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Roll Number: 31118 (K-1 Batch)

Subject: DBSL Lab – Assignment 05

Code:

```sql
CREATE TABLE stud_marks(
    roll_num INT NOT NULL PRIMARY KEY,
    stud_name VARCHAR(200),
    total_marks INT
);

CREATE TABLE result(
    roll_num INT NOT NULL PRIMARY KEY,
    stud_name VARCHAR(200),
    class VARCHAR(300)
);

INSERT INTO stud_marks(roll_num, stud_name, total_marks)
VALUES (1, 'Alex', 1300),
(2, 'Bob', 980),
(3, 'Natasha', 840);

DELIMITER //

CREATE PROCEDURE proc_grade(
    IN rn INT
)

BEGIN

    DECLARE sn VARCHAR(200);
    DECLARE marks INT;
    DECLARE cl VARCHAR(300);

    SELECT stud_name, total_marks
    INTO sn, marks
    FROM stud_marks
    WHERE stud_marks.roll_num = rn;

    IF marks >= 990 AND marks <= 1500 THEN
        SET cl = 'distinction category';
    ELSEIF marks >= 900 AND marks <= 989 THEN
        SET cl = 'first class';
    ELSEIF marks >= 825 AND marks <= 899 THEN
        SET cl = 'higher second class';
```

```
    ELSE
        SET cl = 'undefined';
    END IF;

    INSERT INTO result (roll_num, stud_name, class)
    VALUES (rn, sn, cl);

END //

DELIMITER ;

CALL proc_grade(1);
```

Tables in database:

```
mysql> show tables;
+-----------------------+
| Tables_in_a05_database |
+-----------------------+
| result                |
| stud_marks            |
+-----------------------+
2 rows in set (0.02 sec)
```

Schema of Tables:

```
mysql> desc stud_marks;
+-------------+--------------+------+-----+---------+-------+
| Field       | Type         | Null | Key | Default | Extra |
+-------------+--------------+------+-----+---------+-------+
| roll_num    | int          | NO   | PRI | NULL    |       |
| stud_name   | varchar(200) | YES  |     | NULL    |       |
| total_marks | int          | YES  |     | NULL    |       |
+-------------+--------------+------+-----+---------+-------+
3 rows in set (0.01 sec)
```

```
mysql> desc result
    -> ;
+-------------+--------------+------+-----+---------+-------+
| Field       | Type         | Null | Key | Default | Extra |
+-------------+--------------+------+-----+---------+-------+
| roll_num    | int          | NO   | PRI | NULL    |       |
| stud_name   | varchar(200) | YES  |     | NULL    |       |
| class       | varchar(300) | YES  |     | NULL    |       |
+-------------+--------------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

Stored Procedures:

```
mysql> show procedure status;
+--------------+----------------+-----------+--------------+---------------------+---------------------+---------------+---------+--------------------+-----------------
------+--------------------+
| Db           | Name           | Type      | Definer      | Modified            | Created             | Security_type | Comment | character_set_client | collation_conne
ction | Database Collation |
+--------------+----------------+-----------+--------------+---------------------+---------------------+---------------+---------+--------------------+-----------------
------+--------------------+
| a04_database | calculateFine  | PROCEDURE | root@localhost | 2021-09-02 09:12:00 | 2021-09-02 09:12:00 | DEFINER       |         | cp850              | cp850_general_c
i     | utf8mb4_0900_ai_ci |
| a04_part2    | calculate_area | PROCEDURE | root@localhost | 2021-09-09 09:57:12 | 2021-09-09 09:57:12 | DEFINER       |         | cp850              | cp850_general_c
i     | utf8mb4_0900_ai_ci |
| a05_database | proc_grade     | PROCEDURE | root@localhost | 2021-09-16 09:48:50 | 2021-09-16 09:48:50 | DEFINER       |         | cp850              | cp850_general_c
i     | utf8mb4_0900_ai_ci |
| a06_database | update_old     | PROCEDURE | root@localhost | 2021-09-16 10:40:45 | 2021-09-16 10:40:45 | DEFINER       |         | cp850              | cp850_general_c
i     | utf8mb4_0900_ai_ci |
+--------------+----------------+-----------+--------------+---------------------+---------------------+---------------+---------+--------------------+-----------------
------+--------------------+
4 rows in set (0.01 sec)
```

Initial Table Data:

```
mysql> select * from stud_marks;
+----------+-----------+-------------+
| roll_num | stud_name | total_marks |
+----------+-----------+-------------+
|        1 | Alex      |        1300 |
|        2 | Bob       |         980 |
|        3 | Natasha   |         840 |
+----------+-----------+-------------+
3 rows in set (0.03 sec)
```

```
mysql> select * from result;
Empty set (0.01 sec)
```

Calling Stored Procedure for roll number-1:

```
mysql> select * from result;
Empty set (0.00 sec)

mysql> call proc_grade(1);
Query OK, 1 row affected (0.05 sec)

mysql> select * from result;
+----------+-----------+----------------------+
| roll_num | stud_name | class                |
+----------+-----------+----------------------+
|        1 | Alex      | distinction category |
+----------+-----------+----------------------+
1 row in set (0.00 sec)
```

Calling Stored Procedure for roll number-2:

```
mysql> select * from result;
+----------+-----------+----------------------+
| roll_num | stud_name | class                |
+----------+-----------+----------------------+
|        1 | Alex      | distinction category |
+----------+-----------+----------------------+
1 row in set (0.00 sec)

mysql> call proc_grade(2);
Query OK, 1 row affected (0.00 sec)

mysql> select * from result;
+----------+-----------+----------------------+
| roll_num | stud_name | class                |
+----------+-----------+----------------------+
|        1 | Alex      | distinction category |
|        2 | Bob       | first class          |
+----------+-----------+----------------------+
2 rows in set (0.00 sec)
```

Calling Stored Procedure for Roll Number-3:

```
mysql> select * from result;
+----------+-----------+----------------------+
| roll_num | stud_name | class                |
+----------+-----------+----------------------+
|        1 | Alex      | distinction category |
|        2 | Bob       | first class          |
+----------+-----------+----------------------+
2 rows in set (0.00 sec)

mysql> call proc_grade(3);
Query OK, 1 row affected (0.00 sec)

mysql> select * from result;
+----------+-----------+----------------------+
| roll_num | stud_name | class                |
+----------+-----------+----------------------+
|        1 | Alex      | distinction category |
|        2 | Bob       | first class          |
|        3 | Natasha   | higher second class  |
+----------+-----------+----------------------+
3 rows in set (0.00 sec)
```

Thank You!