

Name: Athiena Rachel  
Roll no.: 230701046  
Experiment 12  
Date: 09.10.2024

## 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.