**ASSIGNMENT 4**

**Unnamed PL/SQL code block: Use of Control structure and Exception handling is mandatory.**

**Suggested Problem statement:**

Consider Tables:

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

2. Fine(Roll\_no,Date,Amt)

Accept Roll\_no & NameofBook from user.

* Check the number of days (from date of issue),
* If days are between 15 to 30 then fine amount 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.
* Also handles the exception by named exception handler or user define exception handler.

**mysql> create database library;**

Query OK, 1 row affected (0.01 sec)

**mysql> use dbms;**

Database changed

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

**-> varchar(20),status varchar(20));**

Query OK, 0 rows affected (0.35 sec)

**mysql> create table fine(rollno int,foreign key(rollno) references borrower(rollno),returndate date,amount int);**

Query OK, 0 rows affected (0.38 sec)

**mysql> insert into borrower values(1,'abc','2021-06-01','SEPM','I');**

Query OK, 1 row affected (0.06 sec)

**mysql> insert into borrower values(2,'xyz','2021-05-01','OOP','I');**

Query OK, 1 row affected (0.06 sec)

**mysql> insert into borrower values(3,'pqr','2021-06-15','DBMS','I');**

Query OK, 1 row affected (0.12 sec)

**mysql> insert into borrower values(4,'def','2021-06-30','DSA','I');**

Query OK, 1 row affected (0.10 sec)

**mysql> insert into borrower values(5,'lmn','2021-07-05','ADS','I');**

Query OK, 1 row affected (0.05 sec)

**mysql> select \* from borrower;**

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

| rollno | name | dateofissue | nameofbook | status |

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

| 1 | abc | 2021-06-01 | SEPM | I |

| 2 | xyz | 2021-05-01 | OOP | I |

| 3 | pqr | 2021-06-15 | DBMS | I |

| 4 | def | 2021-06-30 | DSA | I |

| 5 | lmn | 2021-07-05 | ADS | I |

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

5 rows in set (0.00 sec)

**mysql> delimiter $**

**mysql> create procedure calc\_fine\_lib(in roll int)**

**-> begin**

**-> declare fine1 int;**

**-> declare noofdays int;**

**-> declare issuedate date;**

**-> declare exit handler for SQLEXCEPTION select 'create table definition';**

**-> select dateofissue into issuedate from borrower where rollno=roll;**

**-> select datediff(curdate(),issuedate) into noofdays;**

**-> if noofdays>15 and noofdays<=30 then**

**-> set fine1=noofdays\*5;**

**-> insert into fine values(roll,curdate(),fine1);**

**-> elseif noofdays>30 then**

**-> set fine1=((noofdays-30)\*50) + 30\*5;**

**-> insert into fine values(roll,curdate(),fine1);**

**-> else**

**->**

**-> insert into fine values(roll,curdate(),0);**

**-> end if;**

**-> update borrower set status='R' where rollno=roll;**

**-> end $**

Query OK, 0 rows affected (0.04 sec)

**mysql> delimiter ;**

**mysql> call calc\_fine\_lib(1);**

Query OK, 1 row affected (0.11 sec)

**mysql> call calc\_fine\_lib(2);**

Query OK, 1 row affected (0.20 sec)

**mysql> call calc\_fine\_lib(3);**

Query OK, 1 row affected (0.10 sec)

**mysql> call calc\_fine\_lib(4);**

Query OK, 1 row affected (0.10 sec)

**mysql> call calc\_fine\_lib(5);**

Query OK, 1 row affected (0.10 sec)

**mysql> select \* from fine;**

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

| rollno | returndate | amount |

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

| 1 | 2022-08-26 | 21200 |

| 2 | 2022-08-26 | 22750 |

| 3 | 2022-08-26 | 20500 |

| 4 | 2022-08-26 | 19750 |

| 5 | 2022-08-26 | 19500 |

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

5 rows in set (0.00 sec)