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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;
/
```

```
Function created.
```

```
DECLARE result
   NUMBER;
BEGIN
   result := itfact(7); -- Call the function with 7 as input
   DBMS_OUTPUT.PUT_LINE('The factorial of 7 is ' || result);
END;
/
```

```
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_name VARCHAR2(100),
  author_name VARCHAR2(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_id IN INT, p_book_name IN OUT
    VARCHAR2, p_author_name OUT VARCHAR2
) IS
BEGIN
    -- Retrieve book information based on the book_id
    SELECT 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.
```