***#Assignment A5-SQL#***

**Problem Statement:** PL/SQL Stored Procedure and Stored Function.

Write a Stored Procedure namely proc\_Grade for the categorization of student. If marks scored by students in examination is <=1500 and marks>=990 then student will be placed in distinction category if marks scored are between 989 and900 category is first class, if marks 899 and 825 category is Higher Second Class.  
**Source Code:**

-- Create Stud\_Mark\_s table

SELECT \* FROM STUD\_MARK\_S;

DROP TABLE Stud\_Mark\_s;

CREATE TABLE Stud\_Mark\_s (

Roll\_No NUMBER PRIMARY KEY,

Name VARCHAR2(100),

Total\_Marks NUMBER

);

-- Insert sample data into Stud\_Mark\_s table with Roll Numbers

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (1, 'Aarav Sharma', 1200);

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (2, 'Vivaan Patel', 980);

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (3, 'Aditya Mehta', 1500);

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (4, 'Vihaan Rao', 850);

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (5, 'Arjun Singh', 700);

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (6, 'Krishna Kumar', 1120);

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (7, 'Sai Joshi', 920);

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (8, 'Anaya Gupta', 1350);

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (9, 'Saanvi Verma', 800);

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (10, 'Aanya Nair', 1050);

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (11, 'Rohan Chatterjee', 900);

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (12, 'Pooja Desai', 950);

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (13, 'Kavya Bhatia', 980);

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (14, 'Shivam Yadav', 700);

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (15, 'Tanvi Sethi', 1100);

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (16, 'Niranjan Reddy', 1150);

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (17, 'Harshitha Rani', 780);

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (18, 'Rajesh Malhotra', 1300);

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (19, 'Sneha Iyer', 880);

INSERT INTO Stud\_Mark\_s (Roll\_No, Name, Total\_Marks) VALUES (20, 'Aarushi Khanna', 950);

SELECT \* FROM RESULT\_S;

-- Create Result\_s table with Roll\_No field

CREATE TABLE Result\_s (

Roll\_No NUMBER PRIMARY KEY,

Name VARCHAR2(100),

Class VARCHAR2(50)

);

CREATE OR REPLACE PROCEDURE proc\_Grade\_S (

p\_roll IN NUMBER,

p\_name IN VARCHAR2,

p\_total\_marks IN NUMBER

) AS

v\_class VARCHAR2(50);

BEGIN

IF p\_total\_marks >= 990 AND p\_total\_marks <= 1500 THEN

v\_class := 'Distinction';

ELSIF p\_total\_marks >= 900 AND p\_total\_marks < 990 THEN

v\_class := 'First Class';

ELSIF p\_total\_marks >= 825 AND p\_total\_marks < 900 THEN

v\_class := 'Higher Second Class';

ELSE

v\_class := 'FAIL';

END IF;

INSERT INTO Result\_s (Roll\_No, Name, Class)

VALUES (p\_roll, p\_name, v\_class);

COMMIT;

EXCEPTION

WHEN OTHERS THEN

DBMS\_OUTPUT.PUT\_LINE('An error occurred: ' || SQLERRM);

END;

/

DROP PROCEDURE PROC\_GRADE\_S;

DECLARE

v\_total\_marks NUMBER;

v\_roll NUMBER;

v\_name VARCHAR2(100); -- Variable to store the student's name

BEGIN

DBMS\_OUTPUT.PUT\_LINE('Enter Roll Number:');

v\_roll := &roll\_number; -- Accepts the roll number from user input

BEGIN

SELECT Total\_Marks, Name INTO v\_total\_marks, v\_name

FROM Stud\_Mark\_s

WHERE Roll\_No = v\_roll;

EXCEPTION

WHEN NO\_DATA\_FOUND THEN

DBMS\_OUTPUT.PUT\_LINE('No student found with Roll No: ' || v\_roll);

RETURN;

END;

proc\_Grade\_s(v\_roll, v\_name, v\_total\_marks);

DECLARE

v\_class VARCHAR2(50);

BEGIN

SELECT Class INTO v\_class

FROM Result\_s

WHERE Roll\_No = v\_roll;

DBMS\_OUTPUT.PUT\_LINE('Roll No: ' || v\_roll || ', Name: ' || v\_name || ', Class: ' || v\_class);

EXCEPTION

WHEN NO\_DATA\_FOUND THEN

DBMS\_OUTPUT.PUT\_LINE('No result found for Roll No: ' || v\_roll);

END;

EXCEPTION

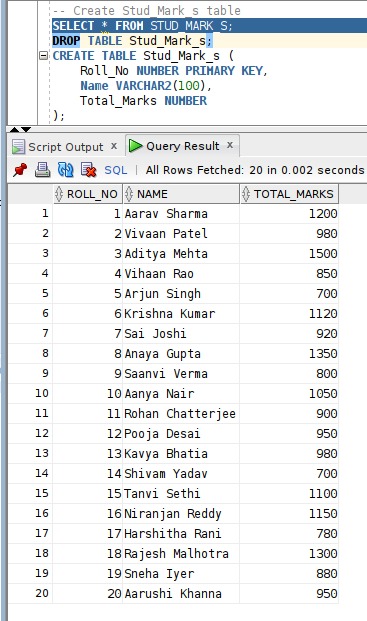
WHEN OTHERS THEN

DBMS\_OUTPUT.PUT\_LINE('An error occurred: ' || SQLERRM);

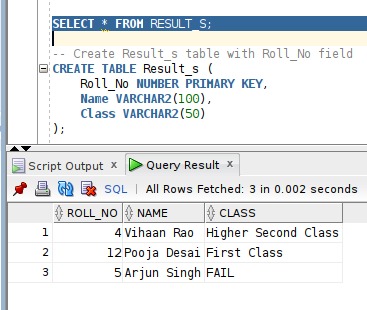
END;

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**Output:**



Marks Table



Fine Table