

WORKING WITH CURSOR, PROCEDURES AND FUNCTION

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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.
```