

## **Experiment No.4 a : Unnamed PL/SQLcode block: Use of Control structure and Exception handling is mandatory**

### **Code:**

```
DECLARE
    v_roll_no Borrower.Roll_no%TYPE;
    v_name_of_book Borrower.Name_of_Book%TYPE;
    v_date_of_issue Borrower.Date_of_Issue%TYPE;
    v_status Borrower.Status%TYPE;
    v_days_due NUMBER;
    v_fine_amt NUMBER;
BEGIN
    -- Accept Roll_no and Name_of_Book from the user
    v_roll_no := &user_roll_no;
    v_name_of_book := '&user_name_of_book';

    -- Retrieve Date_of_Issue and Status for the given Roll_no and Name_of_Book
    SELECT Date_of_Issue, Status
    INTO v_date_of_issue, v_status
    FROM Borrower
    WHERE Roll_no = v_roll_no AND Name_of_Book = v_name_of_book;

    -- Calculate the number of days overdue
    v_days_due := TRUNC(SYSDATE - v_date_of_issue);

    -- Check the fine amount based on the number of days overdue
    IF v_days_due > 30 THEN
        v_fine_amt := v_days_due * 50;
    ELSIF v_days_due >= 15 AND v_days_due <= 30 THEN
        v_fine_amt := v_days_due * 5;
    ELSE
        v_fine_amt := 0;
    END IF;
```

```

-- Update the status in the Borrower table

IF v_fine_amt > 0 THEN

    -- Store details into the Fine table

    INSERT INTO Fine (Roll_no, Date, Amt)

        VALUES (v_roll_no, SYSDATE, v_fine_amt);

END IF;


-- Update the status in the Borrower table

IF v_status = 'T' THEN

    UPDATE Borrower

        SET Status = 'R'

        WHERE Roll_no = v_roll_no AND Name_of_Book = v_name_of_book;

ELSE

    DBMS_OUTPUT.PUT_LINE('The book is already returned.');
```

```

END IF;


DBMS_OUTPUT.PUT_LINE('Number of days overdue: ' || v_days_due);
DBMS_OUTPUT.PUT_LINE('Fine amount: Rs ' || v_fine_amt);


COMMIT;

EXCEPTION

    WHEN NO_DATA_FOUND THEN

        DBMS_OUTPUT.PUT_LINE('Record not found for the given Roll_no and Name_of_Book.');
```

```

    WHEN OTHERS THEN

        DBMS_OUTPUT.PUT_LINE('An error occurred: ' || SQLERRM);

END;

/
```

## Output:

```
Enter value for user_roll_no: 101
Enter value for user_name_of_book: SampleBook
Number of days overdue: 20
Fine amount: Rs 100

PL/SQL procedure successfully completed.
```

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