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

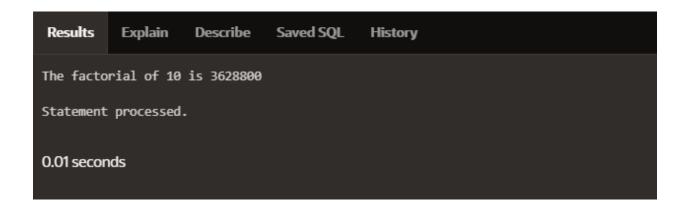
## Program 1 FACTORIAL OF A NUMBER USING FUNCTION

```
DECLARE

n NUMBER := 10;
result NUMBER;

FUNCTION itfact(num NUMBER) RETURN NUMBER IS
fact NUMBER := 1;
BEGIN
FOR i IN 1..num LOOP
fact := fact * i;
END LOOP;
RETURN fact;
END;

BEGIN
result := itfact(n);
DBMS_OUTPUT_PUT_LINE('The factorial of ' || n || ' is ' || result);
END;
```



## Program 2

Write a PL/SQL program using Procedures IN,INOUT,OUT parameters to retrieve the corresponding book information in library

```
CREATE OR REPLACE PROCEDURE book_info(
  p book id IN NUMBER,
  p author OUT VARCHAR2,
  p title OUT VARCHAR2,
  p published date OUT DATE
) AS
BEGIN
  SELECT author, title, published date
  INTO p_author, p_title, p_published_date
  FROM books
  WHERE book_id = p_book_id;
EXCEPTION
  WHEN NO_DATA_FOUND THEN
    p author := NULL;
    p_title := NULL;
    p_published_date := NULL;
  WHEN OTHERS THEN
    RAISE;
END book_info;
DECLARE
  v author VARCHAR2(100);
  v_title VARCHAR2(100);
  v published date DATE;
  v_book_id NUMBER := 1;
BEGIN
  book_info(v_book_id, v_author, v_title, v_published_date);
  IF v author IS NOT NULL THEN
    DBMS_OUTPUT.PUT_LINE('Book ID: ' || v_book_id);
    DBMS_OUTPUT.PUT_LINE('Author: ' || v_author);
    DBMS OUTPUT.PUT LINE('Title: ' || v title);
    DBMS_OUTPUT.PUT_LINE('Published Date: ' || TO_CHAR(v_published_date, 'YYYY-
MM-DD'));
  ELSE
    DBMS_OUTPUT_LINE('No book found with ID: ' || v_book_id);
  END IF;
END;
```

Book ID: 1

Author: William Shaespeare

Title: Hamlet

Published Date: 1590-12-12

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