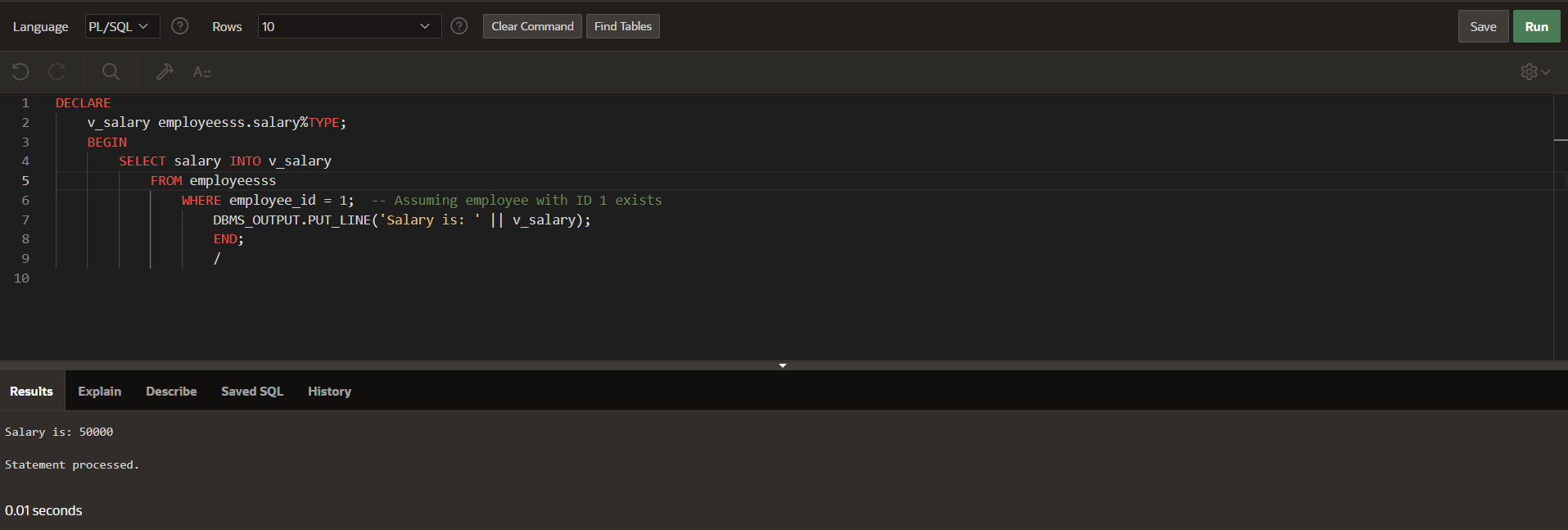
Section 5\_1 dbms



DECLARE

CURSOR cur\_depts IS

SELECT department\_id, department\_name FROM departmentss;

v\_department\_id departmentss.department\_id%TYPE;

v\_department\_name departmentss.department\_name%TYPE;

BEGIN

OPEN cur\_depts;

LOOP

FETCH cur\_depts INTO v\_department\_id, v\_department\_name;

EXIT WHEN cur\_depts%NOTFOUND;

