DBMS exp 7

mysql> create database DBMSL\_Exp\_7;

Query OK, 1 row affected (0.02 sec)

mysql> use DBMSL\_Exp\_7;

Database changed

mysql> create table Library (BookID int primary key, BookTitle varchar(45) not null, BookAuthor varchar(25) not null, BookEdition int, NumberOfCopies int);

Query OK, 0 rows affected (0.04 sec)

mysql> desc Library;

+----------------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+----------------+-------------+------+-----+---------+-------+

| BookID | int | NO | PRI | NULL | |

| BookTitle | varchar(45) | NO | | NULL | |

| BookAuthor | varchar(25) | NO | | NULL | |

| BookEdition | int | YES | | NULL | |

| NumberOfCopies | int | YES | | NULL | |

+----------------+-------------+------+-----+---------+-------+

5 rows in set (0.00 sec)

mysql> create table Library\_Audit (BookID int not null, BookTitle varchar(45)

not null, BookAuthor varchar(25) not null, BookEdition int, NumberOfCopies int, DateModified date, Operation varchar(15));

Query OK, 0 rows affected (0.04 sec)

mysql> desc Library\_Audit;

+----------------+-------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+----------------+-------------+------+-----+---------+-------+

| BookID | int | NO | | NULL | |

| BookTitle | varchar(45) | NO | | NULL | |

| BookAuthor | varchar(25) | NO | | NULL | |

| BookEdition | int | YES | | NULL | |

| NumberOfCopies | int | YES | | NULL | |

| DateModified | date | YES | | NULL | |

| Operation | varchar(15) | YES | | NULL | |

+----------------+-------------+------+-----+---------+-------+

7 rows in set (0.01 sec)

mysql> delimiter #

create trigger LibraryUpdateTrigger

before update on Library for each row

begin

declare Operation varchar(15);

set Operation = "Updated";

insert into Library\_Audit values (old.BookID, old.BookTitle, old.BookAuthor, old.BookEdition, old.NumberOfCopies, curdate(), Operation);

end #

create trigger LibraryDeleteTrigger

before delete on Library for each row

begin

declare Operation varchar(15);

set Operation = "Deleted";

insert into Library\_Audit values (old.BookID, old.BookTitle, old.BookAuthor, old.BookEdition, old.NumberOfCopies, curdate(), Operation);

end #

mysql> delimiter ;

mysql> insert into Library values (1, 'DBMS', 'Henry Korth', 1, 1000), (2, 'CNS', 'Behrouz Forouzan', 2, 500), (3, 'TOC', 'Vikas Kumar', 1, 200), (4, 'SPOS', 'A

braham Silberschatz', 2, 300);

Query OK, 4 rows affected (0.01 sec)

Records: 4 Duplicates: 0 Warnings: 0

mysql> select \* from Library;

+--------+-----------+----------------------+-------------+----------------+

| BookID | BookTitle | BookAuthor | BookEdition | NumberOfCopies |

+--------+-----------+----------------------+-------------+----------------+

| 1 | DBMS | Henry Korth | 1 | 1000 |

| 2 | CNS | Behrouz Forouzan | 2 | 500 |

| 3 | TOC | Vikas Kumar | 1 | 200 |

| 4 | SPOS | Abraham Silberschatz | 2 | 300 |

+--------+-----------+----------------------+-------------+----------------+

4 rows in set (0.00 sec)

mysql> update Library set BookEdition = 6 where BookID = 1;

Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> select \* from Library;

+--------+-----------+----------------------+-------------+----------------+

| BookID | BookTitle | BookAuthor | BookEdition | NumberOfCopies |

+--------+-----------+----------------------+-------------+----------------+

| 1 | DBMS | Henry Korth | 6 | 1000 |

| 2 | CNS | Behrouz Forouzan | 2 | 500 |

| 3 | TOC | Vikas Kumar | 1 | 200 |

| 4 | SPOS | Abraham Silberschatz | 2 | 300 |

+--------+-----------+----------------------+-------------+----------------+

4 rows in set (0.00 sec)

mysql> select \* from Library\_Audit;

+--------+-----------+-------------+-------------+----------------+--------------+-----------+

| BookID | BookTitle | BookAuthor | BookEdition | NumberOfCopies | DateModified | Operation |

+--------+-----------+-------------+-------------+----------------+--------------+-----------+

| 1 | DBMS | Henry Korth | 1 | 1000 | 2023-11-17 | Updated |

+--------+-----------+-------------+-------------+----------------+--------------+-----------+

1 row in set (0.00 sec)

mysql> update Library set BookAuthor = 'John Hopcraft' where BookTitle = 'TOC';

Query OK, 1 row affected (0.02 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> select \* from Library;

+--------+-----------+----------------------+-------------+----------------+

| BookID | BookTitle | BookAuthor | BookEdition | NumberOfCopies |

+--------+-----------+----------------------+-------------+----------------+

| 1 | DBMS | Henry Korth | 6 | 1000 |

| 2 | CNS | Behrouz Forouzan | 2 | 500 |

| 3 | TOC | John Hopcraft | 1 | 200 |

| 4 | SPOS | Abraham Silberschatz | 2 | 300 |

+--------+-----------+----------------------+-------------+----------------+

4 rows in set (0.00 sec)

mysql> select \* from Library\_Audit;

+--------+-----------+-------------+-------------+----------------+--------------+-----------+

| BookID | BookTitle | BookAuthor | BookEdition | NumberOfCopies | DateModified | Operation |

+--------+-----------+-------------+-------------+----------------+--------------+-----------+

| 1 | DBMS | Henry Korth | 1 | 1000 | 2023-11-17 | Updated |

| 3 | TOC | Vikas Kumar | 1 | 200 | 2023-11-17 | Updated |

+--------+-----------+-------------+-------------+----------------+--------------+-----------+

2 rows in set (0.00 sec)

mysql> delete from Library where BookTitle = 'TOC';

Query OK, 1 row affected (0.02 sec)

mysql> select \* from Library;

+--------+-----------+----------------------+-------------+----------------+

| BookID | BookTitle | BookAuthor | BookEdition | NumberOfCopies |

+--------+-----------+----------------------+-------------+----------------+

| 1 | DBMS | Henry Korth | 6 | 1000 |

| 2 | CNS | Behrouz Forouzan | 2 | 500 |

| 4 | SPOS | Abraham Silberschatz | 2 | 300 |

+--------+-----------+----------------------+-------------+----------------+

3 rows in set (0.00 sec)

mysql> select \* from Library\_Audit;

+--------+-----------+---------------+-------------+----------------+--------------+-----------+

| BookID | BookTitle | BookAuthor | BookEdition | NumberOfCopies | DateModified | Operation |

+--------+-----------+---------------+-------------+----------------+--------------+-----------+

| 1 | DBMS | Henry Korth | 1 | 1000 | 2023-11-17 | Updated |

| 3 | TOC | Vikas Kumar | 1 | 200 | 2023-11-17 | Updated |

| 3 | TOC | John Hopcraft | 1 | 200 | 2023-11-17 | Deleted |

+--------+-----------+---------------+-------------+----------------+--------------+-----------+

3 rows in set (0.00 sec)