describe Stud\_Marks;

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

| Field | Type | Null | Key | Default | Extra |

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

| Roll | int(5) | NO | PRI | NULL | |

| Name | varchar(50) | YES | | NULL | |

| Total\_Marks | int(3) | YES | | NULL | |

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

describe Result;

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

| Field | Type | Null | Key | Default | Extra |

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

| Roll | int(5) | NO | PRI | NULL | |

| Name | varchar(50) | YES | | NULL | |

| Class | varchar(50) | YES | | NULL | |

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

select \* from Stud\_Marks;

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

| Roll | Name | Total\_Marks |

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

| 101 | John Doe | 1020 |

| 102 | Jane Smith | 950 |

| 103 | Alice Johnson | 880 |

| 105 | Bob Brown | 790 |

DELIMITER //

mysql>

mysql> CREATE PROCEDURE proc\_Grade(

IN p\_Roll INT,

IN p\_Name VARCHAR(50),

IN p\_Total\_Marks INT

)

BEGIN

DECLARE v\_Class VARCHAR(20);

-- Determine the category based on total marks

IF p\_Total\_Marks >= 990 AND p\_Total\_Marks <= 1500 THEN

SET v\_Class = 'Distinction';

ELSEIF p\_Total\_Marks >= 900 AND p\_Total\_Marks <= 989 THEN

SET v\_Class = 'First Class';

ELSEIF p\_Total\_Marks >= 825 AND p\_Total\_Marks <= 899 THEN

SET v\_Class = 'Higher Second Class';

ELSE

SET v\_Class = 'Not Categorized'; -- For marks below 825 or above 1500

END IF;

-- Insert the result into the Result table

INSERT INTO Result (Roll, Name, Class)

VALUES (p\_Roll, p\_Name, v\_Class);

END //

DELIMITER ;

DELIMITER //

mysql>

mysql> CREATE PROCEDURE process\_all\_students()

BEGIN

DECLARE done INT DEFAULT FALSE;

DECLARE v\_Roll INT;

DECLARE v\_Name VARCHAR(50);

DECLARE v\_Total\_Marks INT;

DECLARE cur CURSOR FOR SELECT Roll, Name, Total\_Marks FROM Stud\_Marks;

DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = TRUE;

OPEN cur;

read\_loop: LOOP

FETCH cur INTO v\_Roll, v\_Name, v\_Total\_Marks;

IF done THEN

LEAVE read\_loop;

END IF;

-- Call the stored procedure

CALL proc\_Grade(v\_Roll, v\_Name, v\_Total\_Marks);

END LOOP;

CLOSE cur;

END //

DELIMITER ;

select \* from Result;

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

| Roll | Name | Class |

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

| 101 | John Doe | Distinction |

| 102 | Jane Smith | First Class |

| 103 | Alice Johnson | Higher Second Class |

| 105 | Bob Brown | Not Categorized |

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

CREATE FUNCTION determine\_class(p\_Total\_Marks INT)

RETURNS VARCHAR(50)

BEGIN

DECLARE v\_Class VARCHAR(20);

-- Determine the category based on total marks

IF p\_Total\_Marks >= 990 AND p\_Total\_Marks <= 1500 THEN

SET v\_Class = 'Distinction';

ELSEIF p\_Total\_Marks >= 900 AND p\_Total\_Marks <= 989 THEN

SET v\_Class = 'First Class';

ELSEIF p\_Total\_Marks >= 825 AND p\_Total\_Marks <= 899 THEN

SET v\_Class = 'Higher Second Class';

ELSEIF p\_Total\_Marks >= 700 AND p\_Total\_Marks <= 824 THEN

SET v\_Class = 'Pass';

ELSE

SET v\_Class = 'Not Categorized'; -- For marks below 700 or above 1500

END IF;

RETURN v\_Class;

END //

Updated procedure

CREATE PROCEDURE proc\_Grade(

IN p\_Roll INT,

IN p\_Name VARCHAR(50),

IN p\_Total\_Marks INT

)

BEGIN

DECLARE v\_Class VARCHAR(20);

-- Call the function to determine the class

SET v\_Class = determine\_class(p\_Total\_Marks);

-- Insert the result into the Result table

INSERT INTO Result (Roll, Name, Class)

VALUES (p\_Roll, p\_Name, v\_Class);

-- No explicit commit needed in MySQL stored procedures; transactions are handled by the client.

END //