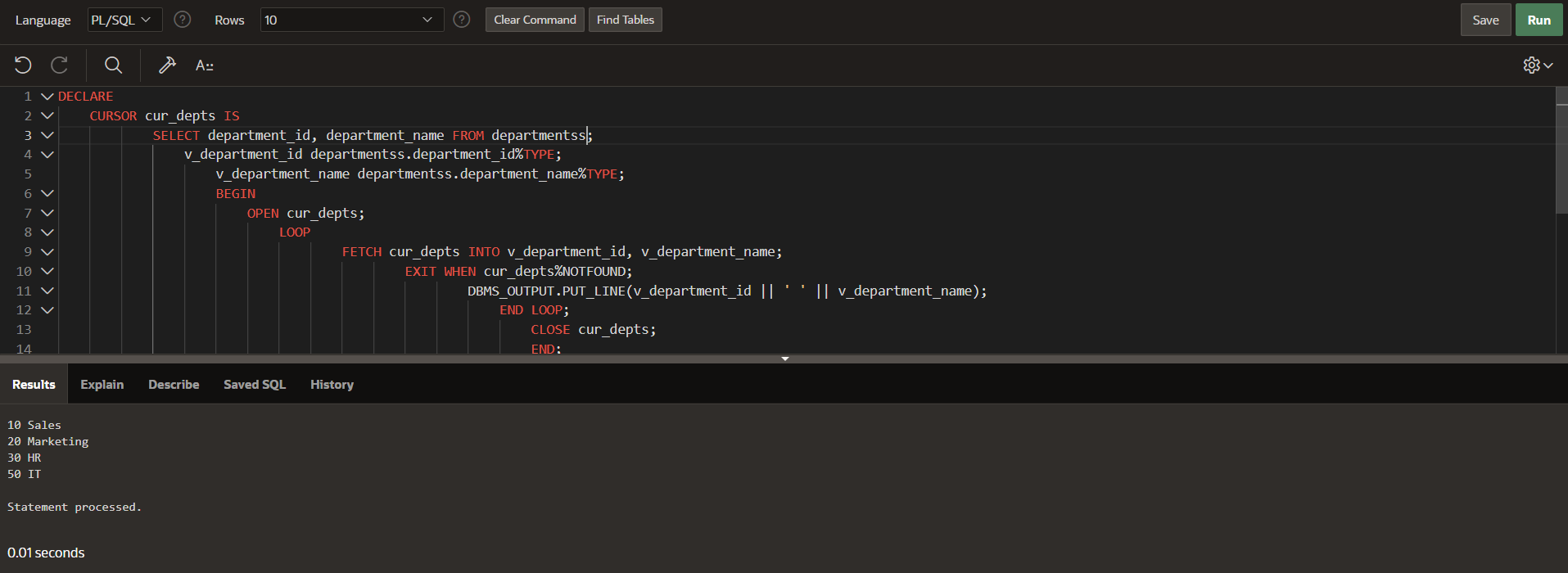
DBMS\_OUTPUT.PUT\_LINE(v\_department\_id || ' ' || v\_department\_name);

END LOOP;

CLOSE cur\_depts;

END;

/



DECLARE

CURSOR emp\_cursor IS

SELECT employee\_id, last\_name FROM employeesss

WHERE department\_id = 10;

v\_empno employeesss.employee\_id%TYPE;

v\_lname employeesss.last\_name%TYPE;

BEGIN

OPEN emp\_cursor;

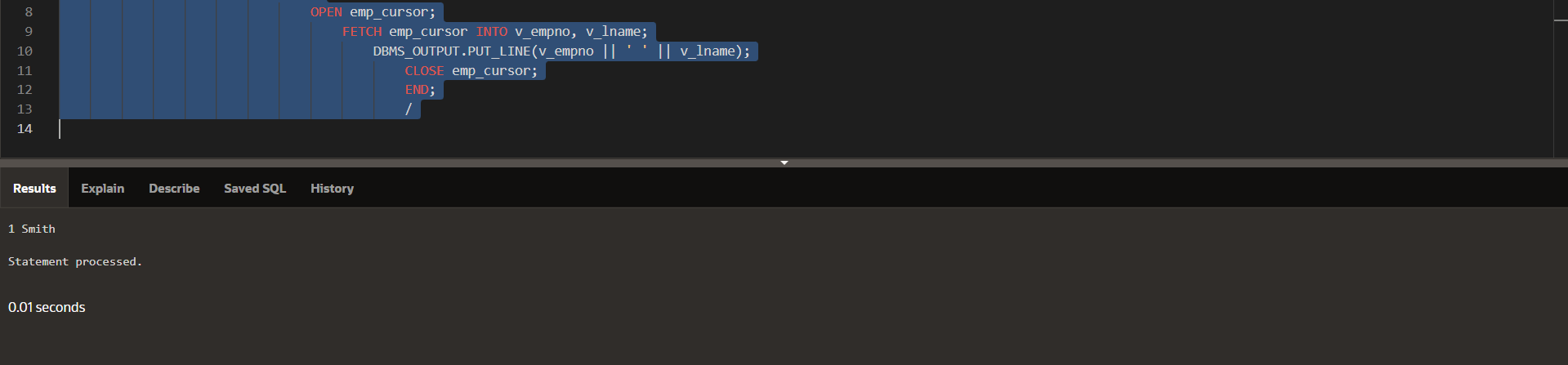
FETCH emp\_cursor INTO v\_empno, v\_lname;

DBMS\_OUTPUT.PUT\_LINE(v\_empno || ' ' || v\_lname);

CLOSE emp\_cursor;

END;

/



DECLARE

CURSOR cur\_emps IS

SELECT employee\_id, last\_name FROM employeesss

WHERE department\_id = 50;

v\_empno employeesss.employee\_id%TYPE;

v\_lname employeesss.last\_name%TYPE;

