B461 Assignment 6: PL/pgSQL

This assignment is designed to test your knowledge on PL/pgSQL

For this assignment, you will need to submit 2 files. The first file is a .sql file that should contain all the SQL code relating to problems requesting the development of such code. The second file is a .txt file that should contain the output of the queries. **Make sure you follow the following syntax (Example 1) when writing the program and also make sure you run the functions with minimum of two different test cases.**

Example 1:

```
CREATE OR REPLACE FUNCTION factorial_Iterative (n integer) RETURNS integer AS
$$
  DECLARE
  result integer;
  i integer;
  BEGIN
    result := 1;
    FOR i IN 1..n LOOP
                result := i * result;
                END LOOP;
  RETURN result;
   END;
$$ language plpgsql;

select factorial_Iterative(0); select factorial_Iterative(5);
```

Questions:

1. Write a PL/pgSQL program that computes and returns the maximum of two values.
   Example :
   Input num1 = 51, num2 = 32
   Output : 51

2. Write a PL/pgSQL program that increments the salary of every employee in customers by 500 and replace the salary(incremented) back into the table.

Note: Create a table customers with the following attributes and records. The updated table should resemble the expected output.

Customers:

ID	NAME	AGE	ADDRESS	SALARY
1	Bhargav	32	Ahmedabad	2000.00
2	Tarika	25	Delhi	1500.00
3	John	23	Kota	2000.00
4	Michael	25	Mumbai	6500.00
5	Harish	27	Bhopal	8500.00
6	Suraj	22	MP	4500.00

Expected Output:

ID	NAME	AGE	ADDRESS	SALARY
1	Bhargav	32	Ahmedabad	2500.00
2	Tarika	25	Delhi	2000.00
3	John	23	Kota	2500.00
4	Michael	25	Mumbai	7000.00
5	Harish	27	Bhopal	9000.00
6	Suraj	22	MP	5000.00

3. Write a PL/pgSQL program that reverses a number.
   Example:
   Input: num = 123
   Output: 321

4. Write a PL/pgSQL program that takes a number n as input and prints a right-angled pyramid of *
   Input:3
   Output:
   *
   **
   ***

5. Write a PL/pgSQL program that takes two numbers and find the GCD (Greatest Common Divisor) or HCF (Highest Common Factor) value of the numbers.
   Example :
   Input: num1 = 8, num2 = 48
   Output: 8