**SEHEJ BAKSHI DBMS Lab 18/08 – 25/08**

**Assignment No. 5**

**Unnamed PL/SQL code block: Use of Control structure and Exception handling is mandatory.** Write a PL/SQL block of code for the following requirements:- Schema:

1. Borrower(Roll\_no, Name, DateofIssue, NameofBook, Status)
2. Fine(Roll\_no, Date, Amt)

* Accept roll\_no & name of book from user
* Check the number of days (from date of issue); if days are between 15 to 30 then fine amounts will be Rs 5per day
* If no. of days>30, per day fine will be Rs 50 per day & for days less than 30, Rs. 5 per day.
* After submitting the book, status will change from I to R
* If condition of fine is true, then details will be stored into fine table

Frame the problem statement for writing PL/SQL block inline with above statement.

1. **Borrower(Roll\_no, Name, DateofIssue, NameofBook, Status)**

mysql> create table borrower(rollno int primary key, name varchar(20), dateofissue date, nameofbook varchar(20), status varchar(10));

Query OK, 0 rows affected (1.66 sec)

mysql> desc borrower;

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

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

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

| rollno | int | NO | PRI | NULL | |

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

| dateofissue | date | YES | | NULL | |

| nameofbook | varchar(20) | YES | | NULL | |

| status | varchar(10) | YES | | NULL | |

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

5 rows in set (0.20 sec)

mysql> insert into borrower values  
-> (1, 'swapnil', '2020-01-01', 'piko', 'I'),  
-> (2, 'negi', '2020-02-19', 'dbms', 'I'),  
 -> (3, 'sehej', '2020-06-18', 'the book', 'I'),  
 -> (4, 'akshay', '2020-05-11', 'hello there!', 'I'),  
 -> (5, 'skywalker', '2020-04-23', 'general kenobi', 'I'),  
 -> (6, 'obiwan', '2020-03-02', 'satine', 'I');

Query OK, 6 rows affected (0.27 sec)

Records: 6 Duplicates: 0 Warnings: 0

mysql> select \* from borrower;

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

| rollno | name | dateofissue | nameofbook | status |

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

| 1 | swapnil | 2020-01-01 | piko | I |

| 2 | negi | 2020-02-19 | dbms | I |

| 3 | sehej | 2020-06-18 | the book | I |

| 4 | akshay | 2020-05-11 | hello there! | I |

| 5 | skywalker | 2020-04-23 | general kenobi | I |

| 6 | obiwan | 2020-03-02 | satine | I |

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

1. rows in set (0.02 sec)
2. **Fine(Roll\_no, Date, Amt)**

mysql> create table fine(rollno int, dateofreturn date, amt int);

Query OK, 0 rows affected (0.71 sec)

mysql> alter table fine add foreign key(rollno) references borrower(rollno);

Query OK, 0 rows affected (2.43 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> desc fine;

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

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

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

| rollno | int | YES | MUL | NULL | |

| dateofreturn | date | YES | | NULL | |

| amt | int | YES | | NULL | |

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

3 rows in set (0.10 sec)

1. **Procedure**

mysql> delimiter //

mysql> create procedure calcfine(in roll int, in sname varchar(20))  
 -> begin  
-> declare days int;  
 -> declare continue handler for not found  
-> begin  
-> select 'NOT FOUND';  
 -> end;  
 -> select datediff(curdate(), dateofissue) into days from borrower where rollno=roll and sname=name;  
 -> if(days>15 and days<30)  
 -> then  
-> insert into fine values(roll, curdate(), (days\*5));  
 -> end if;  
 -> if(days>30)  
 -> then  
-> insert into fine values(roll, curdate(), (days\*50));  
 -> end if;  
 -> update borrower set status='R' where rollno=roll;  
 -> end;  
 -> //

Query OK, 0 rows affected (0.11 sec)

mysql> call calcfine(1, 'swapnil');//

Query OK, 1 row affected (0.27 sec)

mysql> select \* from fine;//

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

| rollno | dateofreturn | amt |

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

| 1 | 2020-08-25 | 11850 |

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

1 row in set (0.00 sec)

mysql> call calcfine(8, 'midvd');//

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

| NOT FOUND |

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

| NOT FOUND |

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

1 row in set (0.00 sec)

Query OK, 0 rows affected (0.01 sec)

mysql> select \* from borrower;//

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

| rollno | name | dateofissue | nameofbook | status |

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

| 1 | swapnil | 2020-01-01 | piko | R |

| 2 | negi | 2020-02-19 | dbms | I |

| 3 | sehej | 2020-06-18 | the book | I |

| 4 | akshay | 2020-05-11 | hello there! | I |

| 5 | skywalker | 2020-04-23 | general kenobi | I |

| 6 | obiwan | 2020-03-02 | satine | I |

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

6 rows in set (0.00 sec)