12.WORKING WITH CURSOR, PROCEDURES AND FUNCTION

Program 1

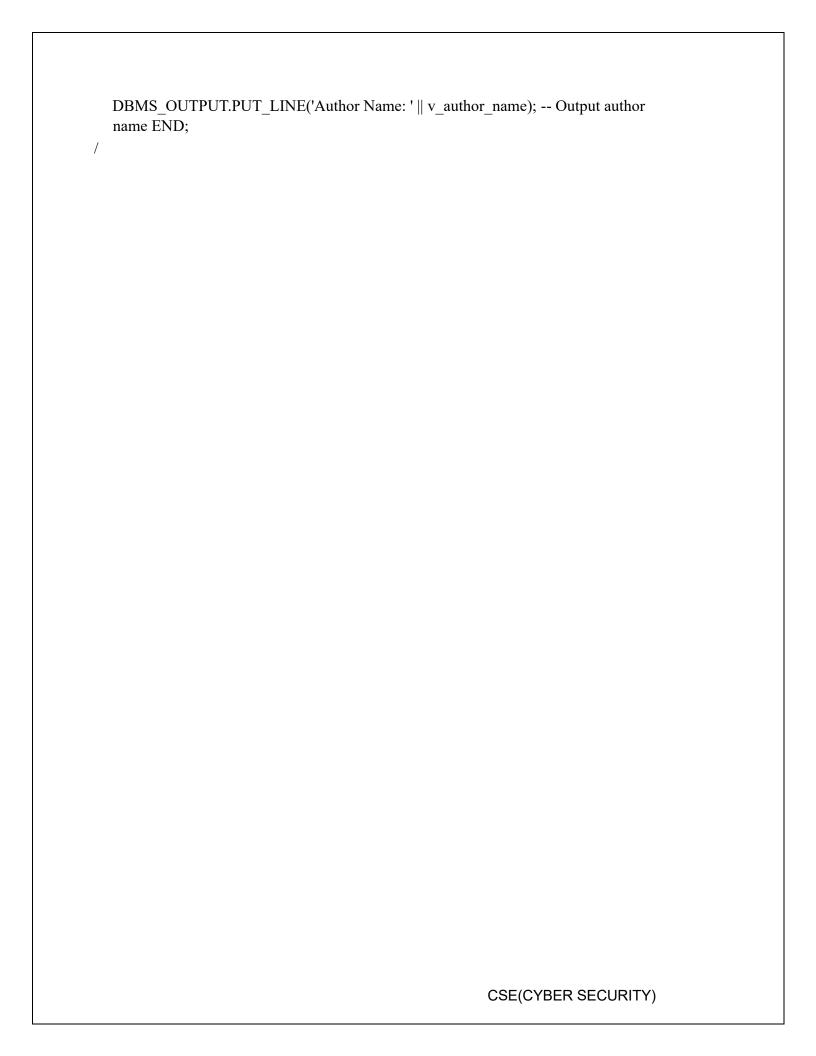
FACTORIAL OF A NUMBER USING FUNCTION

```
CREATE OR REPLACE FUNCTION it fact (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
```



Book Name: Introduction to PL/SQL - Updated Author Name: John Doe Statement processed. CSE(CYBER SECURITY)