**EXERCISE -> 3,4**

**NAME: KAUSHAL BAGHEL ROLL NO : 21MAI0003**

**EXERCISE-3**

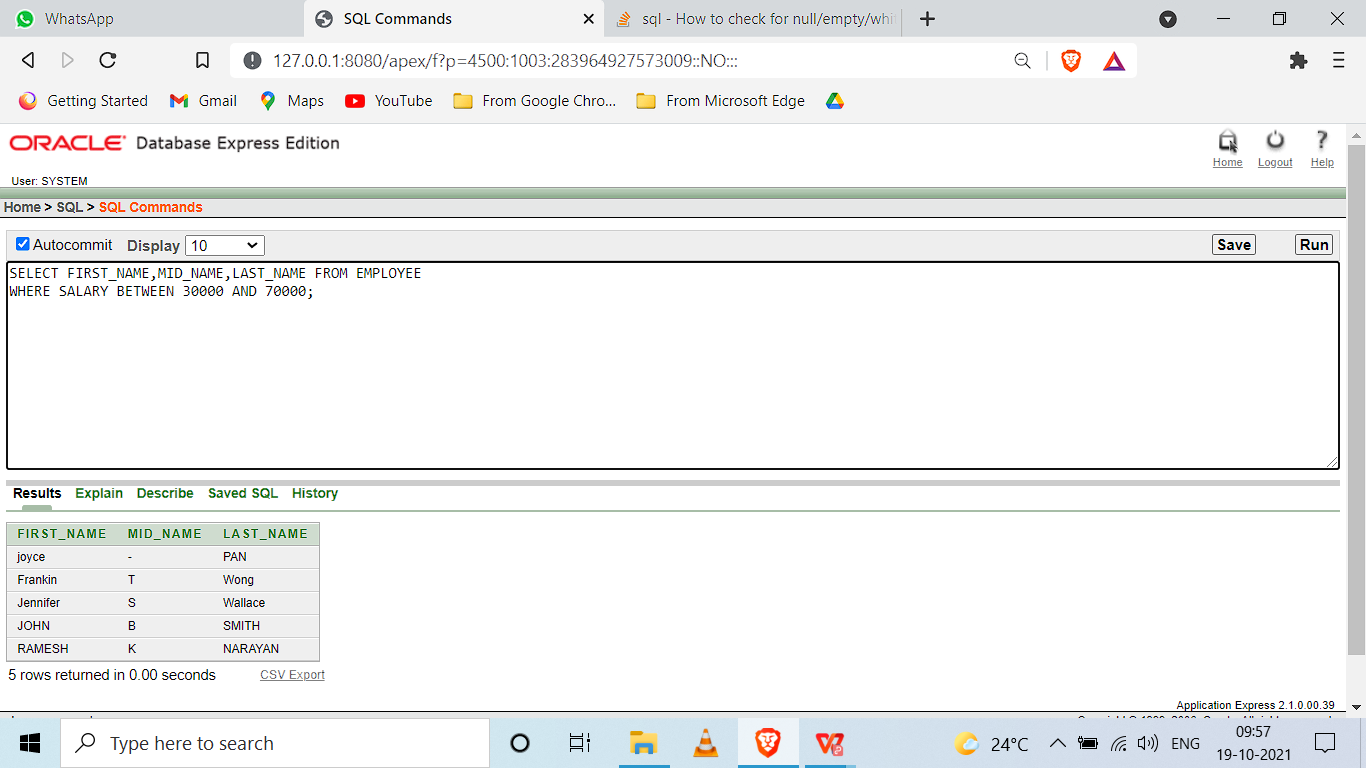
**Operators and Functions**

**Aim: To understand different operators and types of function in SQL**

