**Stored Procedure proc\_Grade:**

sql

Copy code

CREATE OR REPLACE PROCEDURE proc\_Grade (p\_Roll IN INT) IS

v\_Total\_marks INT;

v\_Class VARCHAR2(20);

BEGIN

-- Fetch total marks from Stud\_Marks table for the given Roll number

SELECT Total\_marks INTO v\_Total\_marks

FROM Stud\_Marks

WHERE Roll = p\_Roll;

-- Determine the category based on the marks

IF v\_Total\_marks >= 990 AND v\_Total\_marks <= 1500 THEN

v\_Class := 'Distinction';

ELSIF v\_Total\_marks >= 900 AND v\_Total\_marks <= 989 THEN

v\_Class := 'First Class';

ELSIF v\_Total\_marks >= 825 AND v\_Total\_marks <= 899 THEN

v\_Class := 'Higher Second Class';

ELSE

v\_Class := 'No Classification'; -- For marks below 825

END IF;

-- Insert the classification into the Result table

INSERT INTO Result (Roll, Name, Class)

SELECT Roll, Name, v\_Class

FROM Stud\_Marks

WHERE Roll = p\_Roll;

COMMIT;

EXCEPTION

WHEN NO\_DATA\_FOUND THEN

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

WHEN OTHERS THEN

DBMS\_OUTPUT.PUT\_LINE('Error: ' || SQLERRM);

END proc\_Grade;

/

**PL/SQL Block to Call the Procedure:**

sql

Copy code

DECLARE

v\_Roll INT := 101; -- Example roll number, modify as needed

BEGIN

-- Call the stored procedure with a specific Roll number

proc\_Grade(v\_Roll);

DBMS\_OUTPUT.PUT\_LINE('Grade Categorization Completed for Roll No: ' || v\_Roll);

END;

/

**Function avg\_marks:**

sql

Copy code

CREATE OR REPLACE FUNCTION avg\_marks (p\_Roll IN INT) RETURN NUMBER IS

v\_Avg\_marks NUMBER;

BEGIN

-- Fetch the average marks for the student from the Stud\_Marks table

SELECT AVG(Total\_marks) INTO v\_Avg\_marks

FROM Stud\_Marks

WHERE Roll = p\_Roll;

RETURN v\_Avg\_marks;

EXCEPTION

WHEN NO\_DATA\_FOUND THEN

RETURN NULL;

WHEN OTHERS THEN

RETURN NULL;

END avg\_marks;

/

**Parameterized Cursor cursor\_grade:**

sql

Copy code

DECLARE

CURSOR cursor\_grade (p\_start\_roll INT, p\_end\_roll INT) IS

SELECT Roll, Name, Class

FROM Result

WHERE Roll BETWEEN p\_start\_roll AND p\_end\_roll;

v\_Roll INT;

v\_Name VARCHAR2(100);

v\_Class VARCHAR2(20);

BEGIN

-- Open the cursor with the specified start and end roll numbers

FOR rec IN cursor\_grade(101, 105) LOOP

v\_Roll := rec.Roll;

v\_Name := rec.Name;

v\_Class := rec.Class;

DBMS\_OUTPUT.PUT\_LINE('Roll: ' || v\_Roll || ' | Name: ' || v\_Name || ' | Class: ' || v\_Class);

END LOOP;

END;

/