Assignment: 04

(PL/SQL)

Problem Statement a): 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.

Code:

mysql> create database Viru;

mysql> use Viru;

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

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

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

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

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

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

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

mysql> select \* from borrower;

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 $

mysql> delimiter ;

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

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

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

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

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

mysql> select \* from fine;

mysql> drop database Viru;

Problem Statement b): Write a PL/SQL code block to calculate the area of a circle for a value of radius varying from 5 to 9. Store the radius and the corresponding values of calculated area in an empty table named areas, consisting of two columns, radius and area.

Code:

mysql> create table areas (radius int, area float(4));

mysql> delimiter //

mysql> create procedure calc (in var1 int, out var2 float(4))

-> begin

-> while var1<=9 do

-> set var2 = var1\*var1\*3.14;

-> insert into areas values (var1,var2);

-> set var1 = var1+1;

-> end while;

-> end

-> //

mysql> call calc(5,@n1)//

mysql> select \* from areas//

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

| radius | area |

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

| 5 | 78.5 |

| 6 | 113.04 |

| 7 | 153.86 |

| 8 | 200.96 |

| 9 | 254.34 |

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

5 rows in set (0.00 sec)