1. Find the employee names whose salary lies in the range between 30000 and 70000.

SELECT FIRST\_NAME,MID\_NAME,LAST\_NAME FROM EMPLOYEE

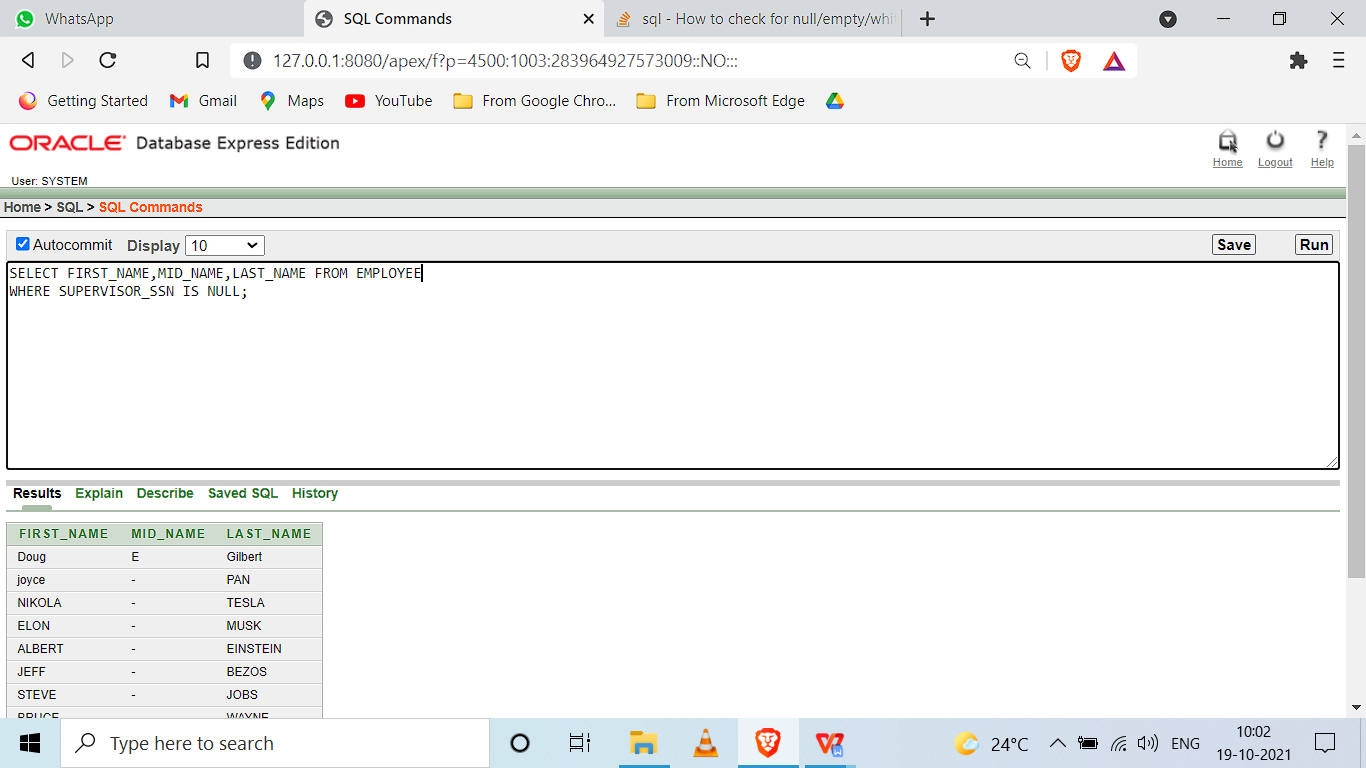
WHERE SALARY BETWEEN 30000 AND 70000;



