MES College of Engineering

Kuttippuram,Thrikkanapuram
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LAB PRACTICAL EXAM - I (BATCH - I)

Roll Nos from 1 to 31

Program : MCA, MCA 2023-24 Sem : S2

Course Code: 20MCA134 Duration : 3 Hrs

Course Name: Advanced DBMS Lab Max Mark : 20.00

QUESTIONS

1. **Question 1:**

Create a table ***authors*** in MySQL database with the following schema and constraints: (**4 Marks**)

authors(author_id, author_name, nationality, birth_year)

author_id (identifier for an author) is an integer attribute. ***author_name*** (name of the author) is a variable character attribute of length 25. ***nationality*** (nationality of the author) is a variable character attribute of length 15. ***birth_year*** (birth year of the author) is an integer attribute.

Constraints to set for the table ***authors:***

1. *author_id* is the primary key
2. *author_name* should not be empty
3. *birth_year* must be between 1700 and 2000 and set its default value as 1900

Question 2:

Create a table ***books*** in MySQL database with the following schema and constraints: (**4 Marks**)

books(book_id, author_id, title, genre, price)

book_id (identifier for a book) is an integer attribure. ***author_id*** (identifier for an author) is an integer attribute. ***title*** (title of the book) is a variable character attribure of length 100. ***genre*** (genre of the book) is a variable character attribure of length 50. ***price*** (price of the book) is a a floating point attribute with 3 decimal points and 2 fractional points.

Constraints to set for the table **books**:

1. *book_id* is the primary key
2. *author_id* is the foreign key attribute that referes to author_id attribute of authors table
3. *title* should not be empty and must be unique
4. *price* must be between 0 and 1000

Question 3:

Insert the following records to the table **authors**: (**2 Marks**)

- (1, F. Scott Fitzgerald, American, 1896)
- (2, Harper Lee, American, 1926)
- (3, J.K. Rowling, British, 1965)
- (4, J.R.R. Tolkien, British, 1892)
- (5, Dan Brown, American, 1964)
- (6, Stieg Larsson, Swedish, 1954)
- (7, Suzanne Collins, American, 1962)

Question 4:

Insert the following records to the table **books**: (**2 Marks**)

- (1, 1, The Great Gatsby, Fiction, 150.25)
- (2, 2, To Kill a Mockingbird, Fiction, 230.70)
- (3, 3, Harry Potter, Fantasy, 600.00)
- (4, 4, The Hobbit, Fantasy, 720.00)
- (5, 5, The Da Vinci Code, Mystery, 800.00)
- (6, 6, The Girl with the Sword, Mystery, 950.00)
- (7, 7, The Hunger Games, Sci-Fi, 120.00)
- (8, 6, Pride and Prejudice, Fiction, 240.30)

Question 5:

Perform the following Queries: (**8 Marks**)

1. Retrieve all books and their corresponding authors (include *book_id, author_name, title*)
2. Display all authors whose name ends with 'n' (include only *author_name*)
3. Get the details of the book with the highest price (include *book_id, title, price*)
4. Get the titles of all books written by American authors (include *book_id, title, author_name, nationality*)
5. List the authors and their birth year ordered by the birth year in ascending order (include *author_name, birth_year*)
6. Get the details of the genre with the most books (include *genre, total_books*)
7. Display genre and the total price (give *'total_price'* for this column) of each genre with total price exceeds 1000
8. Find the number of books written by each author (include *author_name, book_count*)

[Mark : 20] (CO : CO1 , CO2)

(Blooms Level : 2)