Birla Institute of Technology & Science, Pilani, K. K. BIRLA Goa campus
Database Systems (CS F212) Second Semester 2019-2020

Lab-7

To study stored procedures and user defined function in MySQL

Instructions:

You need following two tables in the database.

Student table with following information

id	name	percentage
1	MMM	45.00
2	BBB	65.50
3	AAA	50.00
4	CCAD	95.50
5	RRR	0.00
6	LLL	45.60
7	MMM	45.00
8	HHH	80.00

Orders table with following information

oisbn	ocid	qty
B1	10	2
B1	10	2
B1	11	4
B1	11	4
B3	10	6
B3	11	4
B3	11	4
B3	11	4

You can refer to following links for study material:

http://www.mysqltutorial.org/sql-cursor-in-stored-procedures.aspx
http://forums.mysql.com/read.php?98,358569
http://dev.mysql.com/doc/refman/5.0/en/cursors.html
http://schimpf.es/using-cursor-mysql-stored-procedure/

Exercise

Q1. Write an user defined function DisplayOrder that takes ocid as input parameter and displays total number of books ordered(oisbn) by the corresponding customer as output.

expected output:

```
mysql> select distinct ocid,DisplayOrder(10)as total_books from
bookorder where ocid=10;
+------+------------------+
| ocid | total_books      |
+------+------------------+
| 10   |            2     |
+------+------------------+
```

Q2. Write a stored procedure DisplayDiscount that takes ocid as input parameter and displays the discount based on total books ordered(oisbn) by the corresponding customer as output.

(if count=3 then discount=10. if count=5 then discount=20 else discount=1)
(Hint: use above function to calculate total books ordered. use case statement to calculate the discount.)

expected output:

```
mysql> call DisplayOrder(10,@discount);

mysql> select @discount;
+---------------+
| @discount     |
+---------------+
|    10         |
+---------------+
```

Q3. Write an user defined function FindGrade that takes id as input parameter and display the corresponding grade of the student based on the grandtotal.
(more than 80 : A,
 between 45 and 80 (both inclusive) : B and
 less than 45: C)
Note: do not update the student table, just display the corresponding grade.
Hint: use if then statements.

expected output:

```
select id,percentage, FindGrade(7) as Grade from student where id=7;
+----+------------+--------------+
| id | percentage | Grade        |
+----+------------+--------------+
|  7 |      45.00 | B            |
+----+------------+--------------+
```

Q4. Add a column grade of data type char to student table initially NULL. Write a stored procedure AssignGrade to find the grades and update the grades of all students. call the procedure and verify the grades in all records. (to learn loops, cursor and if then statement in stored procedures in MySQL)

Q5. Now insert a new record in student table. Call the procedure AssignGrade created before and check the grade for new record.