DATABASE MANAGEMENT SYSTEMS

Course Code: CSE2007 | Slot: L13+L14

Class Number: AP2023246000686 | Venue: CB-102

Assignment No.: 9 | Date:04/04/2024

Reg. No:22BCE8609

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School & Programme: B.tech CSE core

Instructions

1. Submit Your Assignment at the following link. Click Here or https://forms.gle/gX2T5hkca7AVE1iU6
2. Submit the Assignment in PDF format.
3. Submit the assignment on or before 08/April/2024.
4. Copy the code, take a picture of the output, and paste it into a Word document. Convert the word doc into PDF and submit.
5. The file name will be your registration number and name.
6. **Assignments Programs:**

S.NO	Question
1	Hello World Program in PL/SQL
2	PL/SQL Program To Add Two Numbers
3	PL/SQL Program for Prime Number
4	PL/SQL Program to Find Factorial of a Number
5	PL/SQL Program to Print Table of a Number

1. Hello World Program in PL/SQL

Source code

```
DELIMITER //

CREATE PROCEDURE hello_world()
BEGIN
    DECLARE message VARCHAR(50);
    SET message := 'Hello, World!';
    SELECT message;
END//

DELIMITER ;

CALL hello_world();
```

OUTPUT

Output:

```
+---------------+
| message       |
+---------------+
| Hello, World! |
+---------------+
```

2.PL/SQL Program To Add Two Numbers

SOURCE CODE

```
DELIMITER //

CREATE PROCEDURE add_two_numbers()
BEGIN
    DECLARE num1 INT DEFAULT 10;
    DECLARE num2 INT DEFAULT 20;
    DECLARE sum_result INT;

    SET sum_result = num1 + num2;
    SELECT CONCAT('The sum of ', num1, ' and ', num2, ' is ', sum_result) AS result;
END//

DELIMITER ;

CALL add_two_numbers();
```

OUTPUT

Output:

```
+-----------------------------+
| result                      |
+-----------------------------+
| The sum of 10 and 20 is 30 |
+-----------------------------+
```

3.PL/SQL Program for Prime Number

SOURCE CODE

queries.sql + 42999dg9p

```
DELIMITER //

CREATE PROCEDURE check_prime_number(IN num INT)
BEGIN
    DECLARE i INT DEFAULT 2;
    DECLARE is_prime BOOLEAN DEFAULT TRUE;

    IF num <= 1 THEN
        SET is_prime = FALSE;
    ELSE
        prime_loop: WHILE i <= SQRT(num) DO
            IF num % i = 0 THEN
                SET is_prime = FALSE;
                LEAVE prime_loop;
            END IF;
            SET i = i + 1;
        END WHILE prime_loop;
    END IF;

    IF is_prime THEN
        SELECT CONCAT(num, ' is a prime number.');
    ELSE
        SELECT CONCAT(num, ' is not a prime number.');
    END IF;
END//
DELIMITER ;
CALL check_prime_number(29);

```

OUTPUT

Output:

```
+-------------------------------------+
| CONCAT(num, ' is a prime number.') |
+-------------------------------------+
| 29 is a prime number.               |
+-------------------------------------+
```

4. PL/SQL Program to Find Factorial of a Number

SOURCE CODE

```
DELIMITER //

CREATE PROCEDURE calculate_factorial(IN num INT)
BEGIN
    DECLARE factorial INT DEFAULT 1;
    DECLARE i INT DEFAULT 1;

    IF num < 0 THEN
        SELECT 'Factorial is not defined for negative numbers.' AS result;
    ELSE
        WHILE i <= num DO
            SET factorial = factorial * i;
            SET i = i + 1;
        END WHILE;
        SELECT CONCAT('Factorial of ', num, ' is ', factorial) AS result;
    END IF;
END//

DELIMITER ;

CALL calculate_factorial(5);
```

OUTPUT

Output:

```
+------------------------+
| result                 |
+------------------------+
| Factorial of 5 is 120 |
+------------------------+
```

5.PL/SQL Program to Print Table of a Number

```
DELIMITER //

CREATE PROCEDURE print_table_of_number(IN num INT)
BEGIN
    DECLARE i INT DEFAULT 1;

    WHILE i <= 10 DO
        SELECT CONCAT(num, ' * ', i, ' = ', (num * i)) AS result;
        SET i = i + 1;
    END WHILE;
END//

DELIMITER ;
CALL print_table_of_number(5);
```

OUTPUT

```
+-----------+
| result    |
+-----------+
| 5 * 1 = 5 |
+-----------+
+------------+
| result     |
+------------+
| 5 * 2 = 10 |
+------------+
+------------+
| result     |
+------------+
| 5 * 3 = 15 |
+------------+
+------------+
| result     |
+------------+
| 5 * 4 = 20 |
+------------+
+------------+
| result     |
+------------+
| 5 * 5 = 25 |
+------------+
+------------+
| result     |
+------------+
| 5 * 6 = 30 |
+------------+
+------------+
| result     |
+------------+
| 5 * 7 = 35 |
```

```
+------------+
+------------+
| result     |
+------------+
| 5 * 8 = 40 |
+------------+
+------------+
| result     |
+------------+
| 5 * 9 = 45 |
+------------+
+-------------+
| result      |
+-------------+
| 5 * 10 = 50 |
+-------------+
```