**Assignment No:4a**

Problem Statement:- 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, Date\_of\_Issue, 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 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.

SQL> CREATE TABLE borrower

2 (

3 ROLL\_NO NUMBER PRIMARY KEY,

4 NAME VARCHAR(20),

5 DATE\_OF\_I DATE,

6 BOOK\_N VARCHAR(20),

7 ST VARCHAR(2)

8 );

Table created.

SQL> CREATE TABLE fine

2 (

3 ROLL\_NO NUMBER,

4 R\_DATE DATE,

5 AMT INT,

6 FOREIGN KEY(ROLL\_NO) REFERENCES BORROWER(ROLL\_NO)

7 );

Table created.

SQL> insert into borrower values(102,'Harshad','12 Aug 2024','JAVA','I');

1 row created.

SQL> insert into borrower values(101,'praneket','12 May 2024','cpp','I');

1 row created.

SQL> insert into borrower values(103,'aditya','13 Jun 2024','python','I');

1 row created.

SQL> commit;

Commit complete.

SQL> select \* from borrower;

ROLL\_NO NAME DATE\_OF\_I B\_NAME ST

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102 Harshad 12-AUG-24 JAVA I

101 praneket 12-MAY-24 cpp I

103 aditya 13-JUN-24 python I

SQL> insert into fine values(102,'09 sep 2024',null);

1 row created.

SQL> insert into fine values(101,'12 Jun 2024',null);

1 row created.

SQL> insert into fine values(103,'09 Aug 2024',null);

1 row created.

SQL> commit;

Commit complete.

SQL> select \* from fine;

ROLL\_NO R\_DATE AMT

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102 09-SEP-24 null

101 12-JUN-24 null

103 09-AUG-24 null

DECLARE

t\_roll borrower.roll\_No%type;

t\_Bname borrower.b\_name%type;

DOI borrower.Date\_of\_issue%type;

fine\_Amt fine.Amt%type;

DIR fine.R\_date%type;

t\_No\_of\_days int;

ST borrower.status%type;

t\_Amt fine.Amt%type;

Book\_Not\_Found EXCEPTION;

BEGIN

t\_roll :=&t\_roll;

t\_Bname :=&t\_Bname;

select Date\_of\_issue,status into DOI,ST from borrower where Roll\_no=t\_roll and b\_name=t\_Bname;

select R\_date into DIR from fine where Roll\_No=t\_roll;

t\_No\_of\_days := DIR - DOI;

dbms\_output.put\_line('Total days='||t\_No\_of\_days);

if(t\_No\_of\_days>=15 and t\_No\_of\_days<=30) THEN

fine\_Amt:=5\*t\_no\_of\_days;

dbms\_output.put\_line('Total Fine(Rs 5 per Day)='||fine\_Amt);

elsif(t\_No\_of\_days>30) THEN

fine\_Amt:=50\*t\_no\_of\_days;

dbms\_output.put\_line('Total Fine(Rs 50 per Day)='||fine\_Amt);

else

fine\_Amt :=0;

dbms\_output.put\_line('Total Fine='||fine\_Amt);

end if;

update fine set Amt=fine\_Amt where Roll\_No=t\_roll;

select Amt into t\_Amt from fine where Roll\_No=t\_roll;

if(t\_Amt is not null) THEN

update borrower set status='R' where Roll\_No=t\_roll;

end if;

if(ST ='R') THEN

raise Book\_Not\_Found;

end if;

EXCEPTION when Book\_Not\_Found then

dbms\_output.put\_line('Book Already Returned');

end;

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Enter value for t\_roll: 101

old 12: t\_roll :=&t\_roll;

new 12: t\_roll :=101;

Enter value for t\_bname: 'cpp'

old 13: t\_Bname :=&t\_Bname;

new 13: t\_Bname :='cpp';

PL/SQL procedure successfully completed.

Enter value for t\_roll: 102

old 12: t\_roll :=&t\_roll;

new 12: t\_roll :=102;

Enter value for t\_bname: 'JAVA'

old 13: t\_Bname :=&t\_Bname;

new 13: t\_Bname :='JAVA';

PL/SQL procedure successfully completed.

Enter value for t\_roll: 103

old 12: t\_roll :=&t\_roll;

new 12: t\_roll :=103;

Enter value for t\_bname: 'python'

old 13: t\_Bname :=&t\_Bname;

new 13: t\_Bname :='python';

PL/SQL procedure successfully completed.

SQL> select \* from borrower;

ROLL\_NO NAME DATE\_OF\_I B\_NAME ST

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102 Harshad 12-AUG-24 JAVA R

101 praneket 12-MAY-24 cpp R

103 aditya 13-JUN-24 python R

SQL> select \* from fine;

ROLL\_NO R\_DATE AMT

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102 09-SEP-24 140

101 12-JUN-24 1550

103 09-AUG-24 2850