Class Test 03

PL/SQL

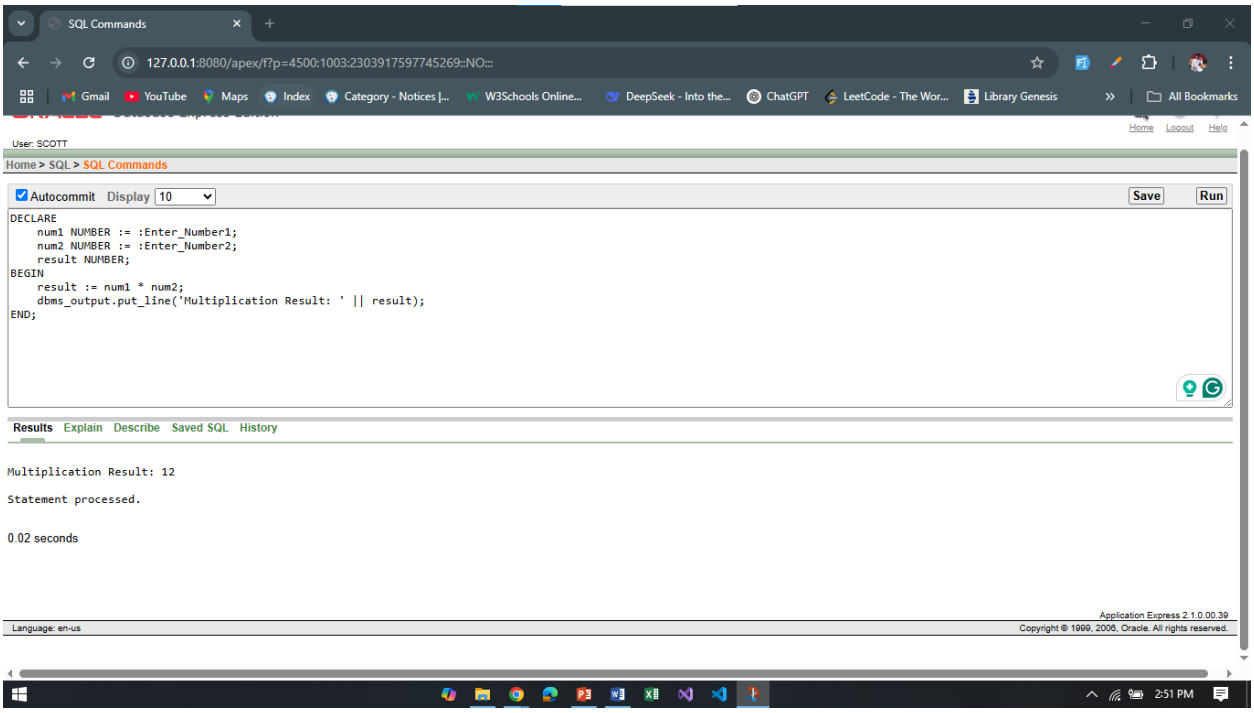
Part 01:

1. Write a query that can multiply two numbers taking input from user.

Answer:

```
DECLARE
   num1 NUMBER := :Enter_Number1;
   num2 NUMBER := :Enter_Number2;
   result NUMBER;
BEGIN
   result := num1 * num2;
   dbms_output.put_line('Multiplication Result: ' || result);
END;
```

Output:



2. Write a query that can add two numbers if the numbers are equal. Use CASE Statement.

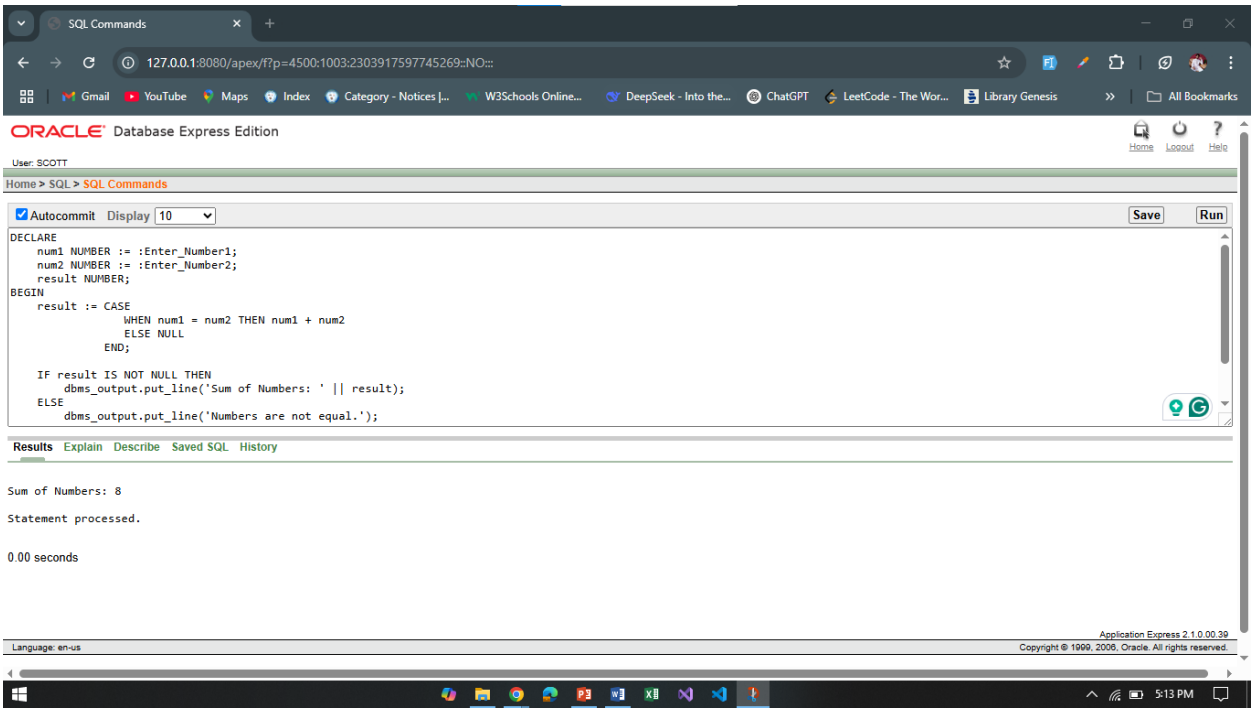
Answer:

```
DECLARE
   num1 NUMBER := :Enter_Number1;
   num2 NUMBER := :Enter_Number2;
   result NUMBER;
```

```
BEGIN
   result := CASE
             WHEN num1 = num2 THEN num1 + num2
             ELSE NULL
            END;

   IF result IS NOT NULL THEN
      dbms_output.put_line('Sum of Numbers: ' || result);
   ELSE
      dbms_output.put_line('Numbers are not equal.');
   END IF;
END;
```

Output:



