

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.