

```

-- Create Borrower table
CREATE TABLE Borrower (
    Roll_no INT PRIMARY KEY,
    Name VARCHAR(255),
    `Date of Issue` DATE,
    `Name of Book` VARCHAR(255),
    Status CHAR(1)
);

-- Create Fine table
CREATE TABLE Fine (
    Roll_no INT,
    Date DATE,
    Amt DECIMAL(10, 2)
);

-- Insert sample data into Borrower table
INSERT INTO Borrower (Roll_no, Name, `Date of Issue`, `Name of Book`, Status)
VALUES
    (1, 'John Doe', '2023-08-01', 'Book A', 'I'),
    (2, 'Jane Smith', '2023-08-15', 'Book B', 'I'),
    (3, 'Alice Johnson', '2023-08-20', 'Book C', 'I'),
    (4, 'Bob Brown', '2023-09-01', 'Book D', 'I');

DELIMITER //

CREATE PROCEDURE CalculateFine(
    IN p_Roll_no INT,
    IN p_BookName VARCHAR(255)
)
BEGIN
    DECLARE v_IssueDate DATE;
    DECLARE v_CurrentDate DATE;
    DECLARE v_FineAmt DECIMAL(10, 2);
    DECLARE v_DaysOverdue INT;

    -- Retrieve issue date and current date
    SELECT `Date of Issue` INTO v_IssueDate
    FROM Borrower
    WHERE Roll_no = p_Roll_no AND `Name of Book` = p_BookName;

    SET v_CurrentDate = CURDATE();

    -- Calculate the number of days overdue
    SET v_DaysOverdue = DATEDIFF(v_CurrentDate, v_IssueDate);

    -- Update status to 'R' (Returned)
    UPDATE Borrower
    SET Status = 'R'
    WHERE Roll_no = p_Roll_no AND `Name of Book` = p_BookName;

    -- Calculate fine amount based on the number of days overdue
    IF v_DaysOverdue BETWEEN 15 AND 30 THEN
        SET v_FineAmt = v_DaysOverdue * 5;
    ELSEIF v_DaysOverdue > 30 THEN
        SET v_FineAmt = v_DaysOverdue * 50;
    ELSE
        SET v_FineAmt = 0;
    END IF;

```

```

-- Insert fine details into the Fine table
INSERT INTO Fine (Roll_no, Date, Amt)
VALUES (p_Roll_no, v_CurrentDate, v_FineAmt);

-- Check if there is a fine, and raise a user-defined exception if needed
IF v_FineAmt > 0 THEN
    SIGNAL SQLSTATE '45000'
    SET MESSAGE_TEXT = 'Fine of ' || v_FineAmt || ' has been imposed for overdue
book.';
END IF;

END //

DELIMITER ;

CALL CalculateFine(1, 'Book A');
```

### Before

Roll_no	Name	Date of Issue	Name of Book	Status
1	John Doe	2023-08-01	Book A	I
2	Jane Smith	2023-08-15	Book B	I
3	Alice	2023-08-20	Book C	I
4	Bob Brown	2023-09-01	Book D	I

### After Procedure

Roll_no	Name	Date of Issue	Name of Book	Status
1	John Doe	2023-08-01	Book A	R
2	Jane Smith	2023-08-15	Book B	I
3	Alice	2023-08-20	Book C	I
4	Bob Brown	2023-09-01	Book D	I

### After Procedure

Roll_no	Date	Amt
1	2023-09-13	60.00