

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.