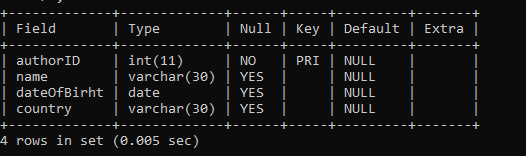
**AUTHOR TABLE**

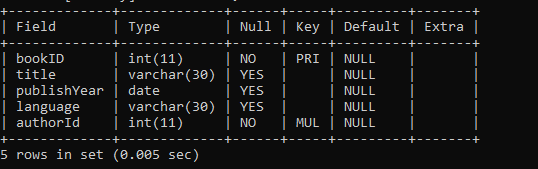
|  |  |  |  |
| --- | --- | --- | --- |
| Attribute name | Type / size | Can be Null? | Key |
| authorID | Int(11) | No | PK |
| Name | Varchar(30) | Yes |  |
| dateOfBirth | Date(30) | Yes |  |
| country | Varchar(30) | Yes |  |

**BOOK TABLE**

|  |  |  |  |
| --- | --- | --- | --- |
| Attribute name | Type / size | Can be Null? | Key |
| BookId | Int(11) | No | PK |
| Title | Varchar(30) | Yes |  |
| Publish Year | Date(30) | Yes |  |
| Language | Varchar(30) | Yes |  |

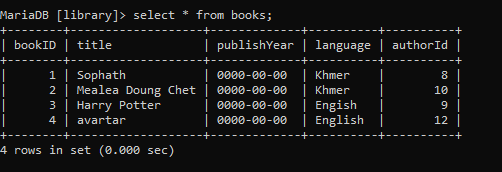
**Q3** – Write the SQL statement to create the 2 tables with appropriate properties

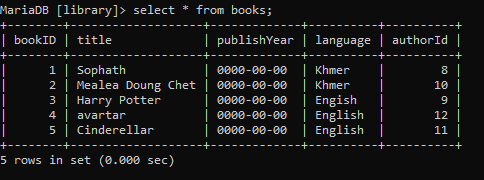




**Q4–** Write the statement to insert 5 books and 5 authors

* + Find the book and author information on the Internet





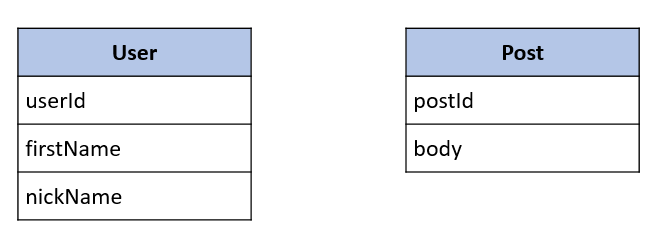
**Q5–** Write the SQL statement to **delete 3 of your books** from the database

# 

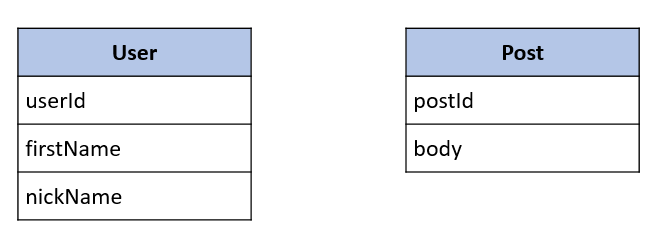
# EXERCISE 2 – USERS & POSTS

We want to manage **users** and **posts** (like posts on Facebook)

* A post is related to **1 user only**
  + A post has a body (the text of the post)
* User can have **many posts**
  + A user has a first name, and a nick name (optional)



**Q1** – What is the relation between User and Post Table?

* + Complete the missing attributes or table to allow this relation

1

\*

|  |
| --- |
| userId |

**Q2** – For each table, complete the following arrays, by specifying for each attribute:

* + The attribute type (SQL type) and size
  + Can be null or not?
  + Is a primary key or foreign keys?

