**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> use assi4finecal;

Database changed

mysql> create table borrower(Roll\_No int primary key not null,Name varchar(20),DateofIssue date,NameofBook varchar(10),Status varchar(2));

Query OK, 0 rows affected (0.05 sec)

mysql> desc borrower;

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

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

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

| Roll\_No | int | NO | PRI | NULL | |

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

| DateofIssue | date | YES | | NULL | |

| NameofBook | varchar(10) | YES | | NULL | |

| Status | varchar(2) | YES | | NULL | |

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

5 rows in set (0.02 sec)

mysql> create table Fine(Roll\_no int ,Day int ,Amt\_Fine int);

Query OK, 0 rows affected (0.04 sec)

mysql> desc Fine;

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

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

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

| Roll\_no | int | YES | | NULL | |

| Day | int | YES | | NULL | |

| Amt\_Fine | int | YES | | NULL | |

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

3 rows in set (0.00 sec)

mysql> insert into borrower values(1,'STUD\_1',"2021-04-03","DBMS","I");

Query OK, 1 row affected (0.02 sec)

mysql> insert into borrower values(2,'STUD\_2',"2021-06-13","CNS","I");

Query OK, 1 row affected (0.01 sec)

mysql> insert into borrower values(4,'STUD\_4',"2020-11-25","SPOS","I");

Query OK, 1 row affected (0.01 sec)

mysql> insert into borrower values(5,'STUD\_5',"2021-11-1","TOC","I");

Query OK, 1 row affected (0.01 sec)

mysql> insert into borrower values(5,'STUD\_5',"2021-10-14","EL\_1","I");

ERROR 1062 (23000): Duplicate entry '5' for key 'borrower.PRIMARY'

mysql> insert into borrower values(7,'STUD\_7',"2021-10-14","EL\_1","I");

Query OK, 1 row affected (0.01 sec)

mysql> select \* from borrower

-> ;

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

| Roll\_No | Name | DateofIssue | NameofBook | Status |

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

| 1 | STUD\_1 | 2021-04-03 | DBMS | I |

| 2 | STUD\_2 | 2021-06-13 | CNS | I |

| 4 | STUD\_4 | 2020-11-25 | SPOS | I |

| 5 | STUD\_5 | 2021-11-01 | TOC | I |

| 7 | STUD\_7 | 2021-10-14 | EL\_1 | I |

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

5 rows in set (0.00 sec)

mysql> select \* from fine;

Empty set (0.01 sec)

mysql> delimiter //

mysql> create procedure proc\_lib(IN roll Integer,IN book\_name varchar(20))

-> begin

-> declare no\_of\_days int;

-> declare fine\_amount int ;

-> declare issue\_date date;

-> set fine\_amount:=0;

-> select DateofIssue into issue\_date from borrower where Roll\_no=roll and NameofBook=book\_name;

-> select issue\_date;

-> select datediff(current\_date,issue\_date) into no\_of\_days from borrower where Roll\_no=roll;

-> select no\_of\_days;

-> if no\_of\_days>=15 and no\_of\_days<=30 and NameofBook=book\_name

-> then

-> set fine\_amount:=no\_of\_days\*5;

-> elseif no\_of\_days>30 and NameofBook=book\_name then set fine\_amount:=no\_of\_days\*50;

-> end if;

-> update borrower set status="R" where Roll\_no=roll;

-> if fine\_amount>=0 and NameofBook=book\_name then

-> insert into Fine values(roll,no\_of\_days,fine\_amount);

-> elseif fine\_amount<0 then

-> begin

-> DECLARE EXIT HANDLER FOR SQLEXCEPTION SELECT 'Table not found';

-> select \* from borrower;

-> end;

-> end if;

-> end;

-> //

Query OK, 0 rows affected (0.02 sec)

mysql> call proc\_lib(1,"DBMS");

-> //

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

| issue\_date |

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

| 2021-04-03 |

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

1 row in set (0.01 sec)

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

| no\_of\_days |

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

| 222 |

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

1 row in set (0.02 sec)

Query OK, 1 row affected (0.04 sec)

mysql> select \* from borrower;//

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

| Roll\_No | Name | DateofIssue | NameofBook | Status |

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

| 1 | STUD\_1 | 2021-04-03 | DBMS | R |

| 2 | STUD\_2 | 2021-06-13 | CNS | I |

| 4 | STUD\_4 | 2020-11-25 | SPOS | I |

| 5 | STUD\_5 | 2021-11-01 | TOC | I |

| 7 | STUD\_7 | 2021-10-14 | EL\_1 | I |

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

5 rows in set (0.00 sec)

mysql> select \* from Fine;//

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

| Roll\_no | Day | Amt\_Fine |

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

| 1 | 222 | 11100 |

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

1 row in set (0.00 sec)

mysql> call proc\_lib(1,"DBMS");//

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

| issue\_date |

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

| 2021-04-03 |

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

1 row in set (0.00 sec)

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

| no\_of\_days |

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

| 222 |

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

1 row in set (0.01 sec)

Query OK, 1 row affected (0.03 sec)

mysql> select \* from borrower;//

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

| Roll\_No | Name | DateofIssue | NameofBook | Status |

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

| 1 | STUD\_1 | 2021-04-03 | DBMS | R |

| 2 | STUD\_2 | 2021-06-13 | CNS | I |

| 4 | STUD\_4 | 2020-11-25 | SPOS | I |

| 5 | STUD\_5 | 2021-11-01 | TOC | I |

| 7 | STUD\_7 | 2021-10-14 | EL\_1 | I |

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

5 rows in set (0.00 sec)

mysql> select \* from borrower;//

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

| Roll\_No | Name | DateofIssue | NameofBook | Status |

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

| 1 | STUD\_1 | 2021-04-03 | DBMS | R |

| 2 | STUD\_2 | 2021-06-13 | CNS | I |

| 4 | STUD\_4 | 2020-11-25 | SPOS | I |

| 5 | STUD\_5 | 2021-11-01 | TOC | I |

| 7 | STUD\_7 | 2021-10-14 | EL\_1 | I |

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

5 rows in set (0.00 sec)

mysql> select \* from Fine;//

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

| Roll\_no | Day | Amt\_Fine |

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

| 1 | 222 | 11100 |

| 1 | 222 | 11100 |

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

2 rows in set (0.00 sec)

mysql> call proc\_lib(9,"DBMS");

-> //

|  |
| --- |
|  |

1 row in set (0.01 sec)

Query OK, 1 row affected (0.04 sec)

mysql> select \* from Fine;//

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

| Roll\_no | Day | Amt\_Fine |

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

| 1 | 222 | 11100 |

| 1 | 222 | 11100 |

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

3 rows in set (0.00 sec)

mysql> call proc\_lib(7,"TOC");//

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

| 1 | STUD\_1 | 2021-04-03 | DBMS | R |

| 2 | STUD\_2 | 2021-06-13 | CNS | I |

| 4 | STUD\_4 | 2020-11-25 | SPOS | I |

| 5 | STUD\_5 | 2021-11-01 | TOC | I |

| 7 | STUD\_7 | 2021-10-14 | EL\_1 | I |

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

Query OK, 1 row affected (0.03 sec)

mysql> select \* from Fine;//

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

| Roll\_no | Day | Amt\_Fine |

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

| 1 | 222 | 11100 |

| 1 | 222 | 11100 |

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

4 rows in set (0.00 sec)

mysql>exit