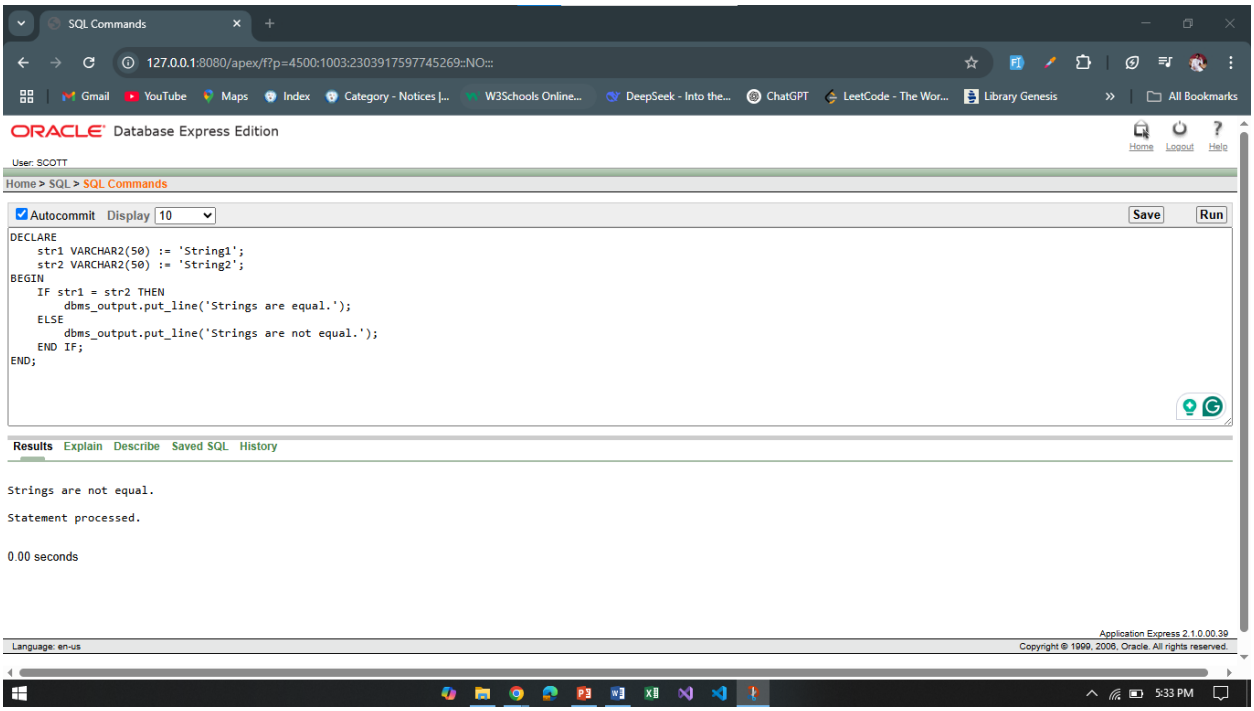
3. Write a query that can check if two strings are equal or not. Use IF-THEN-ELSIF Statement.

Answer:

```
DECLARE
   str1 VARCHAR2(50) := 'String1';
   str2 VARCHAR2(50) := 'String2';
BEGIN
   IF str1 = str2 THEN
      dbms_output.put_line('Strings are equal.');
```

```
    ELSE
      dbms_output.put_line('Strings are not equal.');
    END IF;
END;
```

Output:



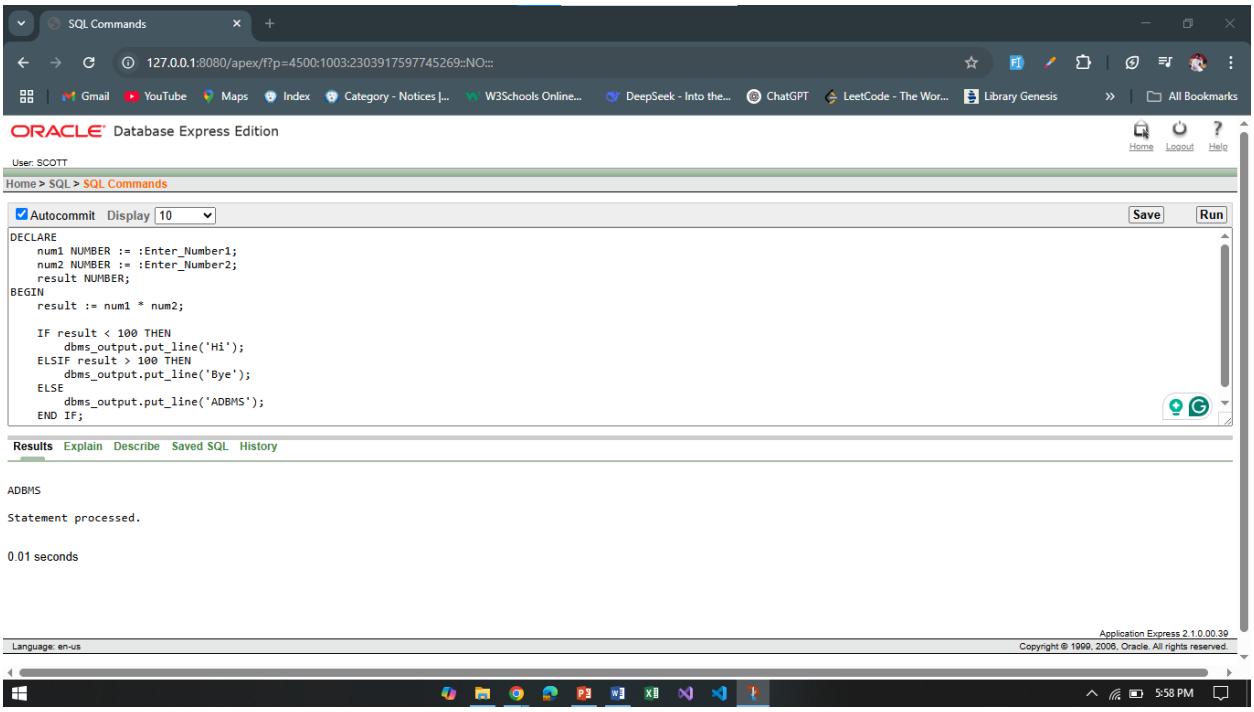
4. Write a query that can multiply two numbers. If the result obtained is less than 100, **Hi** is displayed, if the result obtained is more than 100, **Bye** is displayed and if the result obtained is equal to 100, **ADBMS** is displayed. Use IF-THEN-ELSIF Statement

   Answer:

```
DECLARE
        num1 NUMBER := :Enter_Number1;
        num2 NUMBER := :Enter_Number2;
        result NUMBER;
BEGIN
        result := num1 * num2;

        IF result < 100 THEN
                dbms_output.put_line('Hi');
        ELSIF result > 100 THEN
                dbms_output.put_line('Bye');
        ELSE
```

```
        dbms_output.put_line('ADBMS');
    END IF;
END;
```

