*DDL & Views*

In the first programming project you created these tables.

# myBook

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Column Name | ID | Title | Author | Publisher ID | YR Published |
| Key Type | PK |  | FK | FK |  |
| Nulls/Unique | Not Null | Not Null | Not Null | Null | Null |
| Sample Data | 3001 | Fahrenheit 451 | 8001 | 9001 | 1968 |

# myPublisher

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Column Name | ID | Name | City | Country |
| Key Type | PK |  |  |  |
| Nulls/Unique | Not Null | Not Null, Unique | Not Null | Not Null |
| Sample Data | 9001 | Faraday Publishers | Santa Fe | USA |

# myAuthor

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Column Name | ID | Full Name | Birthdate | Country |
| Key Type | PK |  |  |  |
| Nulls/Unique | Not Null | Not Null, Unique | Null | Null |
| Sample Data | 8001 | Bradbury | 22-Jan-1930 | USA |

In this programming exercise, I want you to build on the work of the first project. ***For each of these questions, be sure to show the question, your code, and the system response (eg. TABLE CREATED) in your solution***. Before you start, it would be a good idea to delete any existing data in these tables.

***Note: This assignment is ‘just like’ Project 2, but for the fact that you’ll be working on the MySQL server instead of the Oracle server.***

## Use the MySQL server for these questions.

1. Define primary key constraints for each of the myBook, myPublisher, and myAuthor tables.
2. Define foreign key constraints for each of the FK columns in the myBook table.
3. Define unique constraints for the name column in the myPublisher table and the full name column in the myAuthor table.
4. Can you define a check constraint on the YR Published column in the books table to ensure that all books in the database were published in the 1900’s?
5. Can you define a check constraint on the birthdate column for the Author table to ensure that if birthdates are provided for an author that the dates fall between 01-Jan-1880 and 01-Jan-1995.
6. Can you define a check constraint on the country column of the author table to ensure that all authors were born in USA or CANADA or MEXICO. **Explain how MySQL supports check constraints**.
7. Insert at least 3 rows into the myPublisher table.
8. Try to insert a row into the myPublisher table that fails the primary key constraint.
9. Try to insert a row into the myPublisher table that fails the City – Not Null constraint.
10. Try to insert a row into the myPublisher table that fails the name unique constraint.
11. Insert at least 8 rows into the myAuthor table.
12. Try to insert a row into the myAuthor table that fails the primary key constraint.
13. Try to insert a row into the myAuthor table that fails the full name unique constraint.

1. Insert 10 rows (for legitimate books) into the myBook table.
2. Try to insert a row into the myBook table that fails the author foreign key constraint.
3. Try to insert a row into the myBook table that fails the publisher foreign key constraint.
4. Show all data in each of the tables.