1. Find the employees who have no supervisor.

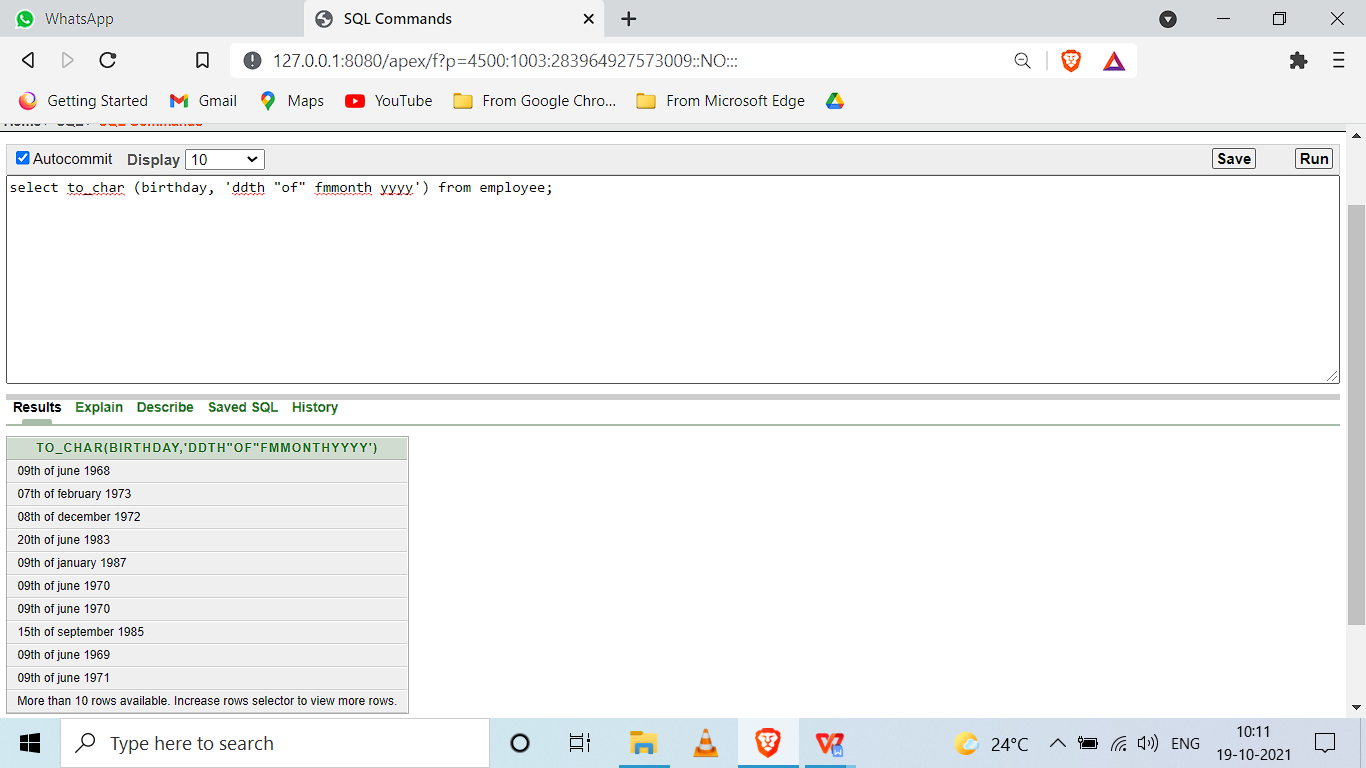
SELECT FIRST\_NAME,MID\_NAME,LAST\_NAME FROM EMPLOYEE

WHERE SUPERVISOR\_SSN IS NULL;



1. Display the bdate of all employees in the format ‘DDthMonthYYYY’.

select to\_char (birthday, 'ddth "of" fmmonth yyyy') from employee;

