

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> set serveroutput on

--Contents of borrower and fine table before executing PL/SQL block

SQL> select * from borrower;

ROLL_NO	NAME	DATE_OF_I	B_NAME	ST
101	Krishiv	06-DEC-22	Ikigai	I
102	Saumya	07-AUG-22	Atomic Habits	I
103	Shivarth	17-SEP-24	Mindset	I

```
SQL> select * from fine;
```

ROLL_NO	R_DATE	AMT
101	07-JAN-23	
102	10-AUG-22	
103	17-OCT-24	

--Execution of PL/SQL Block

```
SQL> DECLARE
2   t_roll borrower.roll_No%type;
3   t_Bname borrower.b_name%type;
4   DOI borrower.Date_of_issue%type;
5   fine_Amt fine.Amt%type;
6   DIR fine.R_date%type;
7   t_No_of_days int;
8   ST borrower.status%type;
9   t_Amt fine.Amt%type;
10  Book_Not_Found EXCEPTION;
11  BEGIN
12    t_roll :=&t_roll;
13    t_Bname :=&t_Bname;
14    select Date_of_issue,status into DOI,ST from borrower
where Roll_no=t_roll and b_name=t_Bname;
15    select R_date into DIR from fine where Roll_No=t_roll;
16    t_No_of_days := DIR - DOI;
17    dbms_output.put_line('Total days='||t_No_of_days);
18    if(t_No_of_days>=15 and t_No_of_days<=30) THEN
```

```

19  fine_Amt:=5*t_no_of_days;
20  dbms_output.put_line('Total Fine(Rs 5 per
Day)='||fine_Amt);
21  elsif(t_No_of_days>30) THEN
22  fine_Amt:=50*t_no_of_days;
23  dbms_output.put_line('Total      Fine(Rs      50      per
Day)='||fine_Amt);
24  else
25  fine_Amt :=0;
26  dbms_output.put_line('Total Fine='||fine_Amt);
27  end if;
28  update fine set Amt=fine_Amt where Roll_No=t_roll;
29
30  select Amt into t_Amt from fine where Roll_No=t_roll;
31  if(t_Amt is not null) THEN
32  update borrower set status='R' where Roll_No=t_roll;
33  end if;
34  if(ST ='R') THEN
35  raise Book_Not_Found;
36  end if;
37  EXCEPTION when Book_Not_Found then
38  dbms_output.put_line('Book Already Returned');
39  end;
40  /

```

Output:

--For Roll_No 101

Enter value for t_roll: 101

old 12: t_roll :=&t_roll;

```

new 12:  t_roll :=101;
Enter value for t_bname: 'Ikigai'
old 13:  t_Bname :=&t_Bname;
new 13:  t_Bname :='Ikigai';
Total days=32
Total Fine(Rs 50 per Day)=1600

```

PL/SQL procedure successfully completed.

--Contents of borrower and fine table After executing PL/SQL block

```
SQL> select * from borrower;
```

ROLL_NO	NAME	DATE_OF_I	B_NAME	ST
101	Krishiv	06-DEC-22	Ikigai	R
102	Saumya	07-AUG-22	Atomic Habits	I
103	Shivarth	17-SEP-24	Mindset	I

```
SQL> select * from fine;
```

ROLL_NO	R_DATE	AMT
101	07-JAN-23	1600
102	10-AUG-22	
103	17-OCT-24	

--For Roll_No 102

Enter value for t_roll: 102

old 12: t_roll :=&t_roll;

new 12: t_roll :=102;

Enter value for t_bname: 'Atomic Habits'

old 13: t_Bname :=&t_Bname;

new 13: t_Bname :='Atomic Habits';

Total days=3

Total Fine=0

PL/SQL procedure successfully completed.

SQL> select * from borrower;

ROLL_NO	NAME	DATE_OF_I	B_NAME	ST
101	Krishiv	06-DEC-22	Ikigai	R
102	Saumya	07-AUG-22	Atomic Habits	R
103	Shivarth	17-SEP-24	Mindset	I

SQL> select * from fine;

ROLL_NO	R_DATE	AMT
101	07-JAN-23	1600
102	10-AUG-22	0
103	17-OCT-24	

--For Roll_No 103

Enter value for t_roll: 103

```

old 12:  t_roll :=&t_roll;
new 12:  t_roll :=103;
Enter value for t_bname: 'Mindset'
old 13:  t_Bname :=&t_Bname;
new 13:  t_Bname :='Mindset';
Total days=30
Total Fine(Rs 5 per Day)=150

```

PL/SQL procedure successfully completed.

```
SQL> select * from borrower;
```

ROLL_NO	NAME	DATE_OF_I	B_NAME	ST
101	Krishiv	06-DEC-22	Ikigai	R
102	Saumya	07-AUG-22	Atomic Habits	R
103	Shivarth	17-SEP-24	Mindset	R

```
SQL> select * from fine;
```

ROLL_NO	R_DATE	AMT
101	07-JAN-23	1600
102	10-AUG-22	0
103	17-OCT-24	150

--If Book is Already returned It will raise The Exception

```
Enter value for t_roll: 101
old 12:  t_roll :=&t_roll;
new 12:  t_roll :=101;
Enter value for t_bname: 'Ikigai'
old 13:  t_Bname :=&t_Bname;
new 13:  t_Bname :='Ikigai';
```

Total days=32

Total Fine(Rs 50 per Day)=1600

Book Already Returned

PL/SQL procedure successfully completed.