

## Exp12      **WORKING WITH CURSOR,PROCEDURES AND FUNCTIONS**

```
1 -- Create a function to find factorial of a number

CREATE OR REPLACE FUNCTION factorial(n NUMBER)

RETURN NUMBER

IS

    result NUMBER := 1;

BEGIN

    IF n < 0 THEN

        RAISE_APPLICATION_ERROR(-20001, 'Number must be non-negative.');
```

ELSIF n = 0 THEN

    RETURN 1;

ELSE

    FOR i IN 1..n LOOP

        result := result \* i;

    END LOOP;

    RETURN result;

END IF;

END;

/

-- PL/SQL block to call the function

DECLARE

    num NUMBER := 5;     -- you can change this number

    fact NUMBER;

BEGIN

    fact := factorial(num);

    DBMS\_OUTPUT.PUT\_LINE('Factorial of ' || num || ' is: ' || fact);

END;

/

2 CREATE TABLE BOOKS (

    BOOK\_ID NUMBER PRIMARY KEY,

```

TITLE VARCHAR2(50),
AUTHOR VARCHAR2(50),
PRICE NUMBER
);

INSERT INTO BOOKS VALUES (101, 'DBMS Concepts', 'Navathe', 550);
INSERT INTO BOOKS VALUES (102, 'Let Us C', 'Yashwant Kanetkar', 450);
INSERT INTO BOOKS VALUES (103, 'Python Basics', 'Wes McKinney', 600);
COMMIT;

CREATE OR REPLACE PROCEDURE get_book_info(
p_book_id IN BOOKS.BOOK_ID%TYPE,
p_book_name IN OUT BOOKS.TITLE%TYPE,
p_author OUT BOOKS.AUTHOR%TYPE,
p_price OUT BOOKS.PRICE%TYPE
)
IS
BEGIN
SELECT TITLE, AUTHOR, PRICE
INTO p_book_name, p_author, p_price
FROM BOOKS
WHERE BOOK_ID = p_book_id;

-- Modify INOUT parameter
p_book_name := UPPER(p_book_name);

EXCEPTION

WHEN NO_DATA_FOUND THEN
DBMS_OUTPUT.PUT_LINE('No book found with ID ' || p_book_id);

END;

/

DECLARE
v_book_id BOOKS.BOOK_ID%TYPE := 102;
v_book_name BOOKS.TITLE%TYPE := 'Unknown';
v_author BOOKS.AUTHOR%TYPE;

```

```
v_price BOOKS.PRICE%TYPE;  
  
BEGIN  
  
get_book_info(v_book_id, v_book_name, v_author, v_price);  
  
DBMS_OUTPUT.PUT_LINE('Book ID: ' || v_book_id);  
  
DBMS_OUTPUT.PUT_LINE('Book Name (Uppercase INOUT): ' || v_book_name);  
  
DBMS_OUTPUT.PUT_LINE('Author: ' || v_author);  
  
DBMS_OUTPUT.PUT_LINE('Price: ' || v_price);  
  
END;  
  
/
```