P6

Problem Statement:

Stored procedure proc_Grade: categorize students based on marks (<=1500 and >=990 =>
Distinction; 989-900 => First class; 899-825 => Higher Second Class). Tables
Stud_Marks(name, total_marks) and Result(Roll, Name, Class).

Code:

```sql
-- P6: proc_Grade (MySQL)
CREATE TABLE Stud_Marks (
  Roll INT PRIMARY KEY,
  Name VARCHAR(100),
  total_marks INT
);

CREATE TABLE Result (
  Roll INT PRIMARY KEY,
  Name VARCHAR(100),
  Class VARCHAR(50)
);

DELIMITER $$
CREATE PROCEDURE proc_Grade()
BEGIN
  DECLARE done INT DEFAULT 0;
  DECLARE vRoll INT; DECLARE vName VARCHAR(100); DECLARE vMarks INT;
  DECLARE cur CURSOR FOR SELECT Roll, Name, total_marks FROM Stud_Marks;
  DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = 1;
  OPEN cur;
  read_loop: LOOP
    FETCH cur INTO vRoll, vName, vMarks;
    IF done THEN LEAVE read_loop; END IF;
    DECLARE vclass VARCHAR(50) DEFAULT 'Other';
    IF vMarks BETWEEN 990 AND 1500 THEN
      SET vclass = 'Distinction';
    ELSEIF vMarks BETWEEN 900 AND 989 THEN
      SET vclass = 'First Class';
    ELSEIF vMarks BETWEEN 825 AND 899 THEN
      SET vclass = 'Higher Second Class';
    END IF;
    INSERT INTO Result(Roll, Name, Class) VALUES (vRoll, vName, vclass)
      ON DUPLICATE KEY UPDATE Name=VALUES(Name), Class=VALUES(Class);
  END LOOP;
  CLOSE cur;
END$$
DELIMITER ;
```