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Experiment 3.1

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Branch: CSE   **Section/Group:** 608 (B)

Semester: 3rd   **Date of Performance:** 03/11/2022

Subject Name: DBMS   **Subject Code:** 21CSH-214

Aim:
Introduction and implementation of programs of Procedures.

Objective:
Learning and implementing Procedures.

Theory:

- ➢ Subprogram
  - o Procedure – Perform an action.
  - o Function – Compute a value.

- Local Subprogram – Subprogram declared inside a block its scope is that scope only.
- Stored Subprogram – Subprogram stored which can be called anytime and anywhere.

- ❖ **ADVANTAGES**
  1. Extendibility
  2. Modularity
  3. Reusability
  4. Maintainability
  5. Abstraction

❖ Difference B/W Procedure & Function.

PROCEDURE	FUNCTION
Parameters can be passed and used to perform actions, then return parameters	Parameters passed used to compute value & return that value
May return value	Must return only one value
Value can't be returned directly as output	Value can be returned as direct output

❖ Local Procedure Syntax

```
DECLARE
        Procedure <procedure_name> (arg1 {IN|OUT|INOUT} datatype, arg2 .....)
                                                {is|as}
        begin
                executable code of procedure;
                [exception handling code];        --optional
        End <procedure_name>;           -- here procedure name is optional
BEGIN
        executable code of program;
        call to procedure;
END;
```

❖ Stored Procedure Syntax

```
Create Procedure <procedure_name> (arg1 {IN|OUT|INOUT} datatype, arg2 .....)
                                                {is|as}
begin
        executable code of procedure;
        [exception handling code]; --optional
End <procedure_name>;
```

DBMS script and Output:

1. Create a local procedure to increase salary of all employees of 'CSE' department by certain amount.

Code:

```
DECLARE
        amt number;

        Procedure salary_raise_CSE (raise number) as

        begin
                Update emp set salary=salary+raise where dept='CSE';
        end salary_raise_CSE;

BEGIN
        amt:=:Enter_amount;
        salary_raise_CSE(amt);
END;
```

Output: (for input 500)

Before:

EID	ENAME	SALARY	DEPT
1	Rohan	1000	CSE
2	Sinu	100	ECE
3	Sameer	700	CSE
4	Harsh	200	AI
5	Ruhela	10	AI
6	Himu	1000	CSE
7	Mrinal	500	AI

After:

EID	ENAME	SALARY	DEPT
1	Rohan	1500	CSE
2	Sinu	100	ECE
3	Sameer	1200	CSE
4	Harsh	200	AI
5	Ruhela	10	AI
6	Himu	1500	CSE
7	Mrinal	500	AI

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2. Find grade of student from marks entered by user at runtime.

```
--Stored Procedure
Create Procedure fire_emp(emp_no number) as
begin
        DELETE from emp where eid=emp_no;
end fire_emp;

-- Program
DECLARE
        emp_no number;
BEGIN
        emp_no:=:Enter_Emp_no;
        fire_emp(emp_no);
END;
```

Output: (for input 3)

Before:

EID	ENAME	SALARY	DEPT
1	Rohan	1500	CSE
2	Sinu	100	ECE
3	Sameer	1200	CSE
4	Harsh	200	AI
5	Ruhela	10	AI
6	Himu	1500	CSE
7	Mrinal	500	AI

After:

EID	ENAME	SALARY	DEPT
1	Rohan	1500	CSE
2	Sinu	100	ECE
4	Harsh	200	AI
5	Ruhela	10	AI
6	Himu	1500	CSE
7	Mrinal	500	AI

Learning outcomes (What I have learnt):

1. Learned about DBMS languages.
2. I have learned about PL/SQL block Structure.
3. Learn about Four components of Pl/SQL and their function.

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