**Jaypee Institute of Information Technology**

**Database Systems & Web Lab (15B11CI312)**

**Assignment 9: (Procedures, Functions , Cursors and Triggers) [CI271.4]**

LAB EXERCISE

PL/SQL Fundamentals (Procedures and Functions)

1. Write a program to take three numbers as input from user. Display the largest number among them.
2. Create a program that accepts a single number X. Display the message “Hello World” X times, where X is the number entered.
3. Try running the above program and entering a negative number, what happens? Change the code to print a message if a number less than 1 is entered that informs the user they must enter a number greater than or equal to 1.

SQL within PL/SQL

1. Create a table AREA(RADIUS NUMBER(5),AREA DECIMAL(14,2))

Write a program to calculate area of circle for radius [1, 10] and insert into the table AREA.

1. Create a table named POWER. A record in POWER must contain a number, its square, and its cube. Insert record using PL/SQL for numbers[20-30].
2. Write a program to reverse a user input string using for loop
3. Consider the EMPLOYEE table, having salary as one of the attributes. Write a program to increase the salary by 15% of an employee, whose SSN is entered by the user.
4. Create a PL/SQL block that accepts a **new** job title and an **old** job title. Find all employees in the old job and give them the new job. Ensure a valid message is given back to the user even if no employees changed job.

Cursors

1. Consider EMPLOYEE table with EMAIL\_ID as one of the attributes. Write following PLSQL procedure that creates an email list of all employees. Make use of cursor.

Triggers

1. Consider a table MEMBERS(MID, NAME, EMAIL, DOB). Consider another tableREMINDERS(ID, MID, MESSAGE)that stores reminder messages.

Create an AFTER INSERT trigger that inserts a reminder message into the REMINDERS table if the birth date of the member is inserted as NULL.

**Explanation:**

If we insert two rows into the MEMBERS table as:

INSERT INTO members(name, email, birthDate)

VALUES

('John Doe', 'john.doe@example.com', NULL),

('KimKole', 'kim.kole@example.com','2000-01-01');

And then, query data from the REMINDERStable:

SELECT \* FROM reminders;

It should display a record as

ID MID MESSAGE

1 MID2 Your DOB is NULL. Please update.

We inserted two rows into the members table. However, only the first row that has a birth date value NULL, therefore, the trigger inserted only one row into the reminders table.