

Department of Computer Engineering

University of Peradeniya CO226-Database Systems

Lab Sheet Number : 07

Topic: Views, Triggers, Stored Procedures

Reg. No: E/18/397

**Task**

1)

```
mysql> create database e18397lab07
-> ;
Query OK, 1 row affected (0.01 sec)
```

```
mysql> use e18397lab07;
Database changed
```

```
mysql> create table student(
-> Name varchar(50),
-> RegNo int primary key,
-> GPA float,
-> ConRegNo int,
-> Class varchar(50)
-> );
Query OK, 0 rows affected (0.04 sec)
```

```
mysql> desc student;
```

Field	Type	Null	Key	Default	Extra
Name	varchar(50)	YES		NULL	
RegNo	int	NO	PRI	NULL	
GPA	float	YES		NULL	
ConRegNo	int	YES		NULL	
Class	varchar(50)	YES		NULL	

```
5 rows in set (0.02 sec)
```

```
mysql> INSERT INTO Student(Name, RegNo, GPA) VALUES
-> ("Sameera", 425, 3.25),
-> ("Kasun", 210, 3.40),
-> ("Kalpa", 201, 3.10),
-> ("Chathura", 312, 3.85),
-> ("Lakmali", 473, 3.75),
-> ("Sidath", 352, 3.30),
-> ("Kumudu", 111, 3.70),
-> ("Nalin", 456, 3.05),
-> ("Rohani", 324, 3.70),
-> ("Chithra", 231, 3.30);
```

Query OK, 10 rows affected (0.01 sec)  
Records: 10 Duplicates: 0 Warnings: 0

```
mysql> select * from student;
```

Name	RegNo	GPA	ConRegNo	Class
Kumudu	111	3.7	NULL	NULL
Kalpa	201	3.1	NULL	NULL
Kasun	210	3.4	NULL	NULL
Chithra	231	3.3	NULL	NULL
Chathura	312	3.85	NULL	NULL
Rohani	324	3.7	NULL	NULL
Sidath	352	3.3	NULL	NULL
Sameera	425	3.25	NULL	NULL
Nalin	456	3.05	NULL	NULL
Lakmali	473	3.75	NULL	NULL

10 rows in set (0.00 sec)

2)

```
mysql> create table Convocation(
-> Lastname varchar(50),
-> Address varchar(200),
-> Age int,
-> RegNO int,
-> ConRegNO int primary key,
-> foreign key (RegNO) references Student(RegNO)
-> );
```

Query OK, 0 rows affected (0.15 sec)

```
mysql> desc convocation;
```

Field	Type	Null	Key	Default	Extra
Lastname	varchar(50)	YES		NULL	
Address	varchar(200)	YES		NULL	
Age	int	YES		NULL	
RegNO	int	YES	MUL	NULL	
ConRegNO	int	NO	PRI	NULL	

5 rows in set (0.01 sec)

3)

```
mysql> DELIMITER //
mysql> create procedure AddDetails (RegNum int, Address varchar(200), age int, ConRNum int)
-> BEGIN
-> insert into convocation values ((select name from student where RegNO = RegNUM), Address, age, RegNum, ConRNum);
-> update student SET ConRegNO = ConRNum where RegNO = RegNum;
-> END //
Query OK, 0 rows affected (0.07 sec)

mysql> DELIMITER;
```

4)

```
mysql> call AddDetails(425, "221/2, Hendala road, Wattala", 26, 1);
Query OK, 1 row affected (0.02 sec)

mysql> call AddDetails(312, "333, Old Moor Street, Colombo 12", 27, 2);
Query OK, 1 row affected (0.01 sec)

mysql> call AddDetails(473, "114, Yatinuwara weediya, Kandy", 27, 3);
Query OK, 1 row affected (0.01 sec)

mysql> call AddDetails(352, "98, Canal Bank Road, Off Hill Street, Dehiwala", 26, 4);
Query OK, 1 row affected (0.01 sec)

mysql> call AddDetails(456, "NO 13, Kohilawatta, Angoda", 28, 5);
Query OK, 1 row affected (0.01 sec)

mysql> select * from student;
+-----+-----+-----+-----+-----+
| Name   | RegNo | GPA   | ConRegNo | Class |
+-----+-----+-----+-----+-----+
| Kumudu | 111   | 3.7   | NULL     | NULL  |
| Kalpa  | 201   | 3.1   | NULL     | NULL  |
| Kasun  | 210   | 3.4   | NULL     | NULL  |
| Chithra | 231   | 3.3   | NULL     | NULL  |
| Chathura | 312   | 3.85  | 2        | NULL  |
| Rohani  | 324   | 3.7   | NULL     | NULL  |
| Sidath  | 352   | 3.3   | 4        | NULL  |
| Sameera | 425   | 3.25  | 1        | NULL  |
| Nalin  | 456   | 3.05  | 5        | NULL  |
| Lakmali | 473   | 3.75  | 3        | NULL  |
+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

5)

```
mysql> create view Registered as
-> select name, Student.RegNO, GPA, Student.ConRegNo, Address, age
-> from student, convocation
-> where Student.RegNo = Convocation.RegNo;
Query OK, 0 rows affected (0.01 sec)
```