BEGIN

OPEN cur\_emps;

LOOP

FETCH cur\_emps INTO v\_empno, v\_lname;

EXIT WHEN cur\_emps%NOTFOUND; -- exit loop when NOTFOUND is TRUE

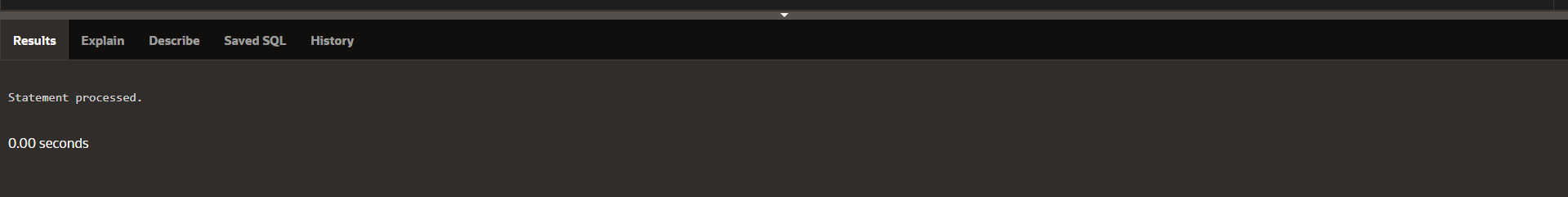
DBMS\_OUTPUT.PUT\_LINE(v\_empno || ' ' || v\_lname);

END LOOP;

CLOSE cur\_emps;

END;

/



DECLARE

CURSOR cur\_emps IS

SELECT employee\_id, last\_name FROM employeesss

WHERE department\_id = 10;

v\_empno employeesss.employee\_id%TYPE;

BEGIN

OPEN cur\_emps;

LOOP

FETCH cur\_emps INTO v\_empno, v\_lname;

EXIT WHEN cur\_emps%NOTFOUND;

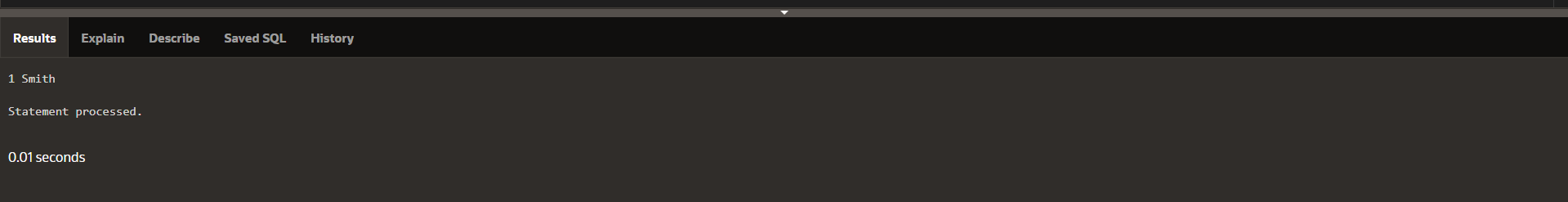
DBMS\_OUTPUT.PUT\_LINE(v\_empno || ' ' || v\_lname);

END LOOP;

CLOSE cur\_emps;

END;

/

\_

Section 5\_2

DECLARE

CURSOR cur\_emps IS

SELECT \* FROM employeesss

WHERE department\_id = 30;

v\_emp\_record cur\_emps%ROWTYPE;

BEGIN

OPEN cur\_emps;

LOOP

FETCH cur\_emps INTO v\_emp\_record;

EXIT WHEN cur\_emps%NOTFOUND;

