

EXNO : 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;
```

```
/
```

```
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.