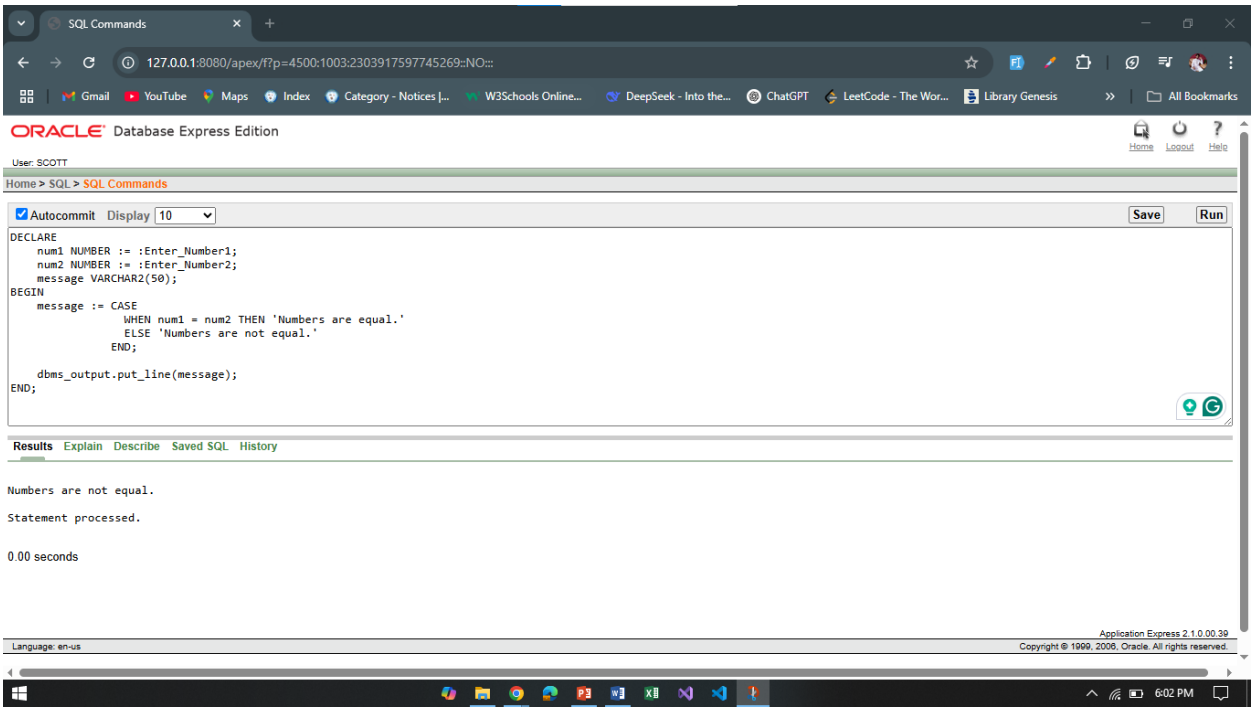


5. Write a query that can check if two numbers are equal or not. Use CASE Statement.

Answer:

```
DECLARE
  num1 NUMBER := :Enter_Number1;
  num2 NUMBER := :Enter_Number2;
  message VARCHAR2(50);
BEGIN
  message := CASE
        WHEN num1 = num2 THEN 'Numbers are equal.'
        ELSE 'Numbers are not equal.'
      END;

  dbms_output.put_line(message);
END;
```



Part 02:

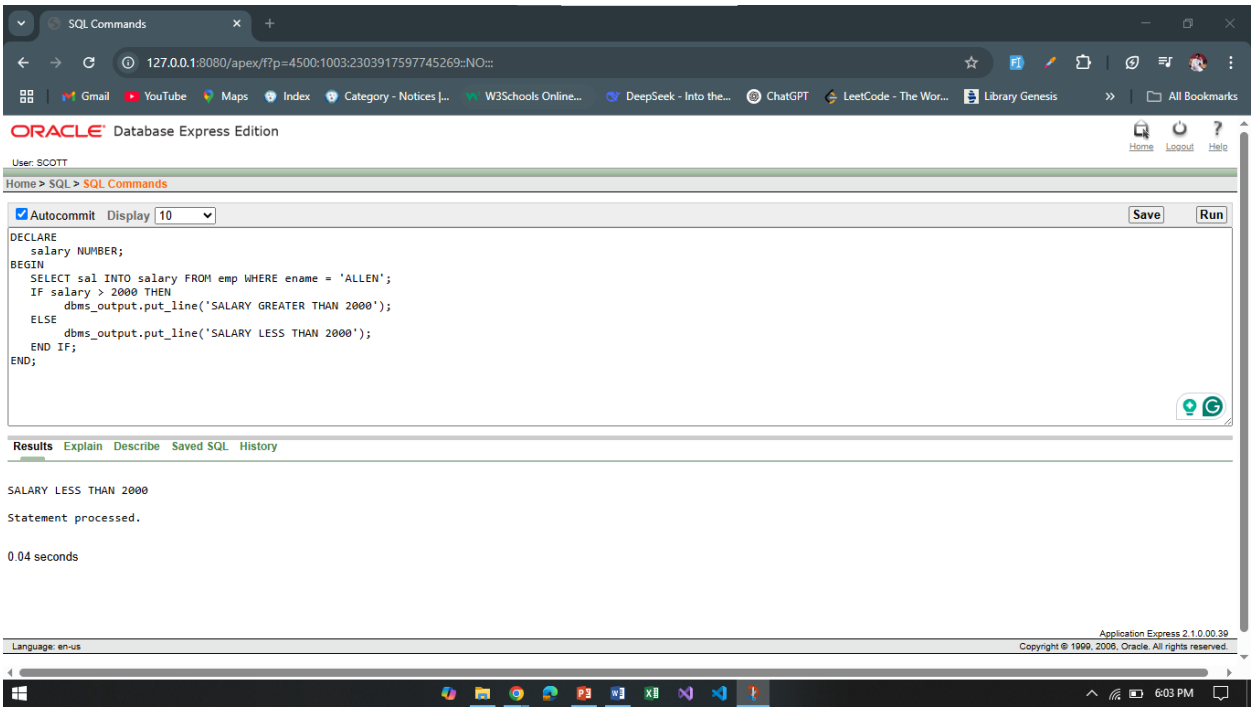
To solve the following use the scott schema

6. Write a query that can display the salary of employee ALLEN. If ALLEN's salary is greater than 2000 display 'SALARY GREATER THAN 2000' and If not then display 'SALARY LESS THAN 2000'.

Answer:

```
DECLARE
        salary NUMBER;
BEGIN
        SELECT sal INTO salary FROM emp WHERE ename = 'ALLEN';
        IF salary > 2000 THEN
                dbms_output.put_line('SALARY GREATER THAN 2000');
        ELSE
                dbms_output.put_line('SALARY LESS THAN 2000');
        END IF;
END;
```

Output:



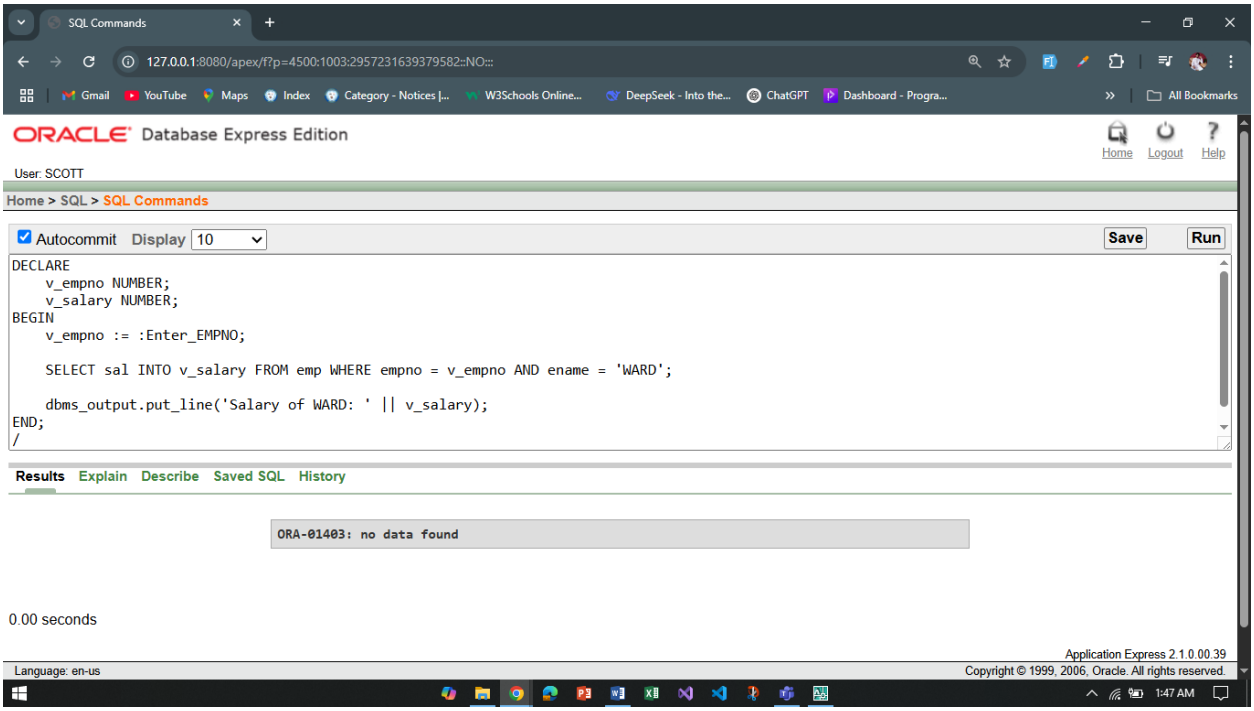
7. Write a query that can ask user to input the EMPNO of employee WARD and display his salary.

Answer:

```
DECLARE
  v_empno NUMBER;
  v_salary NUMBER;
BEGIN
   v_empno := :Enter_EMPNO;

   SELECT sal INTO v_salary FROM emp WHERE empno = v_empno AND ename =
'WARD';

   dbms_output.put_line('Salary of WARD: ' || v_salary);
END;
/
```



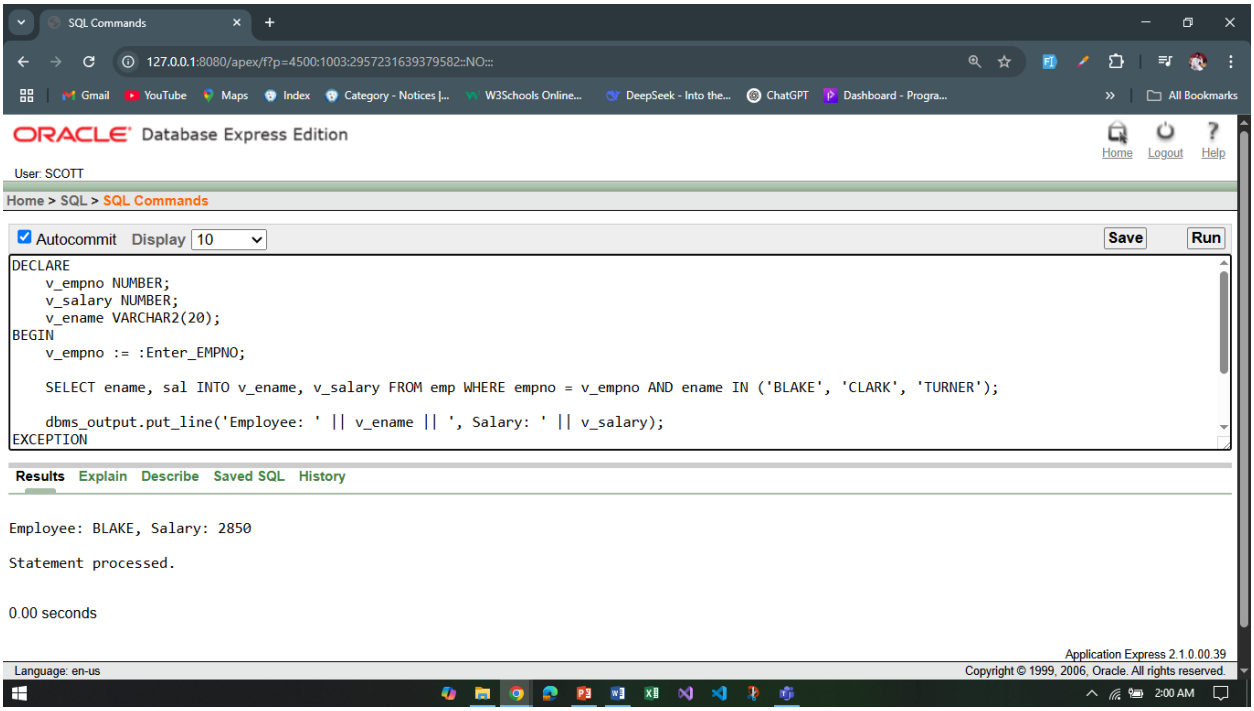
8. Write a query that can ask user to input the EMPNO of employee BLAKE,CLARK and TURNER and display their respective salary.

Answer:

```
DECLARE
   v_empno NUMBER;
   v_salary NUMBER;
   v_ename VARCHAR2(20);
BEGIN
   v_empno := :Enter_EMPNO;

   SELECT ename, sal INTO v_ename, v_salary FROM emp WHERE empno = v_empno AND ename IN ('BLAKE', 'CLARK', 'TURNER');

   dbms_output.put_line('Employee: ' || v_ename || ', Salary: ' || v_salary);
EXCEPTION
   WHEN NO_DATA_FOUND THEN
      dbms_output.put_line('Employee not found.');
END;
/
```