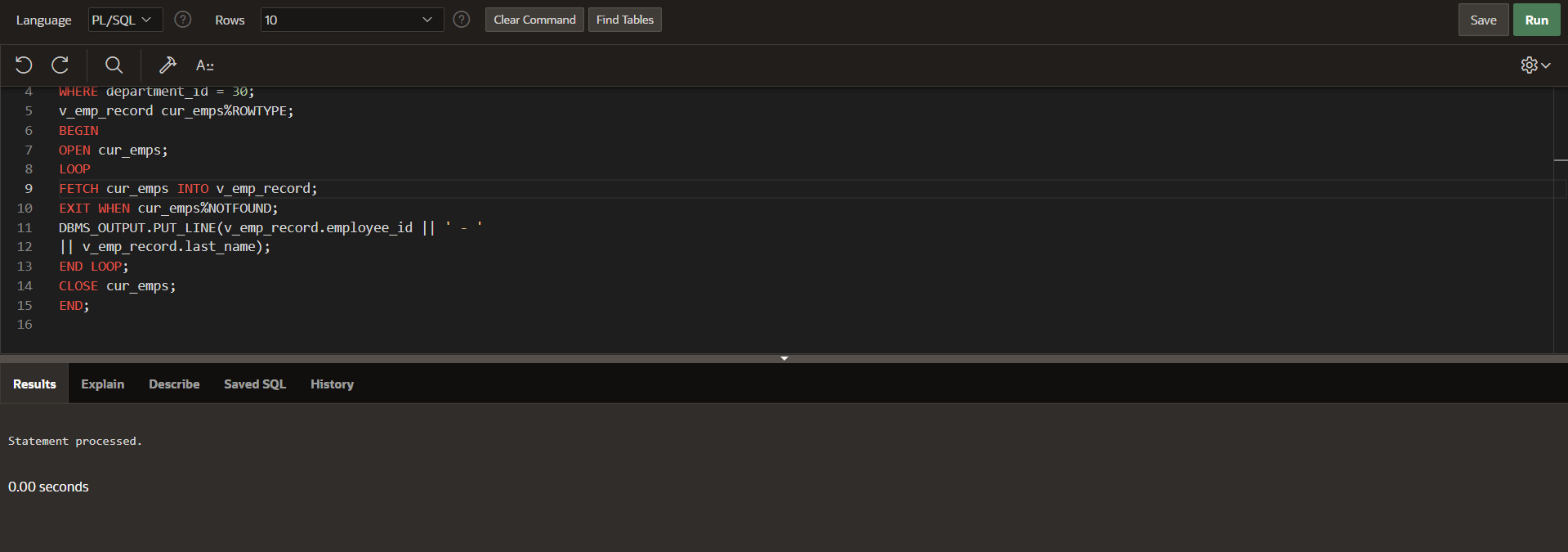
DBMS\_OUTPUT.PUT\_LINE(v\_emp\_record.employee\_id || ' - '

|| v\_emp\_record.last\_name);

END LOOP;

CLOSE cur\_emps;

END;



-- First PL/SQL Block

DECLARE

CURSOR cur\_emps\_dept IS

SELECT first\_name, last\_name, department\_name

WHERE e.department\_id = d.department\_id;

v\_emp\_dept\_record cur\_emps\_dept%ROWTYPE;

BEGIN

OPEN cur\_emps\_dept;

LOOP

FETCH cur\_emps\_dept INTO v\_emp\_dept\_record;

EXIT WHEN cur\_emps\_dept%NOTFOUND;

DBMS\_OUTPUT.PUT\_LINE(v\_emp\_dept\_record.first\_name || ' – ' ||

v\_emp\_dept\_record.last\_name || ' – ' ||

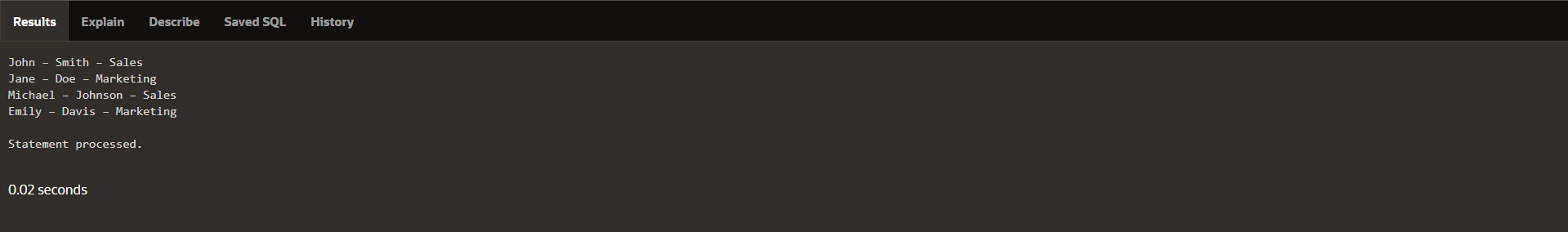
v\_emp\_dept\_record.department\_name);

END LOOP;

CLOSE cur\_emps\_dept;

END;

/



-- Second PL/SQL Block

DECLARE

CURSOR cur\_emps IS

SELECT employee\_id, last\_name FROM emp ;

v\_emp\_record cur\_emps%ROWTYPE;

BEGIN

OPEN cur\_emps;

