

VISHAL G
230701511
COMPUTER SCIENCE AND ENGINEERING

EXNO : 12 **WORKING WITH CURSOR,PROCEDURES AND FUNCTION**
DATE:09.10.20

Program 1

FACTORIAL OF A NUMBER USING FUNCTION

```
CREATE OR REPLACE FUNCTION ifact (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 := ifact(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.