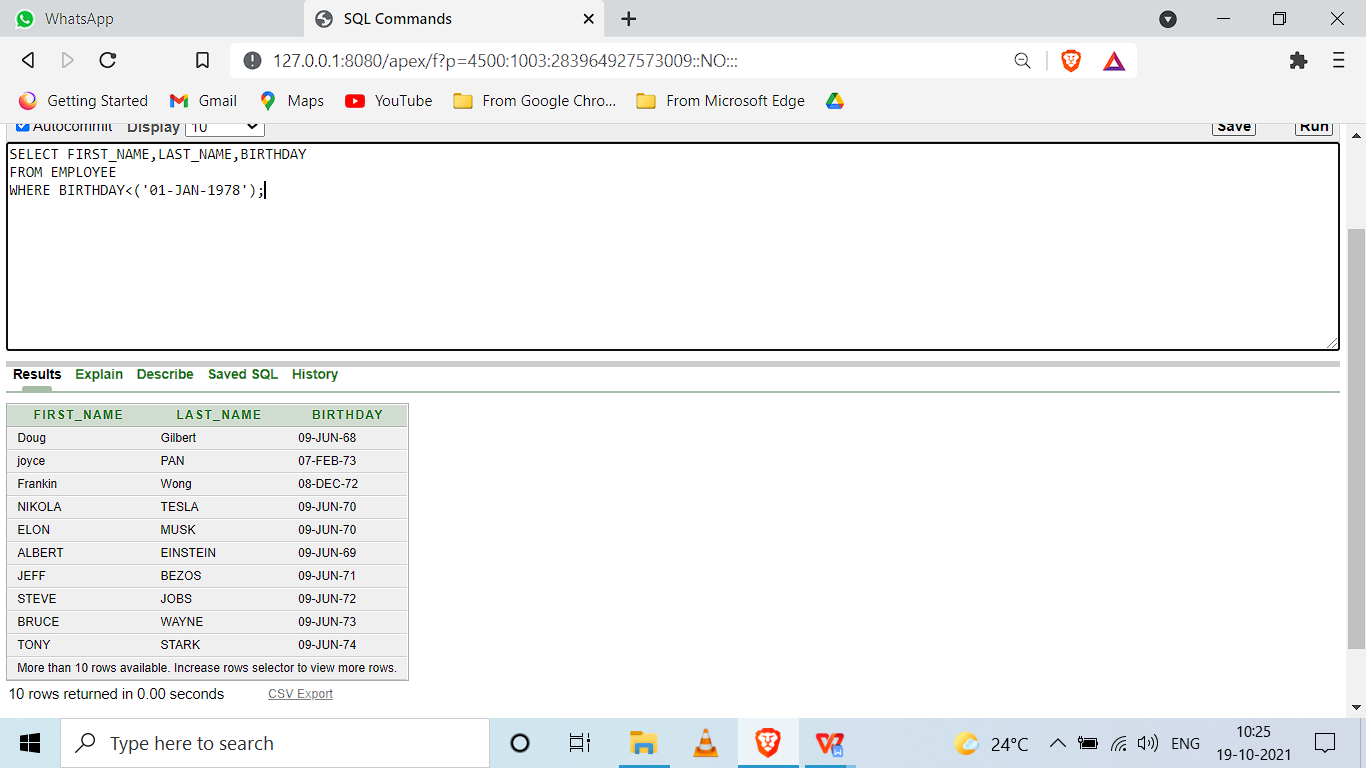


1. Display the employee names whose bdate is on or before 1978.

SELECT FIRST\_NAME,LAST\_NAME,BIRTHDAY

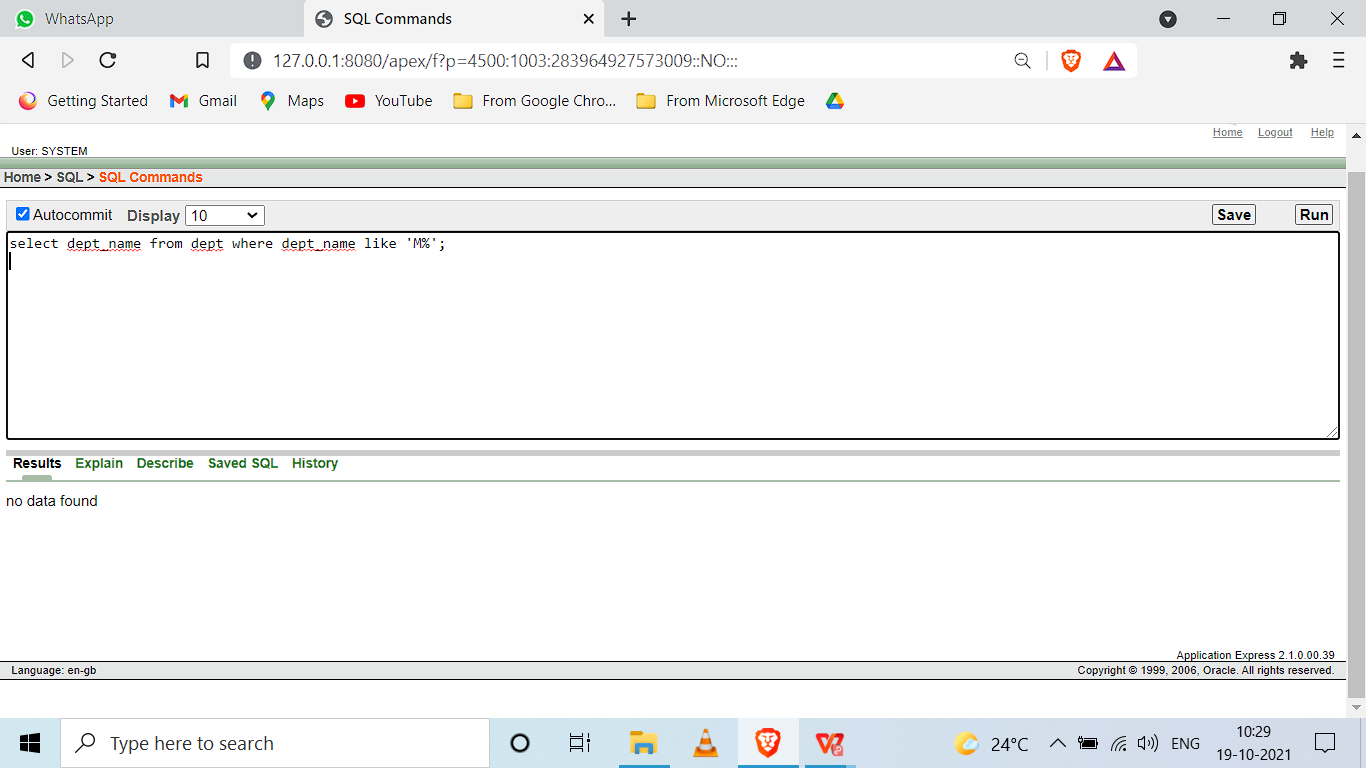
FROM EMPLOYEE

WHERE BIRTHDAY<('01-JAN-1978');