LOOP

FETCH cur\_emps INTO v\_emp\_record;

EXIT WHEN cur\_emps%ROWCOUNT > 10 OR cur\_emps%NOTFOUND;

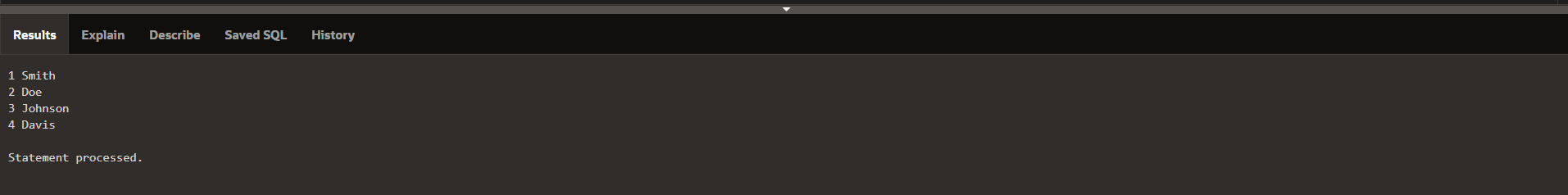
DBMS\_OUTPUT.PUT\_LINE(v\_emp\_record.employee\_id || ' ' || v\_emp\_record.last\_name);

END LOOP;

CLOSE cur\_emps;

END;

/



Section 5\_3

DECLARE

CURSOR cur\_emps IS

SELECT employee\_id, last\_name FROM emp

WHERE department\_id = 50;

BEGIN

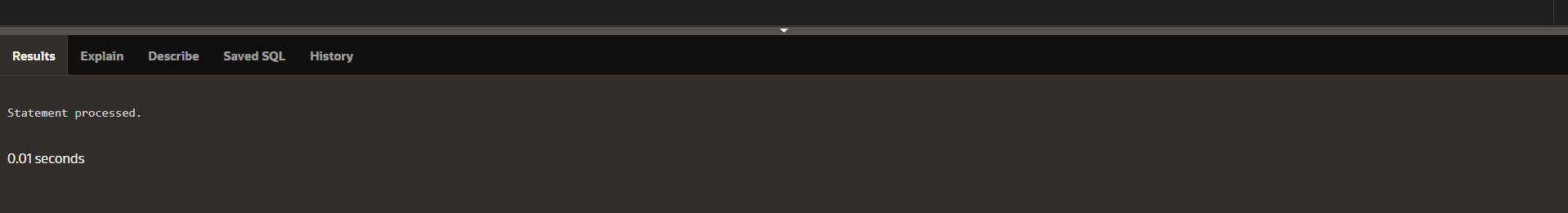
FOR v\_emp\_record IN cur\_emps LOOP

DBMS\_OUTPUT.PUT\_LINE(v\_emp\_record.employee\_id || ' '

|| v\_emp\_record.last\_name);

END LOOP;

END;



DECLARE

CURSOR cur\_depts IS

SELECT department\_id, department\_name

FROM dep

ORDER BY department\_id;

BEGIN

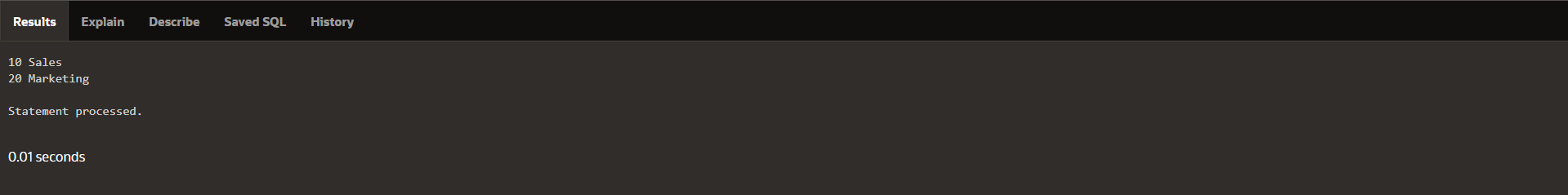
FOR v\_dept\_record IN cur\_depts LOOP

DBMS\_OUTPUT.PUT\_LINE(v\_dept\_record.department\_id || ' '

|| v\_dept\_record.department\_name);

END LOOP;

END;



DECLARE

CURSOR cur\_emps IS

SELECT employee\_id, last\_name

FROM employees;

