**Problem 1: Let’s manage a Library relational database**

**‼️ We only consider books that a written by only one author**

**Exercise 1: Data types**

**Instructions:** Complete the data types of the attributes of the **book** table model**.**

|  |  |
| --- | --- |
| **BOOK** | |
| Book ID  Title  Publishment date  Language | **…**  **…**  **…**  **…** |

**Exercise 2: Table schema**

**Instructions:** From the **Author** table below, design the **Author** table model (check the Theory class or ask the teacher to remember what is the model of a table).

|  |  |  |  |
| --- | --- | --- | --- |
| **Author ID** | **Name** | **Date of birth** | **Country** |
| XXX | XXX | XXX | XXX |
| XXX | XXX | XXX | XXX |
| XXX | XXX | XXX | XXX |

**Exercise 3: Instances of a table**

**Instructions:**

1. By looking on the internet, complete the Book table with at least 3 examples (there are different answers possible)

|  |  |  |  |
| --- | --- | --- | --- |
| **Book ID** | **Title** | **Publishment Date** | **Language** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

1. Complete the Author table with the information of the authors of the book you find on the internet

|  |  |  |  |
| --- | --- | --- | --- |
| **Author ID** | **Name** | **Date of birth** | **Country** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**Exercise 4: Relation between Books & Author**

**Instructions:**

1. Answer to the question: by looking to the theory class, write how we can make the relation between the Book table and the Author table. Ask your teacher if it is right.
2. Update the Book table by adding a column to put the relation between the Book table and the Author table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Book ID** | **Title** | **Publishment Date** | **Language** | **???** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

1. Update the Books model

|  |  |
| --- | --- |
| **BOOK** | |
| Book ID  Title  Publishment date  Language  ??? | **…**  **…**  **…**  **…** |

1. Update the Book and Author model (use drawing in Word)

|  |  |
| --- | --- |
| **BOOK** | |
| Book ID  Title  Publishment date  Language  ??? | **…**  **…**  **…**  **…** |

|  |  |
| --- | --- |
| **AUTHOR** | |
| ???  ???  ???  ???  ??? | **…**  **…**  **…**  **…** |

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**Problem 2: Let’s manage a Movie relational database**

**‼️ We only consider movies that a directed by only one director**

**Exercise 1: Data types**

**Instructions:** Complete the data types of the attributes of the **movie** table model**.**

|  |  |
| --- | --- |
| **MOVIE** | |
| Movie ID  Title  Release Year  Movie Length | **…**  **…**  **…**  **…** |

**Exercise 2: Table schema**

**Instructions:** From the **Director** table below, design the **Director** table model (check the Theory class or ask the teacher to remember what is the model of a table).

|  |  |  |  |
| --- | --- | --- | --- |
| **Director ID** | **Name** | **Date of birth** | **Country** |
| XXX | XXX | XXX | XXX |
| XXX | XXX | XXX | XXX |
| XXX | XXX | XXX | XXX |

**Exercise 3: Instances of a table**

**Instructions:**

1. By looking on the internet, complete the Movie table with at least 3 examples (there are different answers possible)

|  |  |  |  |
| --- | --- | --- | --- |
| **Movie ID** | **Title** | **Release Date** | **Movie Length** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

1. Complete the Authors table with the information of the authors of the book you find on the internet

|  |  |  |  |
| --- | --- | --- | --- |
| **Director ID** | **Name** | **Date of birth** | **Country** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**Exercise 4: Relation between Movie & Director**

**Instructions:**

1. Answer to the question: by looking to the theory class, write how we can make the relation between the Movie table and the Director table. Ask your teacher if it is right.
2. Update the Movie table by adding a column to put the relation between the Movie table and the Director table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Movie ID** | **Title** | **Release Date** | **Movie Length** | **???** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

1. Update the Movie table schema

|  |  |
| --- | --- |
| **MOVIE** | |
| Movie ID  Title  Release date  Movie length  ??? | **…**  **…**  **…**  **…** |

1. Update the Movie and Director model (use drawing in Word)

|  |  |
| --- | --- |
| **MOVIE** | |
| Movie ID  Title  Release date  Movie length  ??? | **…**  **…**  **…**  **…** |

|  |  |
| --- | --- |
| **DIRECTOR** | |
| ???  ???  ???  ???  ??? | **…**  **…**  **…**  **…** |

**❓❓❓**