

Name - Yash Lakhtariya

Enrollment number - 21162101012

Branch - CBA , Batch - 31

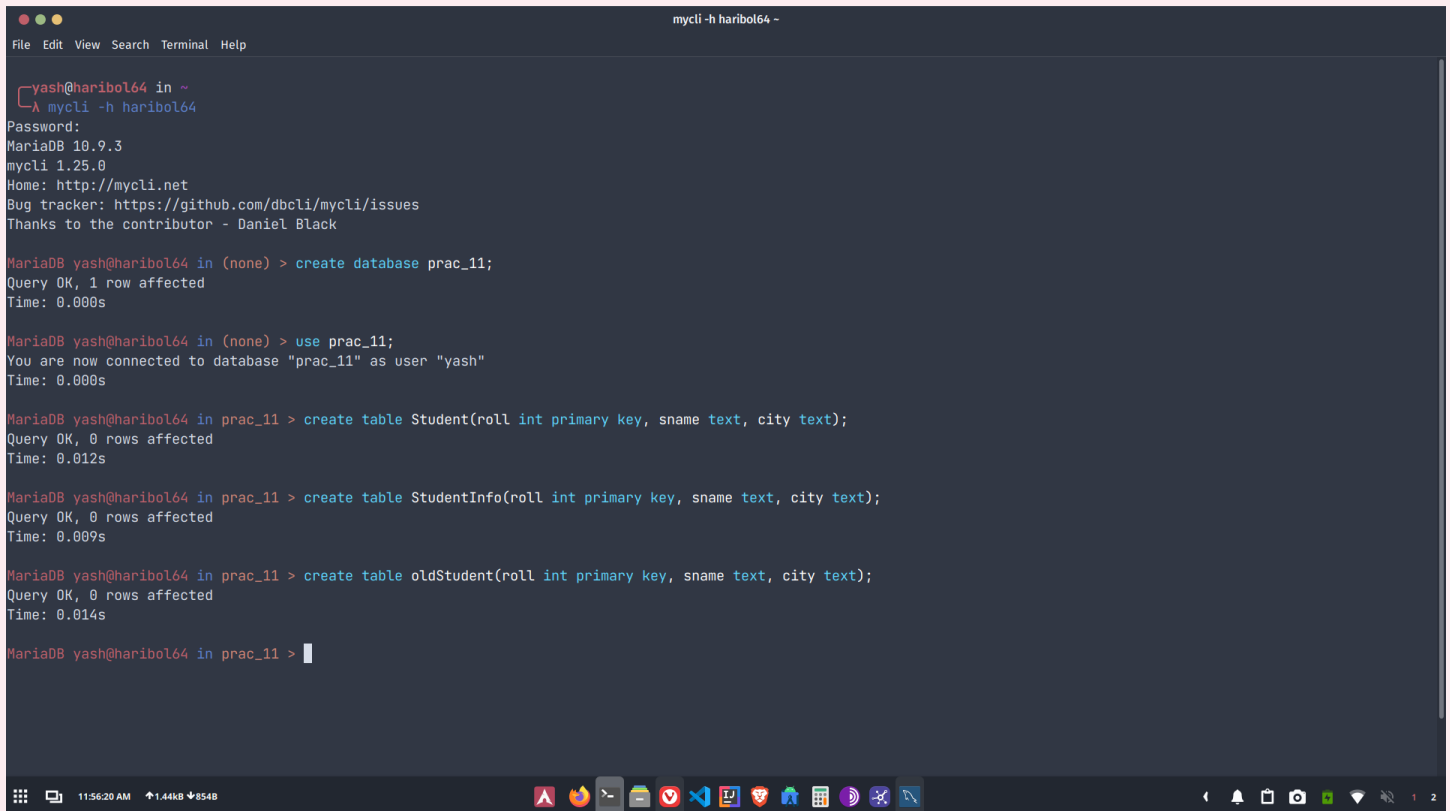
DBMS Practical 11

**Institute of Computer Technology
Ganpat University**

(2CSE301) DATABASE MANAGEMENT SYSTEM

Practical 11 MySQL Triggers

0. Environment for the practical :



```
mycli -h haribol64 -  
File Edit View Search Terminal Help  
  
yash@haribol64 in ~  
└─ mycli -h haribol64  
Password:  
MariaDB 10.9.3  
mycli 1.25.0  
Home: http://mycli.net  
Bug tracker: https://github.com/dbcli/mycli/issues  
Thanks to the contributor - Daniel Black  
  
MariaDB yash@haribol64 in (none) > create database prac_11;  
Query OK, 1 row affected  
Time: 0.000s  
  
MariaDB yash@haribol64 in (none) > use prac_11;  
You are now connected to database "prac_11" as user "yash"  
Time: 0.000s  
  
MariaDB yash@haribol64 in prac_11 > create table Student(roll int primary key, sname text, city text);  
Query OK, 0 rows affected  
Time: 0.012s  
  
MariaDB yash@haribol64 in prac_11 > create table StudentInfo(roll int primary key, sname text, city text);  
Query OK, 0 rows affected  
Time: 0.009s  
  
MariaDB yash@haribol64 in prac_11 > create table oldStudent(roll int primary key, sname text, city text);  
Query OK, 0 rows affected  
Time: 0.014s  
  
MariaDB yash@haribol64 in prac_11 > |
```

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1. Create a trigger that converts each newly inserted student name into Uppercase for table student.

```
mycli -h haribol64 -  
File Edit View Search Terminal Help  
Changed delimiter to //  
Time: 0.000s  
  
MariaDB yash@haribol64 in prac_11 > create trigger eleven1 before insert on Student for each row  
--> begin  
--> set new.sname = upper(new.sname);  
--> end  
--> //  
  
Query OK, 0 rows affected  
Time: 0.009s  
  
MariaDB yash@haribol64 in prac_11 > insert into Student values(1, "Yash", "Vrindavana")//  
Query OK, 1 row affected  
Time: 0.006s  
  
MariaDB yash@haribol64 in prac_11 > select * from `Student`//  
+-----+-----+-----+  
| roll | sname | city |  
+-----+-----+-----+  
| 1    | YASH  | Vrindavana |  
+-----+-----+-----+  
  
1 row in set  
Time: 0.014s  
  
MariaDB yash@haribol64 in prac_11 >   
  