BEGIN

FOR v\_emp\_record IN cur\_emps LOOP

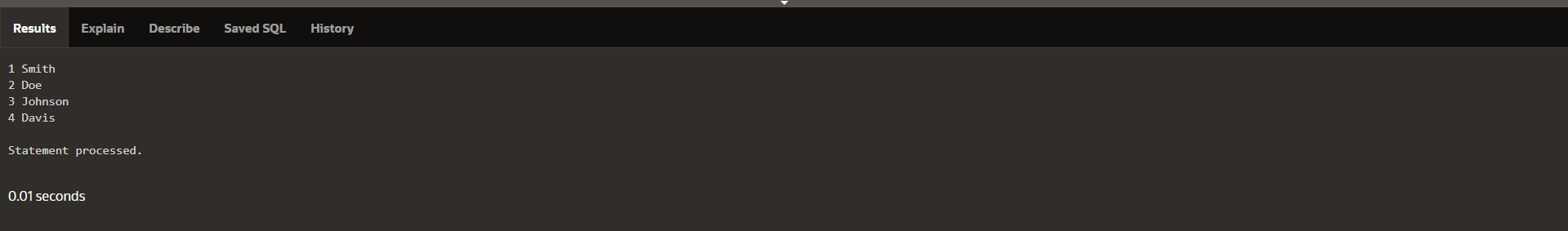
EXIT WHEN cur\_emps%ROWCOUNT > 5;

DBMS\_OUTPUT.PUT\_LINE(v\_emp\_record.employee\_id || ' ' ||

v\_emp\_record.last\_name);

END LOOP;

END;

****

**Section 5\_4**

**-- PL/SQL Block 1**

**DECLARE**

**CURSOR cur\_country (p\_region\_id NUMBER) IS**

**SELECT country\_id, country\_name**

**FROM countries**

**WHERE region\_id = p\_region\_id;**

**v\_country\_record cur\_country%ROWTYPE;**

**BEGIN**

**OPEN cur\_country(145);**

**LOOP**

**FETCH cur\_country INTO v\_country\_record;**

**EXIT WHEN cur\_country%NOTFOUND;**

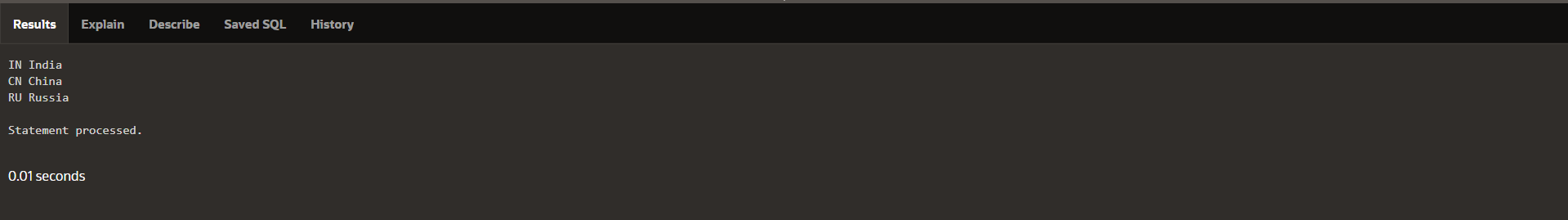
**DBMS\_OUTPUT.PUT\_LINE(v\_country\_record.country\_id || ' ' || v\_country\_record.country\_name);**

