**FUNCTION PACKAGE**

CREATE OR REPLACE PACKAGE taxes\_pkg IS

FUNCTION tax (p\_value IN NUMBER) RETURN NUMBER;

END taxes\_pkg;

/

CREATE OR REPLACE PACKAGE BODY taxes\_pkg IS

FUNCTION tax (p\_value IN NUMBER) RETURN NUMBER IS

v\_rate NUMBER := 0.08;

BEGIN

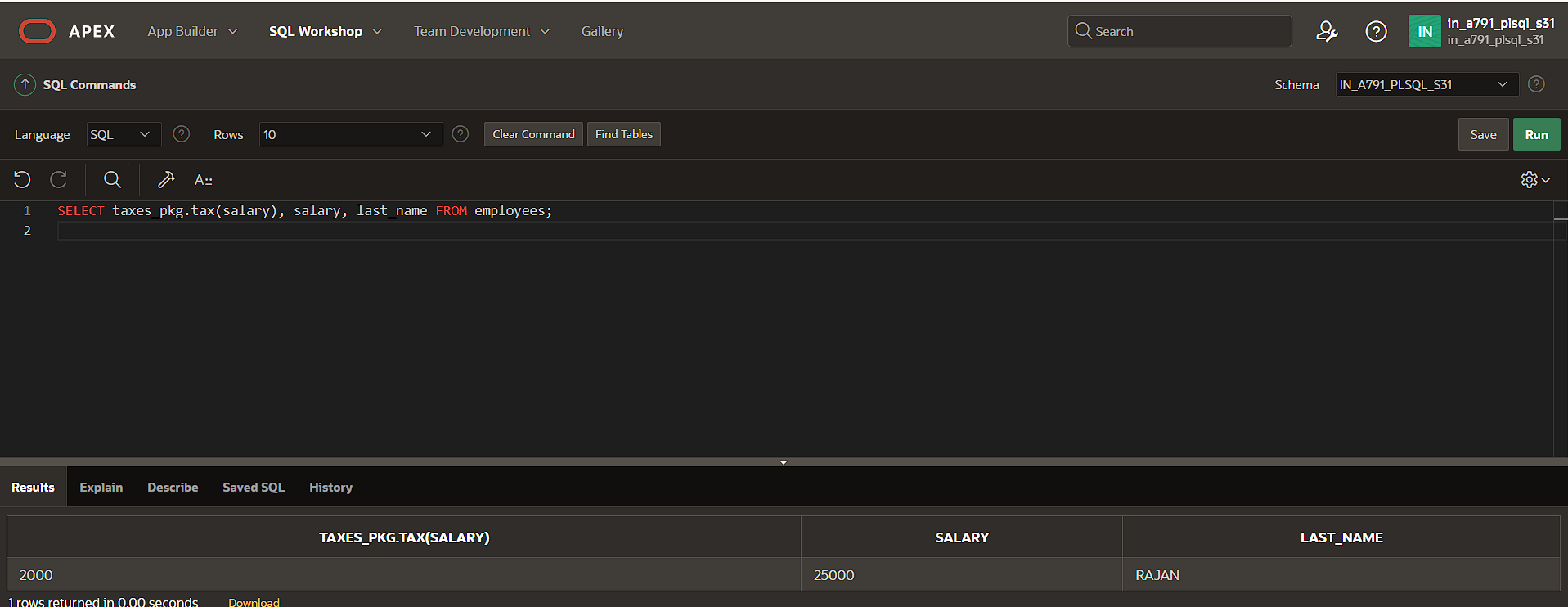
RETURN (p\_value \* v\_rate);

END tax;

END taxes\_pkg;

/

SELECT taxes\_pkg.tax(salary), salary, last\_name FROM employees;



**RECORD PACKAGE**

CREATE OR REPLACE PROCEDURE sel\_one\_emp (

p\_emp\_id IN employees.employee\_id%TYPE,

p\_emprec OUT employees%ROWTYPE

)

IS

BEGIN

SELECT \*

INTO p\_emprec

FROM employees

WHERE employee\_id = p\_emp\_id;

EXCEPTION

WHEN NO\_DATA\_FOUND THEN

WHEN OTHERS THEN

RAISE\_APPLICATION\_ERROR(-20001, 'Unexpected error occurred: ' || SQLERRM);

END sel\_one\_emp;

/

DECLARE

v\_emprec employees%ROWTYPE;

BEGIN

sel\_one\_emp(100, v\_emprec);

IF v\_emprec.employee\_id IS NOT NULL THEN

dbms\_output.put\_line('Last Name: ' || v\_emprec.last\_name);

ELSE

dbms\_output.put\_line('No data found for the given employee ID.');

END IF;