(Delimiter [//] will end the line) [F3] Multiline: ON
```

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2. Create a trigger that insert a tuple into studentinfo table after a tuple is inserted into student table.

```
mycli -h haribol64 -
File Edit View Search Terminal Help
Time: 0.014s

MariaDB yash@haribol64 in prac_11 > create trigger eleven2 after insert on Student for each row
--> begin
--> insert into StudentInfo values(new.roll,new.sname,new.city);
--> end
--> //

Query OK, 0 rows affected
Time: 0.015s

MariaDB yash@haribol64 in prac_11 > insert into Student values(2, "Yash2", "Mayapur");//

Query OK, 1 row affected
Time: 0.006s

MariaDB yash@haribol64 in prac_11 > select * from `Student`//

+-----+-----+-----+
| roll | sname | city |
+-----+-----+-----+
| 1    | YASH  | Vrindavana |
| 2    | YASH2 | Mayapur |
+-----+-----+-----+

2 rows in set
Time: 0.006s

MariaDB yash@haribol64 in prac_11 > select * from `StudentInfo`//

+-----+-----+-----+
| roll | sname | city |
+-----+-----+-----+
| 2    | YASH2 | Mayapur |
+-----+-----+-----+

1 row in set
Time: 0.004s

MariaDB yash@haribol64 in prac_11 > 
```

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3. Create a trigger that updates name in studentinfo table after a name is updated in student table.

```
mycli -h haribol64 -
File Edit View Search Terminal Help
Time: 0.000s

MariaDB yash@haribol64 in prac_11 > create trigger eleven3 after update on Student for each row
--> begin
--> update `StudentInfo` set sname = new.sname;
--> end
--> //

Query OK, 0 rows affected
Time: 0.015s

MariaDB yash@haribol64 in prac_11 > update `Student` set sname = "Haribol" where roll = 2//
Query OK, 1 row affected
Time: 0.006s

MariaDB yash@haribol64 in prac_11 > select * from `Student`//
+-----+-----+-----+
| roll | sname | city |
+-----+-----+-----+
| 1    | YASH  | Vrindavana |
| 2    | Haribol | Mayapur |
+-----+-----+-----+

2 rows in set
Time: 0.014s

MariaDB yash@haribol64 in prac_11 > select * from `StudentInfo`//
+-----+-----+-----+
| roll | sname | city |
+-----+-----+-----+
| 2    | Haribol | Mayapur |
+-----+-----+-----+

1 row in set
Time: 0.006s

MariaDB yash@haribol64 in prac_11 > 
```

