Name: Sanskruti Patil

Roll No: 31448

1. CREATE TABLE Stud_Marks (Roll INT PRIMARY KEY, Name VARCHAR(50), Total_Marks INT NOT NULL);
2. DESC Stud_Marks;

```
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| Roll       | int         | NO   | PRI | NULL    |       |
| Name       | varchar(50) | YES  |     | NULL    |       |
| Total Marks| int         | NO   |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
```

3. CREATE TABLE Result (Roll INT PRIMARY KEY NOT NULL, Name VARCHAR(50), Class VARCHAR(20));
4. DESC Result;

```
+-------+-------------+------+-----+---------+-------+
| Field | Type        | Null | Key | Default | Extra |
+-------+-------------+------+-----+---------+-------+
| Roll  | int         | NO   | PRI | NULL    |       |
| Name  | varchar(50) | YES  |     | NULL    |       |
| Class | varchar(20) | YES  |     | NULL    |       |
+-------+-------------+------+-----+---------+-------+
```

5. INSERT INTO Stud_Marks (Roll, Name, Total_Marks) VALUES (101,'Rajvika', 900);

   INSERT INTO Stud_Marks (Roll, Name, Total_Marks) VALUES (102,'Mayuri', 950);

   INSERT INTO Stud_Marks (Roll, Name, Total_Marks) VALUES (103,'Saksham', 1050);

   INSERT INTO Stud_Marks (Roll, Name, Total_Marks) VALUES (104,'Sushant', 850);

   INSERT INTO Stud_Marks (Roll, Name, Total_Marks) VALUES (105,'Sanvi', 1000);

   INSERT INTO Stud_Marks (Roll, Name, Total_Marks) VALUES (106,'Samukta', 830);

6. SELECT * FROM Stud_Marks;

```
+------+---------+-------------+
| Roll | Name    | Total_Marks |
+------+---------+-------------+
|  101 | Rajvika |         900 |
|  102 | Mayuri  |         950 |
|  103 | Saksham |        1050 |
|  104 | Sushant |         850 |
|  105 | Sanvi   |        1000 |
|  106 | Samukta |         830 |
+------+---------+-------------+
```

7. DELIMITER //

```sql
CREATE PROCEDURE append_grade(IN p_roll INT)
BEGIN
    DECLARE v_name VARCHAR(50);

    DECLARE v_marks INT;

    DECLARE v_class VARCHAR(20);


    SELECT Name, Total_Marks INTO v_name, v_marks
    FROM Stud_Marks
    WHERE Roll = p_roll;


    SET v_class = CASE
        WHEN v_marks BETWEEN 990 AND 1500 THEN 'Distinction'
        WHEN v_marks BETWEEN 900 AND 989 THEN 'First Class'
        WHEN v_marks BETWEEN 800 AND 899 THEN 'Higher Second Class'
        ELSE 'No Category'
    END;
    INSERT INTO Result VALUES (p_roll, v_name, v_class);
    SELECT 'Record Inserted Successfully' AS message;
END //
DELIMITER ;
```

8. CALL append_grade(101);

```
+-----------------------------+
| message                     |
+-----------------------------+
| Record Inserted Successfully |
+-----------------------------+
```

9. CALL append_grade(102);

```
+-----------------------------+
| message                     |
+-----------------------------+
```

```
| Record Inserted Successfully |
+------------------------------+
```

10. CALL append_grade(103);

```
+------------------------------+
| message                      |
+------------------------------+
| Record Inserted Successfully |
+------------------------------+
```

11. CALL append_grade(104);

```
+------------------------------+
| message                      |
+------------------------------+
| Record Inserted Successfully |
+------------------------------+
```

12. CALL append_grade(106);

```
+------------------------------+
| message                      |
+------------------------------+
| Record Inserted Successfully |
+------------------------------+
```

13. SELECT * FROM Result;

```
+------+---------+---------------------+
| Roll | Name    | Class               |
+------+---------+---------------------+
|  101 | Rajvika | First Class         |
|  102 | Mayuri  | First Class         |
|  103 | Saksham | Distinction         |
|  104 | Sushant | Higher Second Class |
|  106 | Samukta | Higher Second Class |
+------+---------+---------------------+
```

14. **FUNCTION**

    DELIMITER //

    CREATE FUNCTION func_grade(p_roll INT) RETURNS VARCHAR(20)

    DETERMINISTIC

    BEGIN

     DECLARE v_marks INT;

     DECLARE v_class VARCHAR(20);

```sql
    SELECT Total_Marks INTO v_marks

    FROM Stud_Marks

    WHERE Roll = p_roll;


    SET v_class = CASE

      WHEN v_marks BETWEEN 990 AND 1500 THEN 'Distinction'

      WHEN v_marks BETWEEN 900 AND 989 THEN 'First Class'

      WHEN v_marks BETWEEN 800 AND 899 THEN 'Higher Second Class'

      ELSE 'No Category'

     END;

     RETURN v_class;

    END //

    DELIMITER ;
```

15. INSERT INTO Result (Roll,Name,Class) SELECT Roll, Name, func_grade(Roll) From Stud_Marks WHERE Roll=101;

    INSERT INTO Result (Roll,Name,Class) SELECT Roll, Name, func_grade(Roll) From Stud_Marks WHERE Roll=102;

    INSERT INTO Result (Roll,Name,Class) SELECT Roll, Name, func_grade(Roll) From Stud_Marks WHERE Roll=103;

    INSERT INTO Result (Roll,Name,Class) SELECT Roll, Name, func_grade(Roll) From Stud_Marks WHERE Roll=104;

    INSERT INTO Result (Roll,Name,Class) SELECT Roll, Name, func_grade(Roll) From Stud_Marks WHERE Roll=105;

    INSERT INTO Result (Roll,Name,Class) SELECT Roll, Name, func_grade(Roll) From Stud_Marks WHERE Roll=106;

16. SELECT * FROM Result;

```
+------+---------+--------------------+
| Roll | Name    | Class              |
+------+---------+--------------------+
|  101 | Rajvika | First Class        |
|  102 | Mayuri  | First Class        |
|  103 | Saksham | Distinction        |
|  104 | Sushant | Higher Second Class |
|  106 | Samukta | Higher Second Class |
+------+---------+--------------------+
```