MariaDB [te31260\_db]> create table Borrower(roll\_no integer, name varchar(20), issue\_date date, book\_name varchar(20), status varchar(10), primary key(roll\_no));

Query OK, 0 rows affected (0.260 sec)

MariaDB [te31260\_db]> create table Fine(roll\_no integer, fine\_date date, amt integer, foreign key(roll\_no) references Borrower(roll\_no));

Query OK, 0 rows affected (0.178 sec)

MariaDB [te31260\_db]> select \* from Borrower;

+---------+---------+------------+------------+--------+

| roll\_no | name | issue\_date | book\_name | status |

+---------+---------+------------+------------+--------+

| 10 | Gayatri | 2023-10-02 | Analytics | Issued |

| 11 | Sakshi | 2024-11-01 | OS | Issued |

| 12 | Prajwal | 2024-01-10 | Javascript | Issued |

| 13 | Hans | 2023-02-10 | DSA | Issued |

| 14 | Anjali | 2024-02-10 | DSA & OOP | Issued |

| 15 | Parth | 2024-03-10 | AIML | Issued |

+---------+---------+------------+------------+--------+

6 rows in set (0.001 sec)

MariaDB [te31260\_db]> delimiter $$

create procedure calc\_fine(

in p\_roll\_no integer,

in p\_book\_name varchar(20)

)

begin

declare x integer;

declare fine\_amount decimal(10, 2);

declare current\_status varchar(20);

declare continue handler for not found

begin

select 'Not Found' as ErrorMessage;

end;

declare exit handler for sql state ‘23000’

begin

select 'Invalid Input' as ErrorMessage;

end;

select DATEDIFF(CURDATE(), issue\_date) into x

from Borrower

where roll\_no = p\_roll\_no and book\_name = p\_book\_name;

if x is not null then

if x > 15 and x <= 30 then

set fine\_amount = (x - 15) \* 5;

elseif x > 30 then

set fine\_amount = (x - 30) \* 50;

else

set fine\_amount = 0;

endif;

if fine\_amount > 0 then

If not exists(

select 1 from Fine

where roll\_no = p\_roll\_no and fine\_date = CURDATE()

) then

Insert into Fine(roll\_no, fine\_date, amt)

values(p\_roll\_no, CURDATE(), fine\_amount);

endif;

endif;

update Borrower

set status = 'Returned'

where roll\_no = p\_roll\_no and book\_name = p\_book\_name;

else

select 'Book not found for the given roll number' as ErrorMessage;

endif;

end$$

delimiter ;

MariaDB [te31260\_db]> select \* from Fine;

+---------+------------+-------+

| roll\_no | fine\_date | amt |

+---------+------------+-------+

| 10 | 2024-08-14 | 14350 |

+---------+------------+-------+

1 row in set (0.001 sec)

MariaDB [te31260\_db]> select \* from Borrower;

+---------+---------+------------+------------+----------+

| roll\_no | name | issue\_date | book\_name | status |

+---------+---------+------------+------------+----------+

| 10 | Gayatri | 2023-10-02 | Analytics | Returned |

| 11 | Sakshi | 2024-11-01 | OS | Issued |

| 12 | Prajwal | 2024-01-10 | Javascript | Issued |

| 13 | Hans | 2023-02-10 | DSA | Issued |

| 14 | Anjali | 2024-02-10 | DSA & OOP | Issued |

| 15 | Parth | 2024-03-10 | AIML | Issued |

+---------+---------+------------+------------+----------+

6 rows in set (0.001 sec)

**Area of Circle:**

DELIMITER $$

FOR i IN 5..9

DO

SET @a:=3.14\*i\*i;

INSERT INTO circle(radius,area)values(i,@

a);

END FOR;

$$

DELIMITER $$

CREATE PROCEDURE calc\_area()

BEGIN

DECLARE ar FLOAT;

DECLARE i INT DEFAULT 1;

WHILE i<10 DO

SET ar=3.14\*i\*i;

INSERT INTO circle values(i,ar);

SET i=i+1;

END WHILE;

SELECT \*FROM circle;

END;

$$