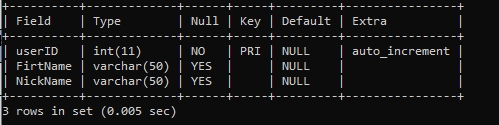
**USER TABLE**

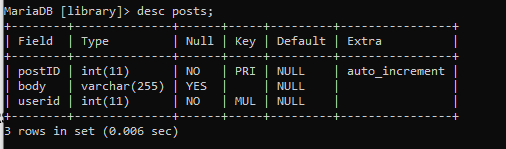
|  |  |  |  |
| --- | --- | --- | --- |
| Attribute name | Type / size | Null? | Key |
| userID | Int(11) | No | PK |
| FirstName | Varchar(50) | Yes |  |
| NickName | Varchar(50) | Yes |  |

**POST TABLE**

|  |  |  |  |
| --- | --- | --- | --- |
| Attribute name | Type / size | Null? | Key |
| postID | Int(11) | No | PK |
| body | Varchar(255) | Yes |  |
| userID | Int(11) | Yes | FK |

**Q3** – Write the SQL statement to create the 2 tables with appropriate properties





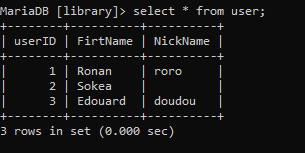
**Q4–** Write the statement to insert the following users and posts

Notes:

* ---- means: no value (the nickname is optional!)
* We don’t specify the KEY, it’s your business!

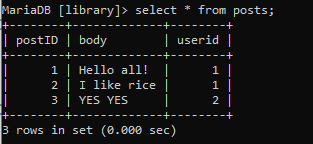
**USERS**

|  |  |
| --- | --- |
| First name | Nick name |
| Ronan | roro |
| Sokea | ---- |
| Edouard | doudou |

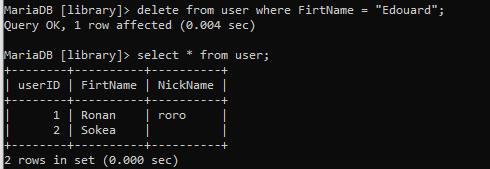


**POSTS**

|  |  |
| --- | --- |
| Post body | From |
| Hello all ! | Ronan |
| I like rice | Ronan |
| YES YES | Sokea |



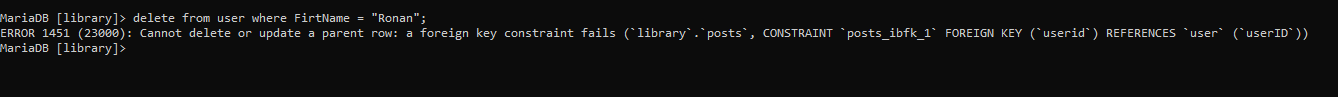
**Q5–** Write the statement to delete the user Edouard

* What’s happen? Can we delete it? Why?

Yes, we can. Because when we wrote the command we have a specific column and values to delete it.

**Q6–** Write the statement to delete the user Ronan

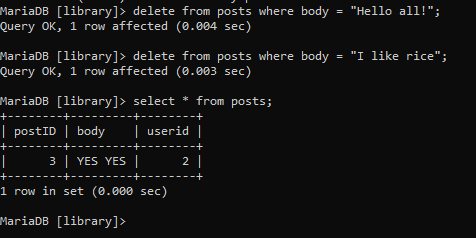
* What’s happen? Can we delete it? Why?



No, we can’t. Because the userID of user Ronan is the foreign key of the posts, so we can’t delete it.

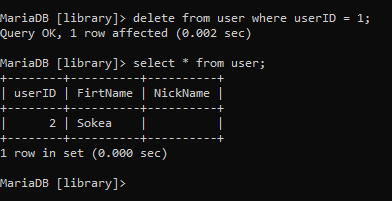
**Q7–** Write SQL statement to remove the rows related to Ronan user:

* Hello all!
* I like rice



**Q8–** now try again to delete the user Ronan

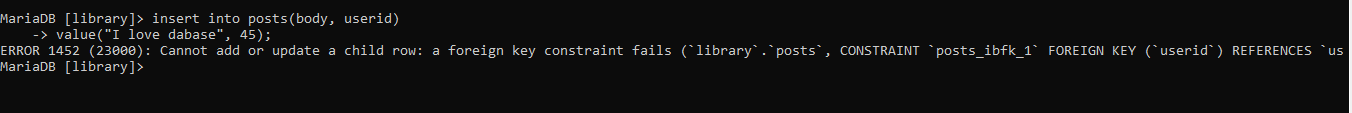
* What’s happen? Can we delete it? What can you conclude?



Yes, we can. Because we deleted the posts’ records that have foreign key of user Ronan.

**Q9–** Add a new POST in the POST table with a userId which does not exist in the User table (ex: 45)

* What’s happen? Why?



We can’t add new post in the post table with a userId that doesn’t exist in the user table. Because in the user table doesn’t have userId 45.