```
mysql>
mysql> select * from registered;
```

name	RegNO	GPA	ConRegNo	Address	age
Sameera	425	3.25	1	221/2, Hendala road, Wattala	26
Chathura	312	3.85	2	333, Old Moor Street, Colombo 12	27
Lakmali	473	3.75	3	114, Yatinuwara weediya, Kandy	27
Sidath	352	3.3	4	98, Canal Bank Road, Off Hill Street, Dehiwala	26
Nalin	456	3.05	5	NO 13, Kohilawatta, Angoda	28

```
5 rows in set (0.00 sec)
```

```
mysql>
```

6)

```
mysql> create view NotRegistered as
-> select name, RegNO, GPA
-> from student
-> where ConRegNo is NULL;
Query OK, 0 rows affected (0.03 sec)
```

```
mysql> select * from notregistered;
```

name	RegNO	GPA
Kumudu	111	3.7
Kalpa	201	3.1
Kasun	210	3.4
Chithra	231	3.3
Rohani	324	3.7

```
5 rows in set (0.00 sec)
```

7)

```
mysql> create table LateRegistration(  
-> Lastname varchar(50),  
-> Address varchar(200),  
-> Age int,  
-> RegNO int,  
-> ConRegNO int primary key,  
-> foreign key (RegNO) references Student(RegNO)  
-> );  
Query OK, 0 rows affected (0.29 sec)
```

```
mysql> desc LateRegistration;  
+-----+-----+-----+-----+-----+-----+  
| Field      | Type          | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| Lastname   | varchar(50)   | YES  |     | NULL    |       |  
| Address    | varchar(200)  | YES  |     | NULL    |       |  
| Age        | int           | YES  |     | NULL    |       |  
| RegNO      | int           | YES  | MUL | NULL    |       |  
| ConRegNO   | int           | NO   | PRI | NULL    |       |  
+-----+-----+-----+-----+-----+-----+  
5 rows in set (0.01 sec)  
  
mysql>
```

8)

```
mysql> create trigger LateReg  
-> after insert on Lateregistration  
-> for each row  
-> update student set ConRegNO = new.ConRegNO  
-> where RegNo = new.RegNo ;  
Query OK, 0 rows affected (0.03 sec)
```

9)

```
mysql> INSERT INTO LateRegistration VALUES  
-> ("Kasun", "NO.52, Old Matara road, Pettigalawatta", 25, 210, 6),  
-> ("Kalpa", " No. 427/1, Sooriyagoda, Murutalawa, kandy", 23, 201, 7),  
-> ("Kumudu", "106, Jayasundara Mawatha, Kalutara", 4, 111, 8),  
-> ("Rohani", " NO.540, Yakkaduwa, Ja-ela", 23, 324, 9),  
-> ("Chithra", " 83, Horana Road, Panadura", 25, 231, 10);  
Query OK, 5 rows affected (0.10 sec)  
Records: 5 Duplicates: 0 Warnings: 0  
  
mysql> select * from student;  
+-----+-----+-----+-----+-----+  
| Name      | RegNo | GPA  | ConRegNo | Class |  
+-----+-----+-----+-----+-----+  
| Kumudu    | 111   | 3.7  | 8        | NULL  |  
| Kalpa     | 201   | 3.1  | 7        | NULL  |  
| Kasun     | 210   | 3.4  | 6        | NULL  |  
| Chithra   | 231   | 3.3  | 10       | NULL  |  
| Chathura  | 312   | 3.85 | 2        | NULL  |  
| Rohani    | 324   | 3.7  | 9        | NULL  |  
| Sidath    | 352   | 3.3  | 4        | NULL  |  
| Sameera   | 425   | 3.25 | 1        | NULL  |  
| Nalin     | 456   | 3.05 | 5        | NULL  |  
| Lakmali   | 473   | 3.75 | 3        | NULL  |  
+-----+-----+-----+-----+-----+  
10 rows in set (0.00 sec)
```

10)

```
mysql> delimiter //
mysql> create procedure find_Class()
-> begin
-> update Student set Class='First class honors' where GPA>=3.7;
-> update Student set Class='Second class honors-upper division' where GPA<3.7 and GPA>=3.3;
-> update Student set Class='Second class honors-lower division' where GPA<3.3 and GPA>=2.7 ;
-> update Student set Class='Third class honors' where GPA<2.7 and GPA>=2.0;
-> end //
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> call find_class();
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> select * from student;
```

Name	RegNo	GPA	ConRegNo	Class
Kumudu	111	3.7	8	First class honors
Kalpa	201	3.1	7	Second class honors-lower division
Kasun	210	3.4	6	Second class honors-upper division
Chithra	231	3.3	10	Second class honors-lower division
Chathura	312	3.85	2	First class honors
Rohani	324	3.7	9	First class honors
Sidath	352	3.3	4	Second class honors-lower division
Sameera	425	3.25	1	Second class honors-lower division
Nalin	456	3.05	5	Second class honors-lower division
Lakmali	473	3.75	3	First class honors

```
10 rows in set (0.00 sec)
```

```
mysql> |
```