**28/08/2020 ASSIGNMENT 5 SANJAY RAWAT(7141)**

**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.

mysql> SHOW DATABASES;

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

| Database |

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

| assgn3 |

| assgn4 |

| assgn5 |

| assgn6 |

| assgn7 |

| assgn8 |

| information\_schema |

| mysql |

| performance\_schema |

| person |

| sakila |

| southwind |

| sys |

| test |

| world |

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

15 rows in set (0.05 sec)

mysql> USE ASSGN5;

Database changed

mysql> DELIMITER ##

mysql> SHOW TABLES##

Empty set (0.00 sec)

mysql> CREATE TABLE BORROWER(

-> RollNo int PRIMARY KEY,

-> Name varchar(20),

-> DateOfIssue date,

-> NameOfBook varchar(20),

-> Status char(1)

-> );

-> ##

Query OK, 0 rows affected (1.02 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 | char(1) | YES | | NULL | |

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

5 rows in set (0.00 sec)

mysql> CREATE TABLE FINE(

-> RollNO int,

-> DateOfReturn date,

-> Amount int

-> );

-> ##

Query OK, 0 rows affected (0.62 sec)

mysql> ALTER TABLE FINE ADD FOREIGN KEY(RollNo) REFERENCES BORROWER(RollNO)##

Query OK, 0 rows affected (2.39 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 | |

| Amount | int | YES | | NULL | |

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

3 rows in set (0.00 sec)

mysql> SHOW TABLES##

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

| Tables\_in\_assgn5 |

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

| borrower |

| fine |

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

2 rows in set (0.00 sec)

mysql> CREATE PROCEDURE INSERTBORROWER(IN RollNo INT,IN Name varchar(20),IN DateOfIssue date,IN NameOfBook varchar(20),Status char(1))

-> BEGIN

-> INSERT INTO BORROWER VALUES (RollNo,Name, DateOfIssue,NameOfBook,Status);

-> END;

-> ##

Query OK, 0 rows affected (0.10 s)

mysql> CALL INSERTBORROWER(1,'Sanjay','2020-01-01','DBMS','I')##

Query OK, 1 row affected (0.11 sec)

mysql> CALL INSERTBORROWER(2,'Anish','2020-02-01','SEPM','I')##

Query OK, 1 row affected (0.15 sec)

mysql> CALL INSERTBORROWER(3,'Atul','2020-03-01','CN','I')##

Query OK, 1 row affected (0.07 sec)

mysql> CALL INSERTBORROWER(4,'Arun','2020-04-01','TOC','I')##

Query OK, 1 row affected (0.16 sec)

mysql> CALL INSERTBORROWER(5,'Aman','2020-05-01','ISEE','I')##

Query OK, 1 row affected (0.10 sec)

mysql> SELECT \*FROM BORROWER##

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

| RollNo | Name | DateOfIssue | NameOfBook | Status |

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

| 1 | Sanjay | 2020-01-01 | DBMS | I |

| 2 | Anish | 2020-02-01 | SEPM | I |

| 3 | Atul | 2020-03-01 | CN | I |

| 4 | Arun | 2020-04-01 | TOC | I |

| 5 | Aman | 2020-05-01 | ISEE | I |

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

5 rows in set (0.00 sec)

mysql> CREATE PROCEDURE CalFine(IN roll int,IN BN varchar(20))

-> BEGIN

-> DECLARE fine int;

-> DECLARE ID date;

-> DECLARE nod int;

-> DECLARE cc cursor for select DateOfIssue from BORROWER WHERE RollNo=roll AND NameOfBook =BN;

-> open cc;

-> fetch cc into ID;

-> close cc;

-> set nod=datediff(curdate(),ID);

-> IF nod < 15 THEN

-> set fine = 0;

-> ELSEIF nod >=15 AND nod <=30 THEN

-> set fine= (nod-15)\*5;

-> ELSE

-> set fine =15\*5 +(nod-30)\*50;

-> END IF;

-> INSERT INTO FINE VALUES (roll,curdate(),fine);

-> UPDATE BORROWER set Status ='R' WHERE RollNo=roll AND NameOfBook = BN;

-> END;

-> ##

Query OK, 0 rows affected (0.30 sec)Query OK, 0 rows affected (0.11 sec)

mysql> call CalFine(1,'DBMS')##

Query OK, 1 row affected (0.26 sec)

mysql> call CalFine(2,'DBMS')##

ERROR 1329 (02000): No data - zero rows fetched, selected, or processed

mysql> call CalFine(2,'SEPM')##

Query OK, 1 row affected (0.28 sec)

mysql> call CalFine(3,'CN')##

Query OK, 1 row affected (0.09 sec)

mysql> call CalFine(4,'TOC')##

Query OK, 1 row affected (0.30 sec)

mysql> call CalFine(5,'ISEE')##

Query OK, 1 row affected (0.18 sec)

mysql> SELECT \* FROM FINE ##

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

| Rollno | DateOfReturn | Amount |

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

| 1 | 2020-08-25 | 10425 |

| 2 | 2020-08-25 | 8875 |

| 3 | 2020-08-25 | 7425 |

| 4 | 2020-08-25 | 5875 |

| 5 | 2020-08-25 | 4375 |

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

5 rows in set (0.00 sec)

mysql> SELECT \* FROM BORROWER ##

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

| RollNo | Name | DateOfIssue | NameOfBook | Status |

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

| 1 | Sanjay | 2020-01-01 | DBMS | R |

| 2 | Anish | 2020-02-01 | SEPM | R |

| 3 | Atul | 2020-03-01 | CN | R |

| 4 | Arun | 2020-04-01 | TOC | R |

| 5 | Aman | 2020-05-01 | ISEE | R |

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

5 rows in set (0.00 sec)

mysql> CREATE PROCEDURE CalFine(IN roll int,IN BN varchar(20))

-> BEGIN

-> DECLARE fine int;

-> DECLARE ID date;

-> DECLARE nod int;

-> DECLARE cc cursor for select DateOfIssue from BORROWER WHERE RollNo=roll AND NameOfBook =BN;

-> Declare EXIT handler for not found

-> select 'record not found' as 'error message';

-> open cc;

-> fetch cc into ID;

-> close cc;

-> set nod=datediff(curdate(),ID);

-> IF nod < 15 THEN

-> set fine = 0;

-> ELSEIF nod >=15 AND nod <=30 THEN

-> set fine= (nod-15)\*5;

-> ELSE

-> set fine =15\*5 +(nod-30)\*50;

-> END IF;

-> INSERT INTO FINE VALUES (roll,curdate(),fine);

-> UPDATE BORROWER set Status ='R' WHERE RollNo=roll AND NameOfBook = BN;

-> END;

-> ##

Query OK, 0 rows affected (0.18 sec)

mysql> call CalFine(7,'DSA')##

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

| error message |

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

| record not found |

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

1 row in set (0.00 sec)

Query OK, 0 rows affected (0.01 sec)