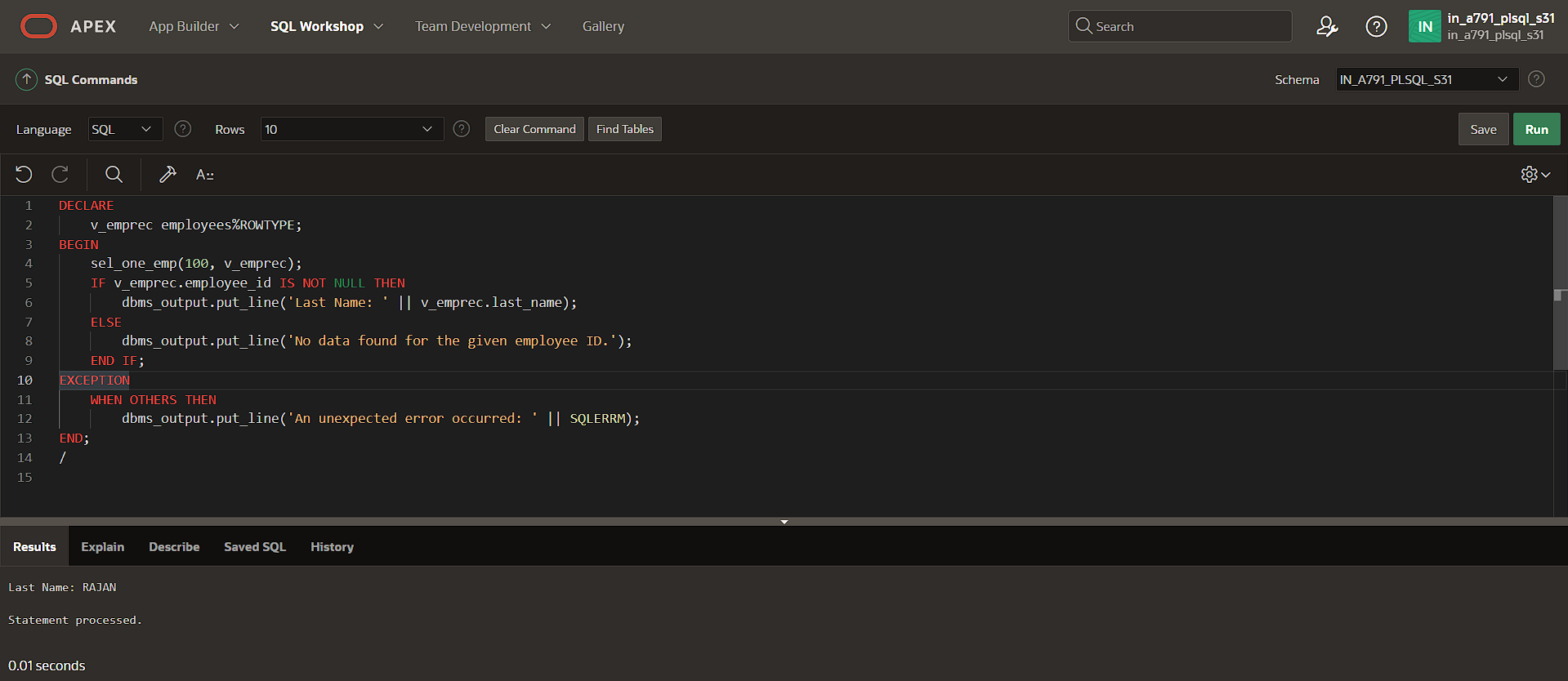
EXCEPTION

WHEN OTHERS THEN

dbms\_output.put\_line('An unexpected error occurred: ' || SQLERRM);

END;

/



**USER-DEFINED PACKAGE**

CREATE OR REPLACE PACKAGE emp\_dept\_pkg

IS

TYPE ed\_type IS RECORD (

f\_name employees.first\_name%TYPE,

l\_name employees.last\_name%TYPE,

d\_name departments.department\_name%TYPE

);

PROCEDURE sel\_emp\_dept (

p\_emp\_id IN employees.employee\_id%TYPE,

p\_emp\_dept\_rec OUT ed\_type

);

END emp\_dept\_pkg;

/

CREATE OR REPLACE PACKAGE BODY emp\_dept\_pkg

IS

PROCEDURE sel\_emp\_dept (

p\_emp\_id IN employees.employee\_id%TYPE,

p\_emp\_dept\_rec OUT ed\_type

)

IS

BEGIN

SELECT e.first\_name, e.last\_name, d.department\_name

INTO p\_emp\_dept\_rec.f\_name, p\_emp\_dept\_rec.l\_name, p\_emp\_dept\_rec.d\_name

FROM employees e

JOIN departments d ON e.department\_id = d.department\_id

WHERE e.employee\_id = p\_emp\_id;

EXCEPTION

WHEN NO\_DATA\_FOUND THEN

p\_emp\_dept\_rec.f\_name := NULL;

p\_emp\_dept\_rec.l\_name := NULL;

p\_emp\_dept\_rec.d\_name := NULL;

WHEN OTHERS THEN

RAISE\_APPLICATION\_ERROR(-20001, 'Unexpected error occurred: ' || SQLERRM);

END sel\_emp\_dept;

END emp\_dept\_pkg;

/

DECLARE

v\_emp\_dept\_rec emp\_dept\_pkg.ed\_type;

BEGIN

emp\_dept\_pkg.sel\_emp\_dept(100, v\_emp\_dept\_rec);

dbms\_output.put\_line('First Name: ' || v\_emp\_dept\_rec.f\_name);

dbms\_output.put\_line('Last Name: ' || v\_emp\_dept\_rec.l\_name);

dbms\_output.put\_line('Department Name: ' || v\_emp\_dept\_rec.d\_name);

EXCEPTION

WHEN NO\_DATA\_FOUND THEN

dbms\_output.put\_line('No data found for the given employee ID.');

WHEN OTHERS THEN

dbms\_output.put\_line('An unexpected error occurred: ' || SQLERRM);

END;

/