**END LOOP;**

**CLOSE cur\_country;**

**END;**

**/**

****

**-- PL/SQL Block 2**

**DECLARE**

**v\_deptid employees.department\_id%TYPE;**

**CURSOR cur\_emps (p\_deptid NUMBER) IS**

**SELECT employee\_id, salary**

**FROM employees**

**WHERE department\_id = p\_deptid;**

**v\_emp\_rec cur\_emps%ROWTYPE;**

**BEGIN**

**SELECT MAX(department\_id) INTO v\_deptid**

**FROM employees;**

**OPEN cur\_emps(v\_deptid);**

**LOOP**

**FETCH cur\_emps INTO v\_emp\_rec;**

**EXIT WHEN cur\_emps%NOTFOUND;**

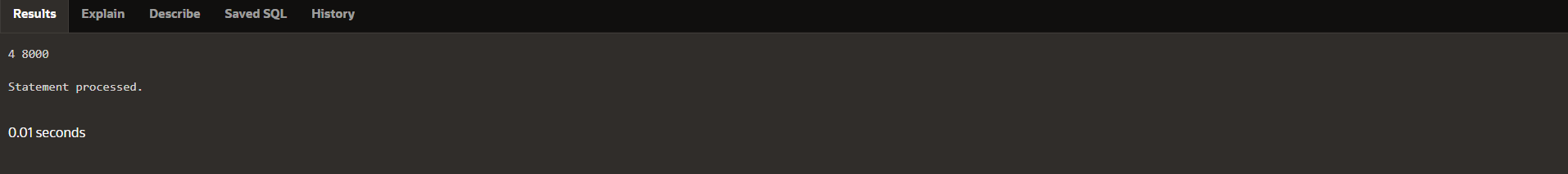
**DBMS\_OUTPUT.PUT\_LINE(v\_emp\_rec.employee\_id || ' ' || v\_emp\_rec.salary);**

**END LOOP;**

**CLOSE cur\_emps;**

**END;**

**/\**

****

**-- PL/SQL Block 3**

**DECLARE**

**CURSOR cur\_emps (p\_job VARCHAR2, p\_salary NUMBER) IS**

**SELECT employee\_id, last\_name**

**FROM empl**

**WHERE job\_id = p\_job**

**AND salary > p\_salary;**

**BEGIN**

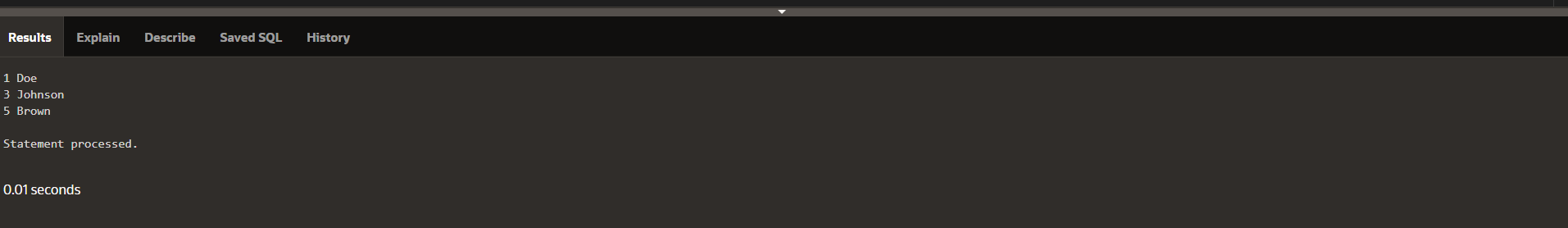
**FOR v\_emp\_record IN cur\_emps('IT\_PROG', 10000) LOOP**

**DBMS\_OUTPUT.PUT\_LINE(v\_emp\_record.employee\_id ||' ' || v\_emp\_record.last\_name);**

**END LOOP;**

**END;**

**/**

**\**

**-- PL/SQL Block 4**

**DECLARE**

**CURSOR cur\_countries (p\_region\_id NUMBER, p\_population NUMBER) IS**

**SELECT country\_id, country\_name, population**

**FROM countries**

**WHERE region\_id = p\_region\_id**

**OR population > p\_population;**

**BEGIN**

**FOR v\_country\_record IN cur\_countries(145, 10000000) LOOP**

**DBMS\_OUTPUT.PUT\_LINE(v\_country\_record.country\_id ||' ' || v\_country\_record.country\_name || ' ' || v\_country\_record.population);**

**END LOOP;**

**END;**

**/**

****

**Section 5\_5**

**DECLARE**

**CURSOR cur\_emps IS**

**SELECT employee\_id, salary FROM empl**

**WHERE salary <= 20000 FOR UPDATE NOWAIT;**

**v\_emp\_rec cur\_emps%ROWTYPE;**

**BEGIN**

**OPEN cur\_emps;**

**LOOP**

**FETCH cur\_emps INTO v\_emp\_rec;**

**EXIT WHEN cur\_emps%NOTFOUND;**

**UPDATE empl**

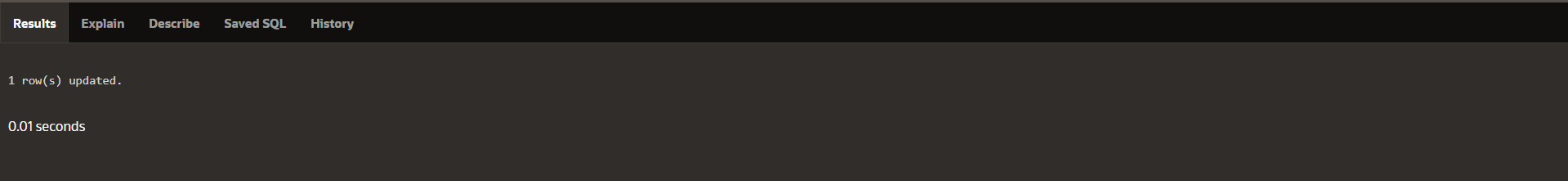
**SET salary = v\_emp\_rec.salary\*1.1**