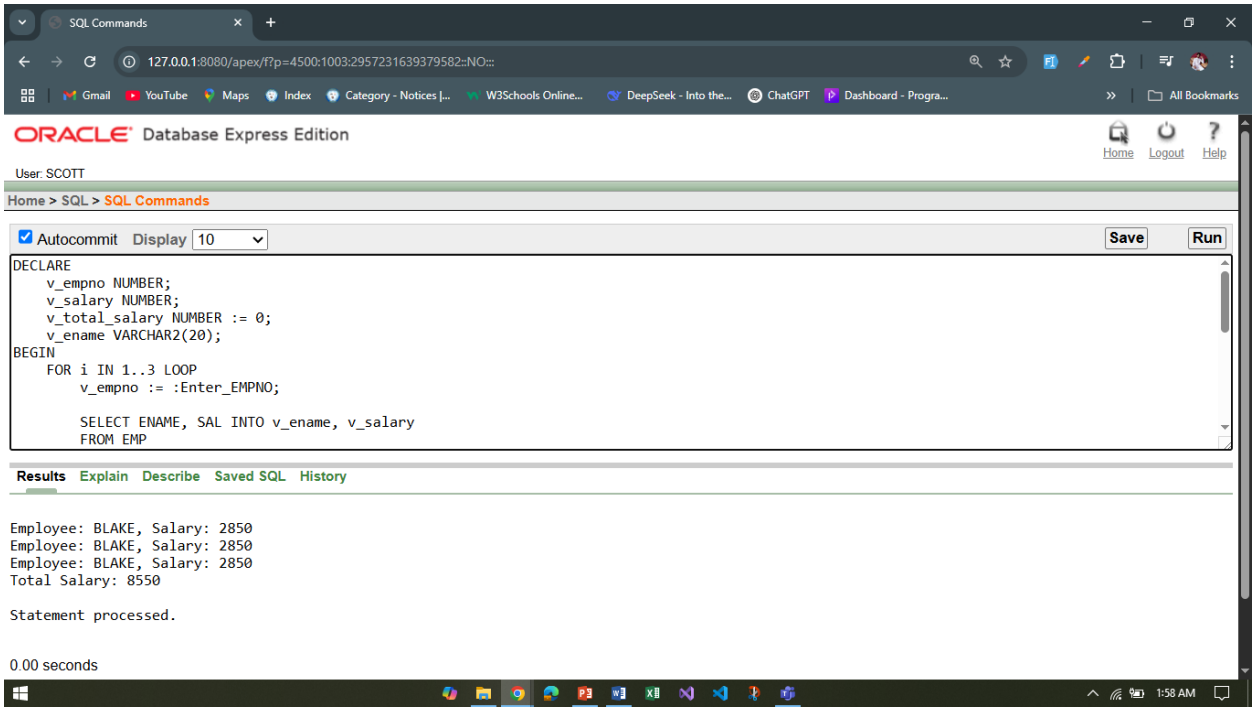


9. Write a query that can ask user to input the EMPNO of employee BLAKE,CLARK and TURNER and display their respective salary, add the salaries and display the total.

Answer:

```
DECLARE
  v_empno NUMBER;
  v_salary NUMBER;
  v_total_salary NUMBER := 0;
  v_ename VARCHAR2(20);
BEGIN
  FOR i IN 1..3 LOOP
    v_empno := :Enter_EMPNO;
    SELECT ENAME, SAL INTO v_ename, v_salary
    FROM EMP
    WHERE EMPNO = v_empno AND ENAME IN ('BLAKE', 'CLARK', 'TURNER');
```

```
    dbms_output.put_line('Employee: ' || v_ename || ', Salary: ' || v_salary);
    v_total_salary := v_total_salary + v_salary;
  END LOOP;
  dbms_output.put_line('Total Salary: ' || v_total_salary);
EXCEPTION
  WHEN NO_DATA_FOUND THEN
    dbms_output.put_line('Employee not found.');
END;
/
```



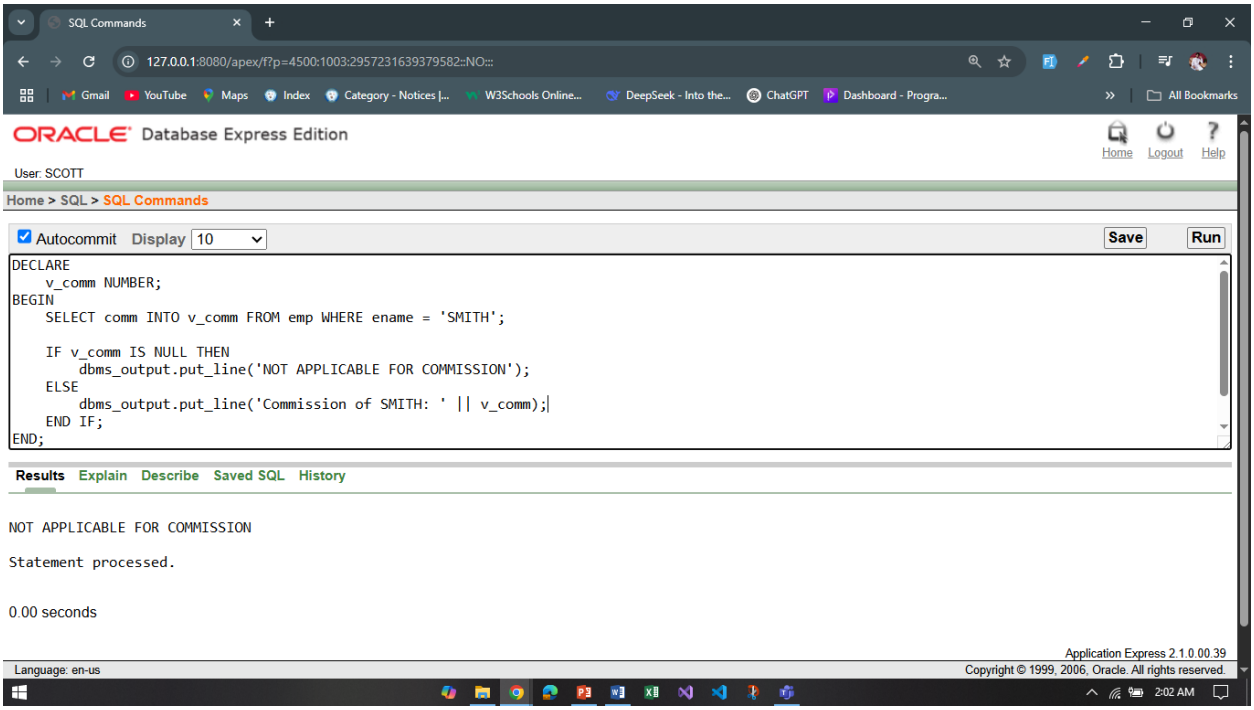
10. Write a query that displays the commission of employee SMITH. If SMITH's commission is NULL. Display 'NOT APPLICABLE FOR COMMISSION'

Answer:

```
DECLARE
  v_comm NUMBER;
BEGIN
  SELECT comm INTO v_comm FROM emp WHERE ename = 'SMITH';

  IF v_comm IS NULL THEN
```

```
    dbms_output.put_line('NOT APPLICABLE FOR COMMISSION');
  ELSE
    dbms_output.put_line('Commission of SMITH: ' || v_comm);
  END IF;
END;
/
```



Part 03:

