

Ex.No.: 12	PL SQL PROGRAMS
Date: 19/09/2024	

## Program 1

### FACTORIAL OF A NUMBER USING FUNCTION

```

DECLARE
  n NUMBER := 10;
  result NUMBER;

  FUNCTION itfact(num NUMBER) RETURN NUMBER IS
    fact NUMBER := 1;
  BEGIN
    FOR i IN 1..num LOOP
      fact := fact * i;
    END LOOP;
    RETURN fact;
  END;

BEGIN
  result := itfact(n);
  DBMS_OUTPUT.PUT_LINE('The factorial of ' || n || ' is ' || result);
END;

```

Results	Explain	Describe	Saved SQL	History
<p>The factorial of 10 is 3628800</p> <p>Statement processed.</p> <p>0.01 seconds</p>				

## Program 2

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

```
CREATE OR REPLACE PROCEDURE book_info(  
    p_book_id IN NUMBER,  
    p_author OUT VARCHAR2,  
    p_title OUT VARCHAR2,  
    p_published_date OUT DATE  
) AS  
BEGIN  
    SELECT author, title, published_date  
    INTO p_author, p_title, p_published_date  
    FROM books  
    WHERE book_id = p_book_id;  
  
EXCEPTION  
    WHEN NO_DATA_FOUND THEN  
        p_author := NULL;  
        p_title := NULL;  
        p_published_date := NULL;  
    WHEN OTHERS THEN  
        RAISE;  
END book_info;  
  
DECLARE  
    v_author VARCHAR2(100);  
    v_title VARCHAR2(100);  
    v_published_date DATE;  
    v_book_id NUMBER := 1;  
BEGIN  
    book_info(v_book_id, v_author, v_title, v_published_date);  
  
    IF v_author IS NOT NULL THEN  
        DBMS_OUTPUT.PUT_LINE('Book ID: ' || v_book_id);  
        DBMS_OUTPUT.PUT_LINE('Author: ' || v_author);  
        DBMS_OUTPUT.PUT_LINE('Title: ' || v_title);  
        DBMS_OUTPUT.PUT_LINE('Published Date: ' || TO_CHAR(v_published_date, 'YYYY-MM-DD'));  
    ELSE  
        DBMS_OUTPUT.PUT_LINE('No book found with ID: ' || v_book_id);  
    END IF;  
END;
```

Book ID: 1  
Author: William Shaespeare  
Title: Hamlet  
Published Date: 1590-12-12

Statement processed.

0.02 seconds