

DBMS – Assignment A4

Creating tables & inserting data

```
CREATE TABLE Borrower (  
  Roll_no NUMBER(15),  
  Name VARCHAR(255),  
  DateOfIssue DATE,  
  NameOfBook VARCHAR(255),  
  Status VARCHAR(255),  
  PRIMARY KEY(Roll_no)  
);
```

Table created.

```
CREATE TABLE Fine (  
  Roll_no NUMBER(15),  
  DateOfReturn DATE,  
  Amount NUMBER(15),  
  FOREIGN KEY(Roll_no) REFERENCES Borrower(Roll_no)  
);
```

Table created.

```
INSERT INTO Borrower (Roll_no, Name, DateOfIssue, NameOfBook, Status)  
values (1, 'Ayush Kalaskar', TO_DATE('2024-07-28','YYYY-MM-DD'), 'DBMS',  
'I');
```

1 row(s) inserted.

```
INSERT INTO Borrower (Roll_no, Name, DateOfIssue, NameOfBook, Status)  
values (2, 'Himanshu Patil', TO_DATE('2024-07-01','YYYY-MM-DD'),'IOT',  
'I');
```

1 row(s) inserted.

```
INSERT INTO Borrower (Roll_no, Name, DateOfIssue, NameOfBook, Status)  
values (3, 'Kshitij', TO_DATE('2024-08-05','YYYY-MM-DD'), 'TOC', 'I');
```

1 row(s) inserted.

Before running procedure

Borrower:

ROLL_NO	NAME	DATEOFISSUE	NAMEOFBOOK	STATUS
1	Ayush Kalaskar	28-JUL-24	DBMS	I
2	Himanshu Patil	01-JUL-24	IOT	I
3	Kshitij	05-AUG-24	TOC	I

Fine:

TABLE FINE

Column	Null?	Type
ROLL_NO	-	NUMBER(15,0)
DATEOFRETURN	-	DATE
AMOUNT	-	NUMBER(15,0)

Procedure

```
DECLARE
  p_nameofbook VARCHAR(255);
  p_rollno NUMBER(15) := 1;
  p_dateofissue DATE;
  currentdate DATE;
  noofdays NUMBER(15);
  amount NUMBER(15);
  nodata EXCEPTION;

BEGIN
  p_nameofbook := '&p_nameofbook';
  currentdate := SYSDATE;

  IF p_rollno <= 0 THEN
    RAISE nodata;
  END IF;

  SELECT DateOfIssue
  INTO p_dateofissue
  FROM Borrower
  WHERE Roll_no = p_rollno AND NameOfBook = p_nameofbook;

  SELECT TRUNC(SYSDATE) - p_dateofissue
  INTO noofdays
  FROM dual;

  DBMS_OUTPUT.PUT_LINE('No of days: ' || noofdays);
  IF (noofdays > 30) THEN
    amount := noofdays * 50;
  ELSIF (noofdays >= 15 AND noofdays <= 30) THEN
    amount := noofdays * 5;
  ELSE
    amount := 0;
  END IF;

  IF amount > 0 THEN
    INSERT INTO Fine (Roll_no, DateOfReturn, Amount)
    VALUES (p_rollno, SYSDATE, amount);
  END IF;

  IF amount > 0 THEN
    UPDATE Borrower
    SET Status = 'R'
    WHERE Roll_no = p_rollno;
  END IF;

EXCEPTION
  WHEN nodata THEN
    DBMS_OUTPUT.PUT_LINE('Roll number or book name not found.');
```

```
  WHEN NO_DATA_FOUND THEN
    DBMS_OUTPUT.PUT_LINE('No entry found for the provided roll number and
book name.');
```

```
  WHEN OTHERS THEN
    DBMS_OUTPUT.PUT_LINE('An error occurred: ' || SQLERRM);

END;
/
```

Output

1. For ROLL_NO = 1 and NAMEOFBOOK = 'DBMS'

Statement processed.

No of days: 63

Borrower:

ROLL_NO	NAME	DATEOFISSUE	NAMEOFBOOK	STATUS
1	Ayush Kalaskar	28-JUL-24	DBMS	R
2	Himanshu Patil	01-JUL-24	IOT	I
3	Kshitij	05-AUG-24	TOC	I

Fine:

ROLL_NO	DATEOFRETURN	AMOUNT
1	29-SEP-24	3150

2. For ROLL_NO = 2 and NAMEOFBOOK = 'IOT'

Statement processed.

No of days: 90

Borrower:

ROLL_NO	NAME	DATEOFISSUE	NAMEOFBOOK	STATUS
1	Ayush Kalaskar	28-JUL-24	DBMS	R
2	Himanshu Patil	01-JUL-24	IOT	R
3	Kshitij	05-AUG-24	TOC	I

Fine:

ROLL_NO	DATEOFRETURN	AMOUNT
1	29-SEP-24	3150
2	29-SEP-24	4500

3. For ROLL_NO = 3 and NAMEOFBOOK = 'TOC'

Statement processed.

No of days: 55

Borrower:

ROLL_NO	NAME	DATEOFISSUE	NAMEOFBOOK	STATUS
1	Ayush Kalaskar	28-JUL-24	DBMS	R
2	Himanshu Patil	01-JUL-24	IOT	R
3	Kshitij	05-AUG-24	TOC	R

Fine:

ROLL_NO	DATEOFRETURN	AMOUNT
1	29-SEP-24	3150
2	29-SEP-24	4500
3	29-SEP-24	2750

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