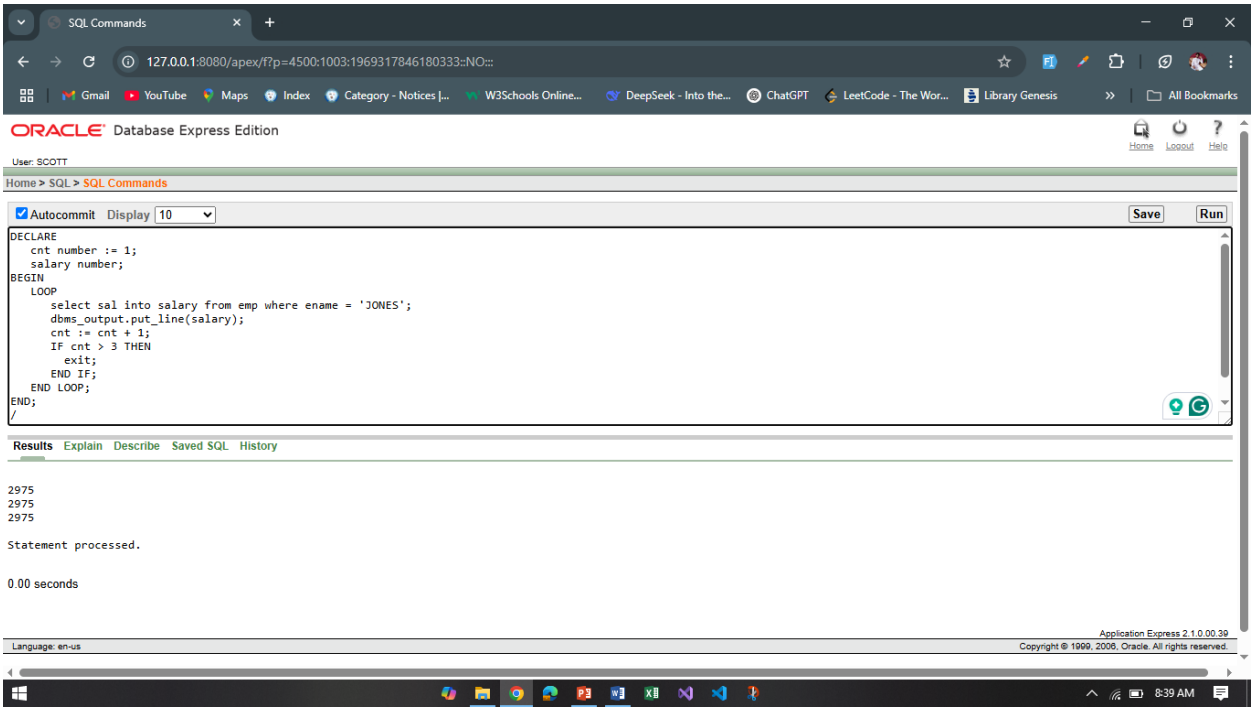
To solve the following use the scott schema

11. Write a query that can display the salary of employee JONES three times using basic loop.

Answer:

```
DECLARE
  cnt number := 1;
  salary number;
BEGIN
  LOOP
    select sal into salary from emp where ename = 'JONES';
    dbms_output.put_line(salary);
    cnt := cnt + 1;
    IF cnt > 3 THEN
      exit;
    END IF;
  END LOOP;
END;
/
```

Output:

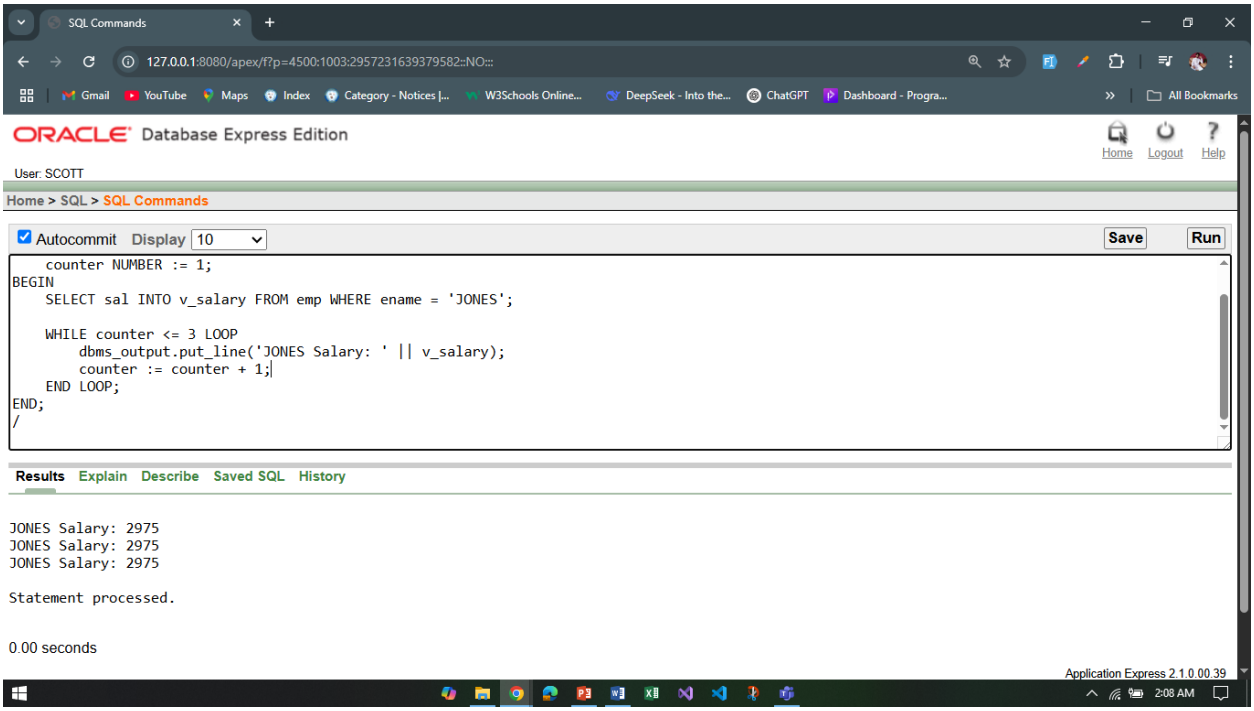


12. Write a query that can display the salary of employee JONES three times using while loop.

Answer:

```
DECLARE
   v_salary NUMBER ;
   counter NUMBER := 1;
BEGIN
   SELECT sal INTO v_salary FROM emp WHERE ename = 'JONES';

   WHILE counter <= 3 LOOP
      dbms_output.put_line('JONES Salary: ' || v_salary);
      counter := counter + 1;
   END LOOP;
END;
/
```

