**ASSIGNMENT 5**

**PL/SQL Stored Procedure and Stored Function.**

**Write a Stored Procedure namely proc\_Grade for the categorization of student. If marks scored by students in examination is less than or equal to 1500 and marks greater than or equal to 990 then student will be placed in distinction category if marks scored are between 989 and900 category is first class, if marks 899 and 825 category is Higher Second Class**

**Write a PL/SQL block for using procedure created with above requirement.**

**Schemas:**

**Stud\_Marks(name, total\_marks)**

**Result(Roll,Name, Class)**

mysql> create database assi5studentgrade;

Query OK, 1 row affected (0.01 sec)

mysql> use assi5studentgrade;

Database changed

mysql> create table stud\_marks(Name varchar(20),total\_marks int);

Query OK, 0 rows affected (0.05 sec)

mysql> create table result(roll int primary key auto\_increment not null,name varchar(20), class varchar(10))

-> ;

Query OK, 0 rows affected (0.04 sec)

mysql> desc stud\_marks;

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

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

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

| Name | varchar(20) | YES | | NULL | |

| total\_marks | int | YES | | NULL | |

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

2 rows in set (0.01 sec)

mysql> desc result;

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

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

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

| roll | int | NO | PRI | NULL | auto\_increment |

| name | varchar(20) | YES | | NULL | |

| class | varchar(10) | YES | | NULL | |

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

3 rows in set (0.00 sec)

mysql> insert into stud\_marks values("stud1",1400);

Query OK, 1 row affected (0.01 sec)

mysql> insert into stud\_marks values("stud2",950);

Query OK, 1 row affected (0.01 sec)

mysql> insert into stud\_marks values("stud3",850);

Query OK, 1 row affected (0.01 sec)

mysql> select \* from stud\_marks;

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

| Name | total\_marks |

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

| stud1 | 1400 |

| stud2 | 950 |

| stud3 | 850 |

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

3 rows in set (0.00 sec)

mysql> delimiter //

mysql> create procedure proc\_Grade(IN rno int,out grade varchar(25))

-> begin

-> declare m int;

-> select total\_marks into m from stud\_marks where name=(select name from result where roll=rno);

-> if m>=990 and m<=1500 then

-> select 'Distinction' into grade;

-> update result set class='Distinction' where roll=rno;

-> elseif m>=900 and m<=989 then

-> select 'First Class' into grade;

-> update result set class='First Class' where roll=rno;

-> elseif m>=825 and m<=899 then

-> select 'Higher Second Class' into grade;

-> update result set class='Higher Second Class' where roll=rno;

-> else

-> select '--' into grade;

-> update result set class='--' where roll=rno;

-> end if;

-> end;

-> //

Query OK, 0 rows affected (0.01 sec)

mysql> insert into result(roll,name) values(1,'stud1');//

Query OK, 1 row affected (0.01 sec)

mysql> insert into result(name) values('stud2');//

Query OK, 1 row affected (0.01 sec)

mysql> insert into result(name) values('stud3');//

Query OK, 1 row affected (0.01 sec)

mysql> select \* from result;

-> //

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

| roll | name | class |

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

| 1 | stud1 | NULL |

| 2 | stud2 | NULL |

| 3 | stud3 | NULL |

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

3 rows in set (0.00 sec)

mysql> create function func\_grade(rno int)

-> return varchar(25)

-> delerministic

-> begin

-> declare grade varchar(25)

-> call proc\_Grade(rno,grade);

-> return grade;

-> end;

-> //

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'return varchar(25)

mysql> create function func\_grade(rno int)

-> returns varchar(25)

-> DETERMINISTIC

-> READS SQL DATA

-> begin

-> declare grade varchar(25);

-> call proc\_Grade(rno,grade);

-> return grade;

-> end;//

Query OK, 0 rows affected (0.02 sec)

mysql> select func\_grade(1);//

ERROR 1406 (22001): Data too long for column 'class' at row 1

mysql> alter table result modify column class varchar(25);

-> //

Query OK, 0 rows affected (0.03 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> select func\_grade(1);//

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

| func\_grade(1) |

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

| Distinction |

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

1 row in set (0.01 sec)

mysql> select \* from result;//

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

| roll | name | class |

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

| 1 | stud1 | Distinction |

| 2 | stud2 | NULL |

| 3 | stud3 | NULL |

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

3 rows in set (0.00 sec)

mysql> select func\_grade(2);//

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

| func\_grade(2) |

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

| First Class |

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

1 row in set (0.01 sec)

mysql> select func\_grade(3);//

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

| func\_grade(3) |

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

| Higher Second Class |

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

1 row in set (0.01 sec)

mysql> insert into result(name) values("stud4");

-> //

Query OK, 1 row affected (0.01 sec)

mysql> insert into stud\_marks values("stud4",140);//

Query OK, 1 row affected (0.01 sec)

mysql> select func\_grade(4);//

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

| func\_grade(4) |

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

| -- |

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

1 row in set (0.01 sec)

mysql> select \* from result;//

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

| roll | name | class |

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

| 1 | stud1 | Distinction |

| 2 | stud2 | First Class |

| 3 | stud3 | Higher Second Class |

| 4 | stud4 | -- |

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

4 rows in set (0.01 sec)

mysql>exit