**WHERE CURRENT OF cur\_emps;**

**END LOOP;**

**CLOSE cur\_emps;**

**END;**

****

**DECLARE**

**CURSOR cur\_loc IS SELECT \* FROM locations;**

**CURSOR cur\_dept (p\_locid NUMBER) IS**

**SELECT \* FROM departmente WHERE location\_id = p\_locid;**

**v\_locrec cur\_loc%ROWTYPE;**

**v\_deptrec cur\_dept%ROWTYPE;**

**BEGIN**

**OPEN cur\_loc;**

**LOOP**

**FETCH cur\_loc INTO v\_locrec;**

**EXIT WHEN cur\_loc%NOTFOUND;**

**DBMS\_OUTPUT.PUT\_LINE(v\_locrec.city);**

**OPEN cur\_dept (v\_locrec.location\_id);**

**LOOP**

**FETCH cur\_dept INTO v\_deptrec;**

**EXIT WHEN cur\_dept%NOTFOUND;**

**DBMS\_OUTPUT.PUT\_LINE(v\_deptrec.department\_name);**

**END LOOP;**

**CLOSE cur\_dept;**

**END LOOP;**

**CLOSE cur\_loc;**

**END;**

****

**DECLARE**

**CURSOR cur\_loc IS SELECT \* FROM locations;**

**CURSOR cur\_dept (p\_locid NUMBER) IS**

**SELECT \* FROM departmente WHERE location\_id = p\_locid;**

**BEGIN**

**FOR v\_locrec IN cur\_loc LOOP**

**DBMS\_OUTPUT.PUT\_LINE(v\_locrec.city);**

**FOR v\_deptrec IN cur\_dept (v\_locrec.location\_id) LOOP**

**DBMS\_OUTPUT.PUT\_LINE(v\_deptrec.department\_name);**

**END LOOP;**

**END LOOP;**

**END;**

****

**DECLARE**

**CURSOR cur\_dept IS SELECT \* FROM departmente;**

**CURSOR cur\_emp (p\_dept\_id NUMBER) IS**

**SELECT \* FROM employeese WHERE department\_id = p\_dept\_id**

**FOR UPDATE NOWAIT;**

**BEGIN**

**FOR v\_deptrec IN cur\_dept LOOP**

**DBMS\_OUTPUT.PUT\_LINE(v\_deptrec.department\_name);**

**FOR v\_emprec IN cur\_emp (v\_deptrec.department\_id) LOOP**

**DBMS\_OUTPUT.PUT\_LINE(v\_emprec.last\_name);**

**IF v\_deptrec.location\_id = 1 AND v\_emprec.salary < 10000 THEN**

**UPDATE employeese**

**SET salary = salary \* 1.1**

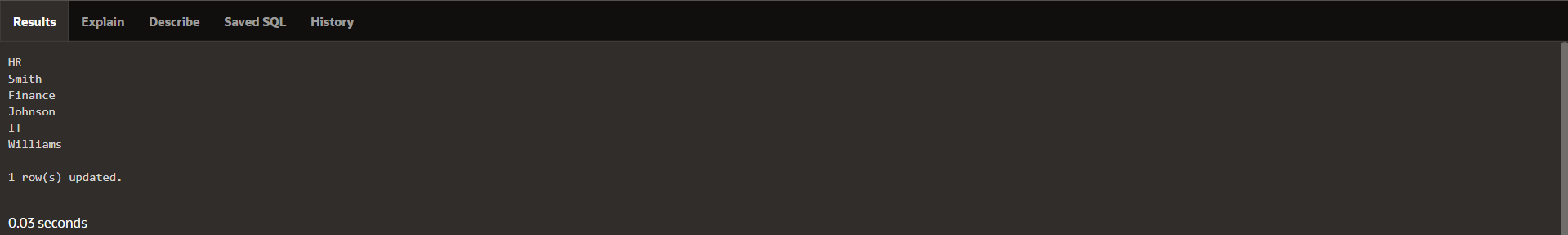
**WHERE CURRENT OF cur\_emp;**

**END IF;**

**END LOOP;**

**END LOOP;**

**END;**

****