

## Assignment-4

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**Assignment 4:** Write SQL statements to CREATE a new database and tables that reflect the library schema you designed earlier. Use ALTER statements to modify the table structures and DROP statements to remove a redundant table.

Consider the Books table:

```
mysql> desc books;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra      |
+-----+-----+-----+-----+-----+-----+
| BookID     | int       | NO   | PRI | NULL    | auto_increment |
| Title      | varchar(255) | NO   |     | NULL    |              |
| ISBN       | varchar(13) | NO   | UNI | NULL    |              |
| PublishedYear | year      | NO   |     | NULL    |              |
| Genre      | varchar(50) | YES  |     | NULL    |              |
| AuthorID   | int       | NO   | MUL | NULL    |              |
| CopiesAvailable | int      | NO   |     | NULL    |              |
| PublisherID | int       | YES  | MUL | NULL    |              |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.00 sec)
```

Modify the Books Table Structure Using ALTER:

1. Rename Column Genre to Category

```
mysql> ALTER TABLE Books
-> CHANGE COLUMN Genre Category VARCHAR(50);
Query OK, 0 rows affected (0.03 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> desc books;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra      |
+-----+-----+-----+-----+-----+-----+
| BookID     | int       | NO   | PRI | NULL    | auto_increment |
| Title      | varchar(255) | NO   |     | NULL    |              |
| ISBN       | varchar(13) | NO   | UNI | NULL    |              |
| PublishedYear | year      | NO   |     | NULL    |              |
| Category    | varchar(50) | YES  |     | NULL    |              |
| AuthorID   | int       | NO   | MUL | NULL    |              |
| CopiesAvailable | int      | NO   |     | NULL    |              |
| PublisherID | int       | YES  | MUL | NULL    |              |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.00 sec)
```

## 2. Add a New Column for LastUpdated with Default Value

```
mysql> ALTER TABLE Books
-> ADD COLUMN LastUpdated TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP;
Query OK, 0 rows affected (0.03 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> desc books;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default          | Extra               |
+-----+-----+-----+-----+-----+-----+
| BookID     | int           | NO   | PRI | NULL             | auto_increment     |
| Title      | varchar(255)  | NO   |     | NULL             |                     |
| ISBN       | varchar(13)   | NO   | UNI | NULL             |                     |
| PublishedYear | year         | NO   |     | NULL             |                     |
| Category   | varchar(50)   | YES  |     | NULL             |                     |
| AuthorID   | int           | NO   | MUL | NULL             |                     |
| CopiesAvailable | int         | NO   |     | NULL             |                     |
| PublisherID | int           | YES  | MUL | NULL             |                     |
| LastUpdated | timestamp     | YES  |     | CURRENT_TIMESTAMP | DEFAULT_GENERATED on update CURRENT_TIMESTAMP |
+-----+-----+-----+-----+-----+-----+
9 rows in set (0.00 sec)
```

## Drop a Publisher Table:

```
mysql> show tables;
+-----+
| Tables_in_library_sys |
+-----+
| authors               |
| books                 |
| publishers            |
| redundant             |
+-----+
4 rows in set (0.00 sec)

mysql> DROP TABLE redundant;
Query OK, 0 rows affected (0.03 sec)

mysql> show tables;
+-----+
| Tables_in_library_sys |
+-----+
| authors               |
| books                 |
| publishers            |
+-----+
3 rows in set (0.00 sec)
```