

Assignment 4 : PL/SQL

Roll No: 31448

1) Create Procedure

DELIMITER \$\$

```
CREATE OR REPLACE PROCEDURE Issue_Book(
    IN p_roll_no INT,
    IN p_name VARCHAR(100),
    IN p_issue_date DATE,
    IN p_book_name VARCHAR(200)
)
BEGIN
    -- Error handler for SQL exceptions
    DECLARE EXIT HANDLER FOR SQLEXCEPTION
    BEGIN
        ROLLBACK;
        SELECT 'Error Occurred' AS msg;
    END;

    START TRANSACTION;

    INSERT INTO borrow(Roll_no, Name, Date_of_Issue, Name_of_Book, Status)
    VALUES (p_roll_no, p_name, p_issue_date, p_book_name, 'I');

    COMMIT;

    SELECT 'BOOK ISSUED SUCCESSFULLY' AS msg;
END $$

DELIMITER ;
```

2) Call Procedure

```
CALL Issue_Book(201,'Mokshada Sheth','2025-08-05','Discovery of India');
CALL Issue_Book(201,'Mokshada Sheth','2025-08-05','Discovery of India');
CALL Issue_Book(202,'Sayali Pawar','2025-02-01','Diary of Anne Frank');
CALL Issue_Book(203,'Gauri Wagh','2025-06-01','It ends with us');
CALL Issue_Book(204,'Shradha Kokare','2025-05-11','Biography of Kiran Bedi');
CALL Issue_Book(205,'Mayuri Sable','2025-03-21','The 5AM Club');
```

```
+-----+
| msg   |
+-----+
| BOOK ISSUED SUCCESSFULLY |
+-----+
```

3) Exception Handler

CALL Issue_Book('205','Mayuri Sable','2025-03-13','The Pysology of Money');

```
+-----+
| msg   |
+-----+
| Error Occurred |
+-----+
```

4) Display Records

SELECT * FROM borrow;

Roll_no	Date_of_Issue	Name_of_book	Status	Name
201	2025-08-05	Discovery of India	I	Mokshada Sheth
202	2025-02-01	Diary of Anne Frank	I	Sayali Pawar
203	2025-06-01	It ends with us	I	Gauri Wagh
204	2025-05-11	Biography of Kiran Bedi	I	Shradha Kokare
205	2025-03-21	The 5AM Club	I	Mayuri Sable

5) Procedure to set fine if between 15 and 30 Rs 5/- per day. If >30 then Rs 50/- per day

DELIMITER \$\$

```
MariaDB [te31448_db]> CREATE OR REPLACE PROCEDURE Return_Book(
-> IN p_roll_no INT,
-> IN p_return_date DATE)
-> BEGIN
-> DECLARE v_days INT;
-> DECLARE v_issue_date DATE;
-> DECLARE v_fine_amount DECIMAL(8,2);
-> SELECT Date_of_Issue INTO v_issue_date FROM borrow WHERE Roll_no = p_roll_no;
-> SET v_days = DATEDIFF(p_return_date,v_issue_date);
-> SET v_fine_amount = 0;
-> IF v_days BETWEEN 15 AND 30 THEN
-> SET v_fine_amount= (v_days-14)*5;
-> ELSEIF v_days>30 THEN
-> SET v_fine_amount= ((v_days-30)*50)+((v_days-14-(v_days-30))*5);
-> -- fiine=(days beyond 30×50)+(days between 15 and 30×5)
-> END IF;
-> UPDATE borrow SET Status='R' WHERE Roll_NO = p_roll_NO AND Status='I';
-> IF v_fine_amount>0 THEN
-> INSERT INTO fine(Roll_no,Fine_date,Amt)
VALUES(p_roll_no,p_return_date,v_fine_amount);
-> END IF;
-> SELECT CONCAT('Return Processed.Fine amount: Rs ',v_fine_amount) AS msg;
-> END
-> $$ DELIMITER
```

6) Call Return Book

-- No fine

CALL Return_Book(203,'2025-06-12');

```
+-----+
| msg                                         |
+-----+
| Return Processed. Fine amount: Rs 0.00    |
+-----+
```

-- days between 15-30

CALL Return_Book(204,'2025-05-30');

```
+-----+
| msg                                         |
+-----+
| Return Processed. Fine amount: Rs 25.00    |
+-----+
```

-- days >30

CALL Return_Book(205,'2025-04-30');

```
+-----+
| msg                                         |
+-----+
| Return Processed. Fine amount: Rs 580.00    |
+-----+
```

7) Status updated

SELECT * FROM borrow;

Roll_no	Date_of_Issue	Name_of_book	Status	Name
201	2025-08-05	Discovery of India	I	Mokshada Sheth
202	2025-02-01	Diary of Anne Frank	I	Sayali Pawar
203	2025-06-01	It ends with us	R	Gauri Wagh
204	2025-05-11	Biography of Kiran Bedi	R	Shradha Kokare
205	2025-03-21	The 5AM Club	R	Mayuri Sable

8) Fine table

SELECT * FROM fine;

Roll_no	Fine_date	Amt
204	2025-05-30	25.00
205	2025-04-30	580.00