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4. Create a trigger that delete a tuple from studentinfo table after a tuple is deleted from student table.

```
mycli -h haribol64 -
File Edit View Search Terminal Help

MariaDB yash@haribol64 in prac_11 > create trigger eleven4 after delete on Student for each row
--> begin
--> delete from 'StudentInfo' where roll = old.roll;
--> end
--> //

Query OK, 0 rows affected
Time: 0.015s

MariaDB yash@haribol64 in prac_11 > delete from 'Student' where roll = 2//
You're about to run a destructive command.
Do you want to proceed? (y/n): y
Your call!
Query OK, 1 row affected
Time: 0.002s

MariaDB yash@haribol64 in prac_11 > select * from 'Student'//
+-----+-----+-----+
| roll | sname | city |
+-----+-----+-----+
| 1    | YASH  | Vrindavana |
+-----+-----+-----+

1 row in set
Time: 0.004s

MariaDB yash@haribol64 in prac_11 > select * from 'StudentInfo'//
+-----+-----+-----+
| roll | sname | city |
+-----+-----+-----+
+-----+-----+-----+

0 rows in set
Time: 0.007s

MariaDB yash@haribol64 in prac_11 > 
```

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5. Create a trigger that insert a tuple into oldstudent table before a tuple is deleted from student table.

```
mycli -h haribol64 -
File Edit View Search Terminal Help

MariaDB yash@haribol64 in prac_11 > create trigger eleven5 before delete on Student for each row
--> begin
--> insert into `oldStudent` values(old.roll,old.sname,old.city);
--> end
--> //

Query OK, 0 rows affected
Time: 0.015s

MariaDB yash@haribol64 in prac_11 > delete from `Student` where roll = 1//
You're about to run a destructive command.
Do you want to proceed? (y/n): y
Your call!
Query OK, 1 row affected
Time: 0.004s

MariaDB yash@haribol64 in prac_11 > select * from `Student`//
+-----+-----+
| roll | sname | city |
+-----+-----+
0 rows in set
Time: 0.008s

MariaDB yash@haribol64 in prac_11 > select * from `oldStudent`//
+-----+-----+
| roll | sname | city |
+-----+-----+
| 1    | YASH  | Vrindavana |
+-----+-----+

1 row in set
Time: 0.006s

MariaDB yash@haribol64 in prac_11 > 
```

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6. Display all the triggers in your database.

```
mycli -h haribol64 -
File Edit View Search Terminal Help
Changed delimiter to ;
Time: 0.000s

MariaDB yash@haribol64 in prac_11 > show triggers;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Trigger | Event | Table | Statement | Definer | character_set_client | collation_connection | Database Collation | sql_mode |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| eleven1 | INSERT | Student | begin
Y_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_SUBSTITUTION | yash@localhost | utf8mb3 |
| | | | set new.sname = uppen(new.sname); | | | | |
| | | | | | | | |
| | | | end | | | | |
| eleven2 | INSERT | Student | begin
Y_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_SUBSTITUTION | yash@localhost | utf8mb3 |
| | | | insert into StudentInfo values(new.roll,new.sname,new.city); | | | | |
| | | | end | | | | |
| eleven3 | UPDATE | Student | begin
Y_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_SUBSTITUTION | yash@localhost | utf8mb3 |
| | | | update `StudentInfo` set sname = new.sname; | | | | |
| | | | end | | | | |
| eleven5 | DELETE | Student | begin
Y_ZERO,NO_AUTO_CREATE_USER,NO_ENGINE_SUBSTITUTION | yash@localhost | utf8mb3 |
| | | | insert into `oldStudent` values(old.roll,old.sname,old.city); | | | | |
| | | | end | | | | |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| BEFORE | 2022-10-14 | 11:56:59.220000 | STRICT_TRANS_TABLES,ERROR_FOR_DIVISION_B |
| utf8mb3_general_ci | utf8mb4_unicode_ci |
| AFTER | 2022-10-14 | 11:59:27.920000 | STRICT_TRANS_TABLES,ERROR_FOR_DIVISION_B |
| utf8mb3_general_ci | utf8mb4_unicode_ci |
| AFTER | 2022-10-14 | 12:02:58.740000 | STRICT_TRANS_TABLES,ERROR_FOR_DIVISION_B |
| utf8mb3_general_ci | utf8mb4_unicode_ci |
| BEFORE | 2022-10-14 | 12:08:37.580000 | STRICT_TRANS_TABLES,ERROR_FOR_DIVISION_B |
| utf8mb3_general_ci | utf8mb4_unicode_ci |
```

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[illegible]