

EXNO: 12  
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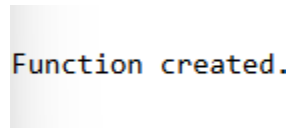
## WORKING WITH CURSOR,PROCEDURES AND FUNCTION

### Program 1

#### FACTORIAL OF A NUMBER USING FUNCTION

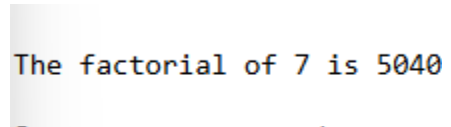
CREATE OR REPLACE FUNCTION itfact (a NUMBER) RETURN NUMBER IS

```
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.