Assignment 7

Creating Tables

```
mysql> CREATE TABLE Library (
    ->     book_id INT UNIQUE PRIMARY KEY NOT NULL AUTO_INCREMENT,
    ->     book_name VARCHAR(100) DEFAULT '',
    ->     isbn INT UNIQUE NOT NULL,
    ->     page_count INT,
    ->     author VARCHAR(100),
    ->     year DATE,
    ->     copies_sold INT
    -> );
Query OK, 0 rows affected (0.34 sec)

mysql>
mysql> CREATE TABLE Library_Audit (
    ->     update_id INT UNIQUE PRIMARY KEY NOT NULL AUTO_INCREMENT,
    ->     book_id INT,
    ->     old_book_name VARCHAR(100) DEFAULT '',
    ->     old_isbn INT UNIQUE NOT NULL,
    ->     old_page_count INT,
    ->     old_author VARCHAR(100),
    ->     old_year DATE,
    ->     old_copies_sold INT
    -> );
Query OK, 0 rows affected (0.10 sec)
```

Populating Tables

```
mysql> INSERT INTO Library VALUES
    ->     (1,'totam',14448882,425,'expedita','2023-03-19',43849117),
    ->     (2,'voluptates',48822856,333,'sit','1974-08-27',11021007),
    ->     (3,'quae',10721240,165,'voluptates','2011-05-06',72946253),
    ->     (4,'impedit',77143556,133,'quam','1995-01-13',20492263),
    ->     (5,'cum',57158171,667,'ipsa','2000-01-26',29278743),
    ->     (6,'officia',23698255,804,'temporibus','2007-11-06',77006951),
    ->     (7,'rerum',52692996,871,'numquam','2012-08-23',23321626),
    ->     (8,'perspiciatis',80040097,697,'sunt','2006-05-02',80292082),
    ->     (9,'voluptate',78591954,642,'voluptatem','1990-07-11',23638319),
    ->     (10,'iure',37495366,644,'non','2020-03-08',59228850),
    ->     (11,'repellendus',29416436,841,'in','1982-03-28',63717696),
    ->     (12,'earum',14016995,778,'officia','1971-09-02',43033034),
    ->     (13,'quasi',46762666,855,'magni','1973-04-12',22185173),
    ->     (14,'nihil',12714950,583,'aspernatur','1991-07-24',83182555),
    ->     (15,'perspiciatis',86876793,590,'cum','1979-03-02',89074976),
    ->     (16,'qui',71512407,331,'maiores','2009-09-11',56650470),
    ->     (17,'neque',31651442,511,'perspiciatis','1980-11-07',18051664),
    ->     (18,'aut',77667078,386,'officia','1990-09-02',13554780),
    ->     (19,'qui',67772169,114,'expedita','2006-01-31',35066713),
    ->     (20,'quae',78427689,222,'quaerat','1992-07-22',54087575)
    -> ;
Query OK, 20 rows affected (0.03 sec)
Records: 20  Duplicates: 0  Warnings: 0
```

Creating the Trigger

```
mysql> -- Creating the Trigger
mysql> DELIMITER $$
mysql> CREATE TRIGGER update_trig
    -> BEFORE UPDATE ON Library
    -> FOR EACH ROW
    -> BEGIN
    ->
    ->     INSERT INTO Library_Audit (book_id, old_book_name, old_isbn, old_page_count, old_author,
old_year,old_copies_sold) VALUES

    ->     (OLD.book_id, OLD.book_name, OLD.isbn, OLD.page_count, OLD.author, OLD.year, OLD.copies_sold);
    ->
    -> END $$
Query OK, 0 rows affected (0.03 sec)

mysql> DELIMITER ;
```

Creating the Error Trigger

```
mysql> -- Creating Error Trigger
mysql> DELIMITER $$
mysql> CREATE TRIGGER error_trig
    -> BEFORE UPDATE ON Library
    -> FOR EACH ROW
    -> BEGIN
    ->     IF NEW.book_name = OLD.book_name THEN
    ->     SIGNAL SQLSTATE '45000'
    ->     SET message_text = 'Same value of updated book';
    ->     END IF;
    -> END $$
Query OK, 0 rows affected (0.10 sec)

mysql> DELIMITER ;
```

Testing the Trigger

```
mysql> -- Testing the trigger
mysql>
mysql> UPDATE Library
    -> SET book_name = 'haha totam' WHERE book_id = 1;
Query OK, 1 row affected (0.02 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> UPDATE Library
    -> SET book_name = 'quae' WHERE book_id = 3;
ERROR 1644 (45000): Same value of updated book
mysql>
mysql> select * from library_audit;
+-----------+---------+---------------+----------+----------------+------------+------------+--------------
---+
| update_id | book_id | old_book_name | old_isbn | old_page_count | old_author | old_year   |
old_copies_sold |
+-----------+---------+---------------+----------+----------------+------------+------------+--------------
---+
|         1 |       1 | totam         | 14448882 |            425 | expedita   | 2023-03-19 |
43849117 |
+-----------+---------+---------------+----------+----------------+------------+------------+--------------
---+
1 row in set (0.01 sec)
```