DATABASE MANAGEMENT SYSTEM

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EXP: 12

WORKING WITH CURSOR, PROCEDURES AND FUNCTION

Program 1
FACTORIAL OF A NUMBER USING FUNCTION

```
CREATE OR REPLACE FUNCTION itfact(a NUMBER) RETURN NUMBER
IS
   fact NUMBER := 1;
   b NUMBER;
BEGIN
   b := a;
   WHILE b > 0 LOOP
      fact := fact * b;
      b := b - 1;
   END LOOP;
   RETURN fact;
END;
/

DECLARE
   result NUMBER;
BEGIN
   result := itfact(7);
   DBMS_OUTPUT.PUT_LINE('The factorial of 7 is ' || result);
END;
/
```

```
Function created.


The factorial of 7 is 5040

Statement processed.
```

Program 2

Write a PL/SQL program using Procedures IN,INOUT,OUT parameters to retrieve the corresponding book information in library

```
-- Create a simple table for the library books
    CREATE TABLE library ( book_id INT PRIMARY KEY, book_nameVARCHAR2(100),
      author_nameVARCHAR2(100));

-- Sample data insertion
    INSERT INTO library VALUES (1, 'Introduction to PL/SQL', 'John Doe'); INSERT INTO
    library VALUES (2, 'Advanced SQL', 'Jane Smith');

-- Procedure to retrieve book information
    CREATE OR REPLACE PROCEDURE get_book_info ( p_book_idIN INT, p_book_name
       IN OUT VARCHAR2, p_author_name OUT VARCHAR2)
       IS BEGIN

-- Retrieve book information based on the book_idSELECT book_name, author_name
        INTO p_book_name, p_author_name FROM library WHERE book_id = p_book_id;

-- Modify book_name if needed (optional, based on INOUT)
    p_book_name:= p_book_name || ' - Updated';
     END;
    /

    -- Test the procedure DECLARE v_book_name
       VARCHAR2(100); v_author_name
       VARCHAR2(100); BEGIN
       v_book_name := 'Sample Book'; -- Initial value
       get_book_info(1, v_book_name, v_author_name);

        -- Fetch book info for ID 1
       DBMS_OUTPUT.PUT_LINE('Book Name: ' || v_book_name);

       -- Output modified book name
       DBMS_OUTPUT.PUT_LINE('Author Name: ' || v_author_name);

       -- Output author name
       END
```

```
Book Name: Introduction to PL/SQL - Updated
Author Name: John Doe

Statement processed.
```