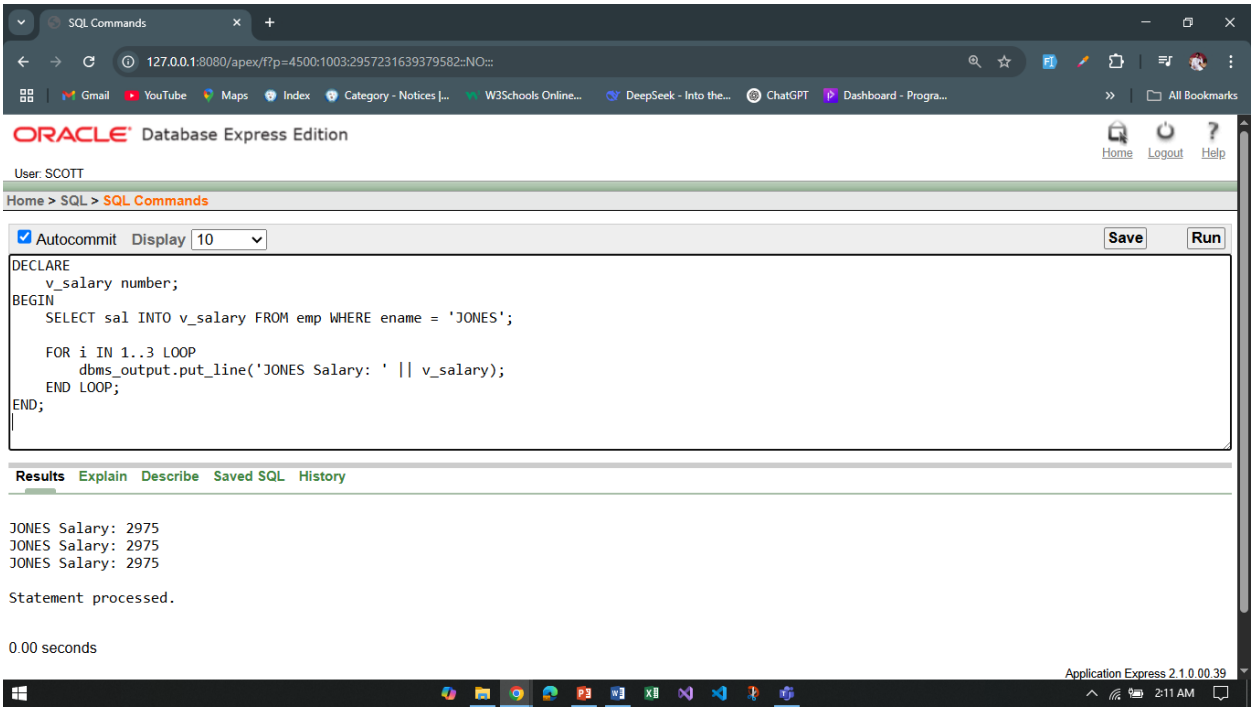


13. Write a query that can display the salary of employee JONES three times using for loop.

Answer:

```
DECLARE
  v_salary number;
BEGIN
  SELECT sal INTO v_salary FROM emp WHERE ename = 'JONES';

  FOR i IN 1..3 LOOP
    dbms_output.put_line('JONES Salary: ' || v_salary);
  END LOOP;
END;
```

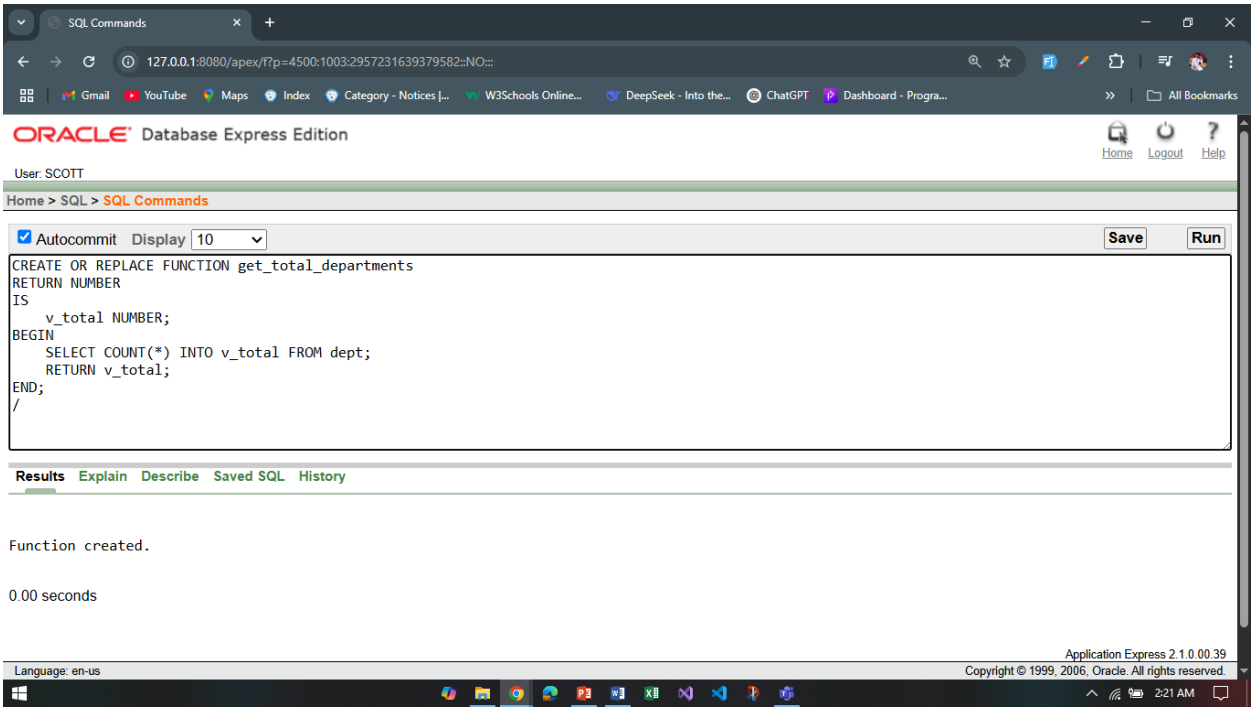


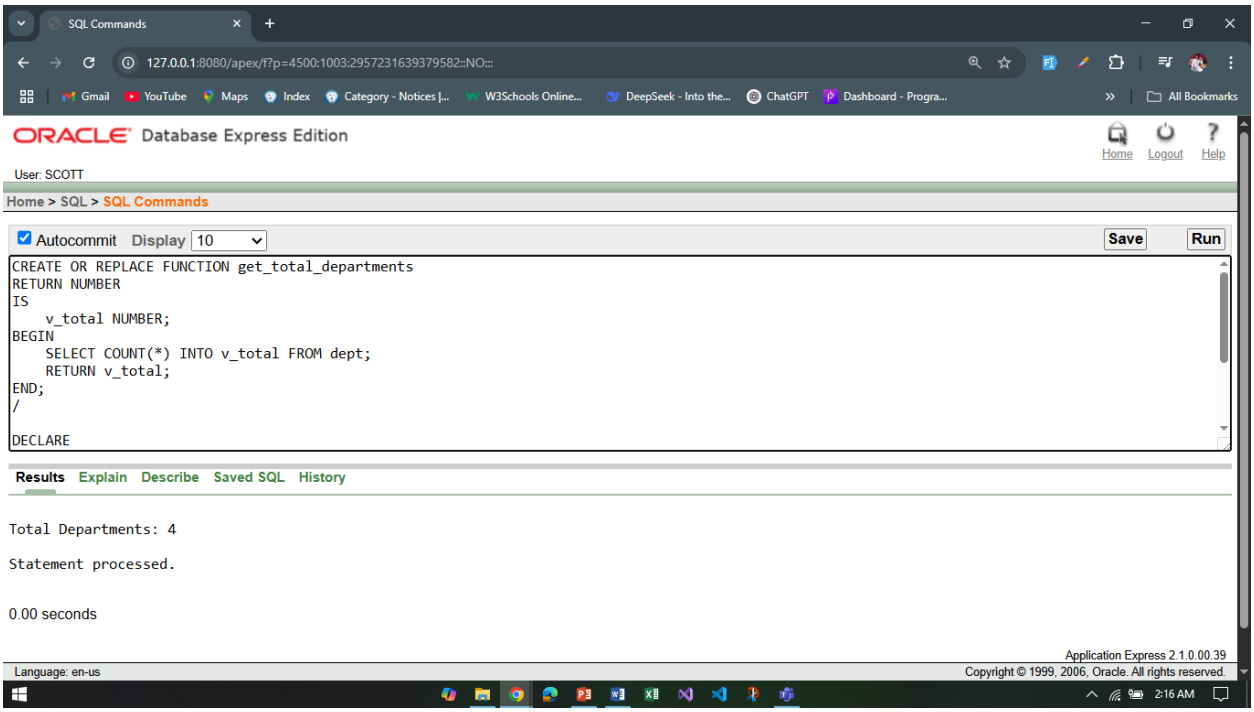
14. Create a function that returns the total number of departments.

