# 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.

|  |
| --- |
| **Author** |
| authorID |
| name |
| dateOfBirth |
| country |

|  |
| --- |
| **Book** |
| bookID |
| Title |
| publishYear |
| language |

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

* Relation between Book and Author table is Many to one, because a book has always 1 author only an author could write many books.

|  |
| --- |
| Book |
| bookID |
| Title |
| publishYear |
| language |

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

|  |
| --- |
| Author |
| authorID |
| name |
| dateOfBirth |
| country |
| bookID |

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**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?

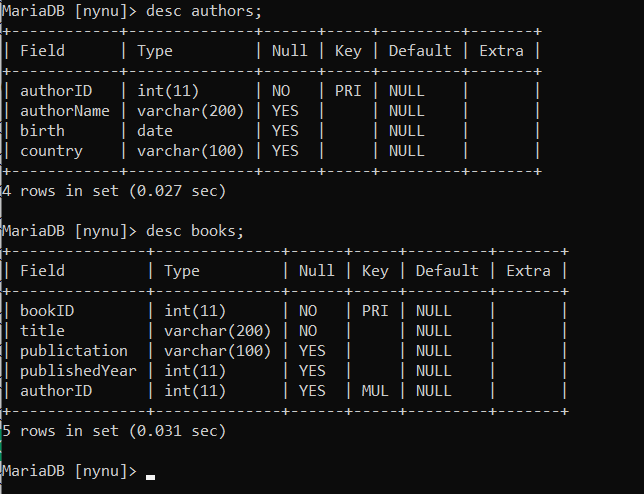
**AUTHOR TABLE**

|  |  |  |  |
| --- | --- | --- | --- |
| Attribute name | Type / size | Can be Null? | Key |
| Author id | int | Not null | PK |
| Author name | Varchar(100) | Not null |  |
| email | Varchar(100) | Not null |  |
| Password | Varchar(100) | Not null |  |

**BOOK TABLE**

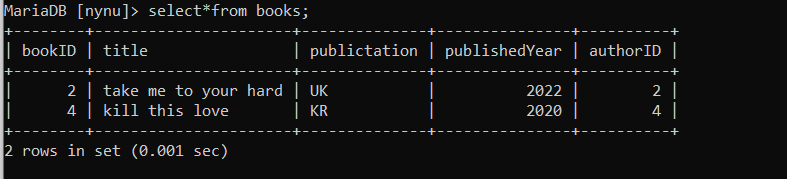
|  |  |  |  |
| --- | --- | --- | --- |
| Attribute name | Type / size | Can be Null? | Key |
| Book id | int | Not null | Pk |
| title | Varchar(200) | Not null |  |
| publication | Varchar(50) | Null |  |
| Published year | int | Null |  |
| Author id | int | Not null | FK |

**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

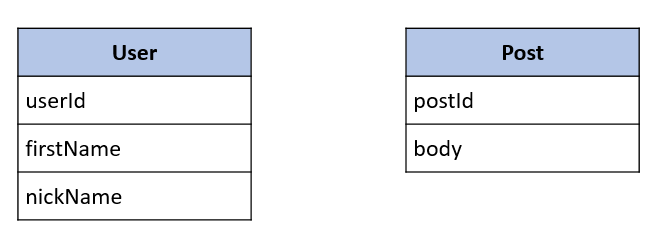
**Q5–** Write the SQL statement to **delete 3 of your books** from the database

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# 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?

Relation between one to many because a post is related to 1 user only and user can have many posts.

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

|  |
| --- |
| User |
| Userid |
| firstName |
| nickName |

|  |
| --- |
| Post |
| Postid |
| Userid |
| body |

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

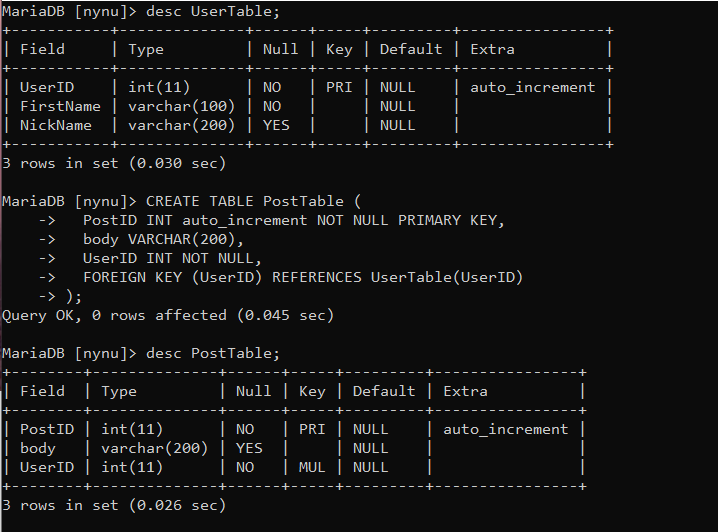
* + The attribute type (SQL type) and size
  + Can be null or not?
  + Is a primary key or foreign keys?

**USER TABLE**

|  |  |  |  |
| --- | --- | --- | --- |
| Attribute name | Type / size | Null? | Key |
| UserID | Int | Not null | PK |
| FirstName | Varchar(100) | Not null |  |
| NickName | Varchar(200) | Null |  |

**POST TABLE**

|  |  |  |  |
| --- | --- | --- | --- |
| Attribute name | Type / size | Null? | Key |
| PostID | Int | Not null | PK |
| body | Varchar(200) | Null |  |
| UserID | Int | Not null | FK |

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

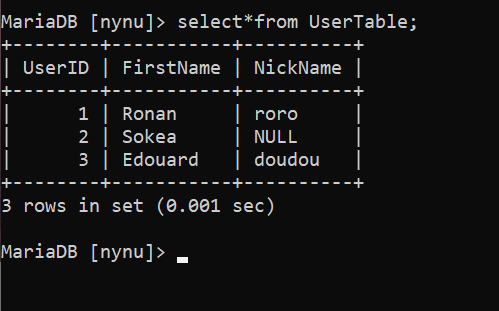
**Q4–** Write the statement to insert the following users and posts

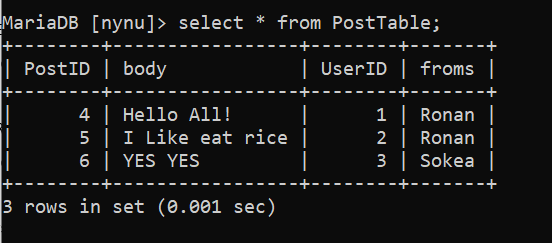
Notes:

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

**USERS**

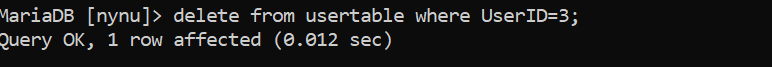
|  |  |
| --- | --- |
| First name | Nick name |
| Ronan | roro |
| Sokea | ---- |
| Edouard | doudou |



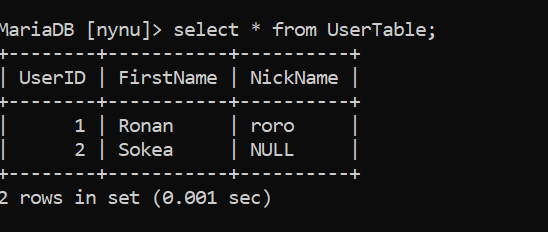
 **POSTS**

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

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



* What’s happen? Can we delete it? Why?
  + It was deleted by UserID.



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

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

**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?

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

* What’s happen? Why?