Name: Vinayak Kumar Singh   **Subject:** Database System

Register No: 23MCA1030   **Date:** 12-10-2023

PL/SQL PROCEDURES AND FUNCTIONS

- **Table Created**

```
CREATE TABLE college_students (
    student_id NUMBER,
    student_name VARCHAR2(50),
    student_department VARCHAR2(50),
    student_ccgpa NUMBER
);
```

- **Procedure Created**

```
CREATE OR REPLACE PROCEDURE insert_student(
    p_student_id NUMBER,
    p_student_name VARCHAR2,
    p_student_department VARCHAR2,
    p_student_ccgpa NUMBER
) AS
BEGIN
    INSERT INTO college_students (student_id, student_name,
student_department, student_ccgpa)
    VALUES (p_student_id, p_student_name, p_student_department,
p_student_ccgpa);
    COMMIT;
```

```
END insert_student;
/
```

- **Function created**

```
CREATE OR REPLACE FUNCTION count_students RETURN NUMBER IS
    student_count NUMBER;
BEGIN
    SELECT COUNT(*) INTO student_count FROM college_students;
    RETURN student_count;
END count_students;
/
```

- **Procedure created**

```
CREATE OR REPLACE PROCEDURE drop_table IS
BEGIN
    EXECUTE IMMEDIATE 'DROP TABLE college_students';
    DBMS_OUTPUT.PUT_LINE('Table Dropped');
    COMMIT;
END drop_table;
/

BEGIN
    insert_student(1, 'Aman Nirmarlkar', 'MSC CS', 7.5);
    insert_student(2, 'Anil Kumar', 'MSC IT', 6.9);
    insert_student(3, 'Aakash Yadav', 'BCA', 8.0);
    insert_student(4, 'Chirag Setpal', 'MCA', 7.8);
    insert_student(5, 'Dheeraj Sahu', 'Btech', 8.5);
END;
/
```

- **Statement processed**

```
BEGIN
    FOR rec IN (SELECT * FROM college_students) LOOP
        DBMS_OUTPUT.PUT_LINE('Student ID: ' || rec.student_id);
        DBMS_OUTPUT.PUT_LINE('Student Name: ' || rec.student_name);
        DBMS_OUTPUT.PUT_LINE('Student Department: ' ||
rec.student_department);
        DBMS_OUTPUT.PUT_LINE('Student CGPA: ' || rec.student_ccgpa);
        DBMS_OUTPUT.PUT_LINE('------------------------');
    END LOOP;
END;
/

DECLARE
    total_students NUMBER;
BEGIN
    total_students := count_students;
    DBMS_OUTPUT.PUT_LINE('Total Students: ' || total_students);
END;
/

BEGIN
    drop_table;
END;
/
```

Output:

```
Table created.

Procedure created.

Function created.

Procedure created.

Statement processed.


Statement processed.
Student ID: 1
Student Name: Aman Nirmarlkar
Student Department: MSC CS
Student CGPA: 7.5
--------------------------
Student ID: 2
Student Name: Anil Kumar
Student Department: MSC IT
Student CGPA: 6.9
--------------------------
Student ID: 3
Student Name: Aakash Yadav
Student Department: BCA
Student CGPA: 8
--------------------------
Student ID: 4
Student Name: Chirag Setpal
Student Department: MCA
Student CGPA: 7.8
--------------------------
Student ID: 5
Student Name: Dheeraj Sahu
Student Department: Btech
Student CGPA: 8.5
--------------------------


Statement processed.
Total Students: 5

Statement processed.
Table Dropped
```

END