Answer:

```
CREATE OR REPLACE FUNCTION get_total_departments
RETURN NUMBER
IS
   v_total NUMBER;
BEGIN
   SELECT COUNT(*) INTO v_total FROM dept;
   RETURN v_total;
END;
/

DECLARE
   dept_count NUMBER;
BEGIN
   dept_count := get_total_departments;
   dbms_output.put_line('Total Departments: ' || dept_count);
END;
/
```





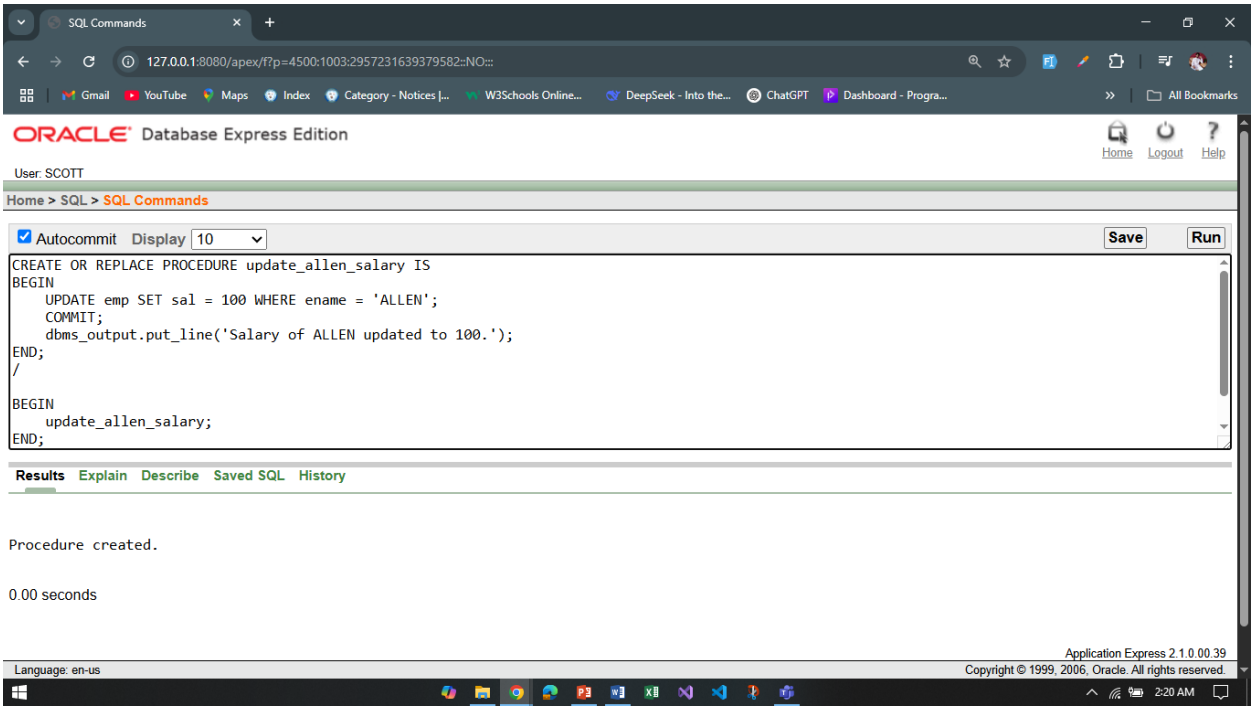
15. Create a procedure to update the salary of employee Allen to 100.

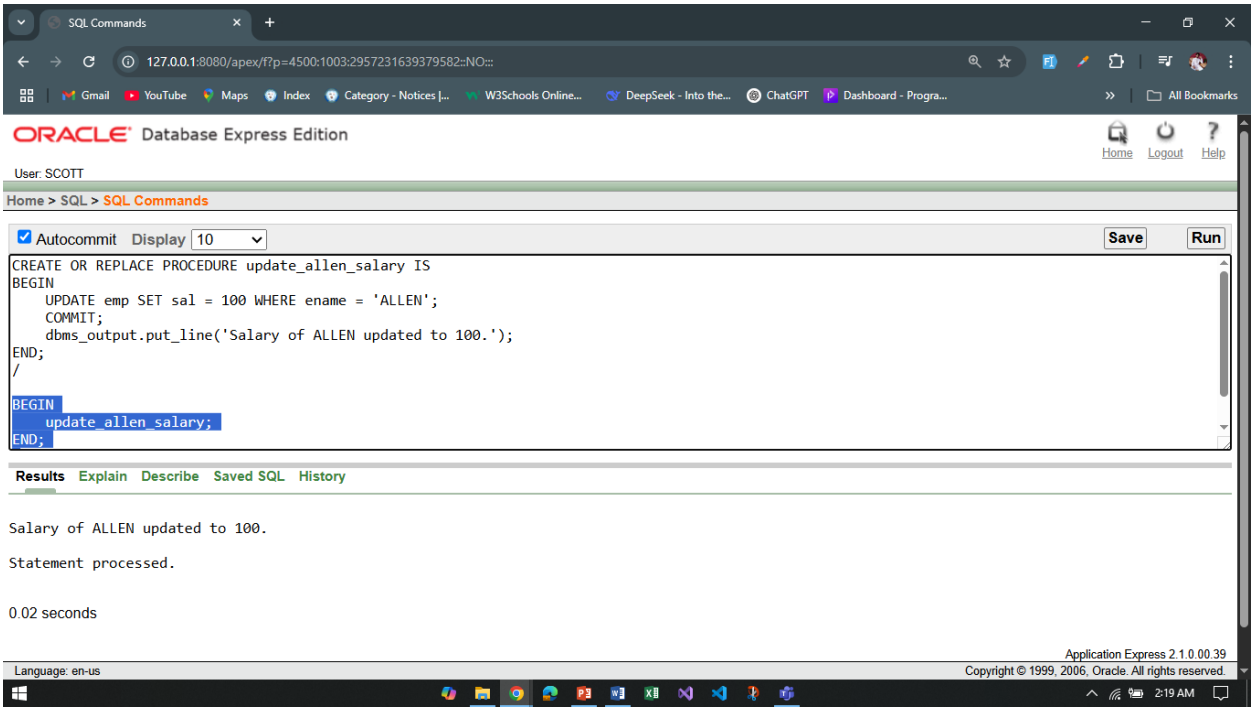
Answer:

```
CREATE OR REPLACE PROCEDURE update_allen_salary IS
BEGIN
    UPDATE emp SET sal = 100 WHERE ename = 'ALLEN';
    COMMIT;
```

```
    dbms_output.put_line('Salary of ALLEN updated to 100.');
END;
/

BEGIN
    update_allen_salary;
END;
/
```





****After solving the above questions using Oracle 10g, write the PL/SQLs in a MS Word document (Write down the answer and give screenshot of the result of the query. The name of the document MUST be your ID and the PL/SQLs MUST be numbered accordingly) and upload it in the provided link in your VUES account**