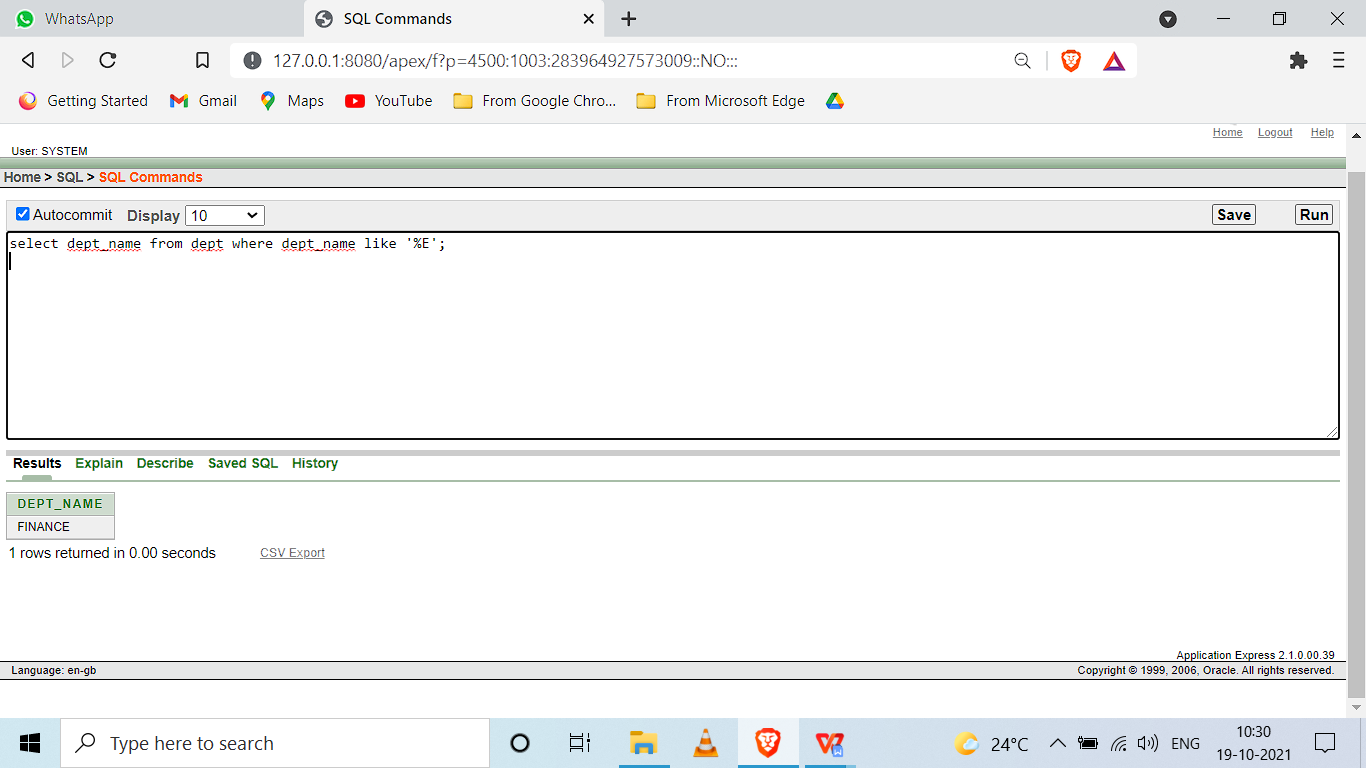
1. Display the department name that starts with ’M’.

select dept\_name from dept where dept\_name like 'M%';



1. Display the department names’ that ends with ‘E’.

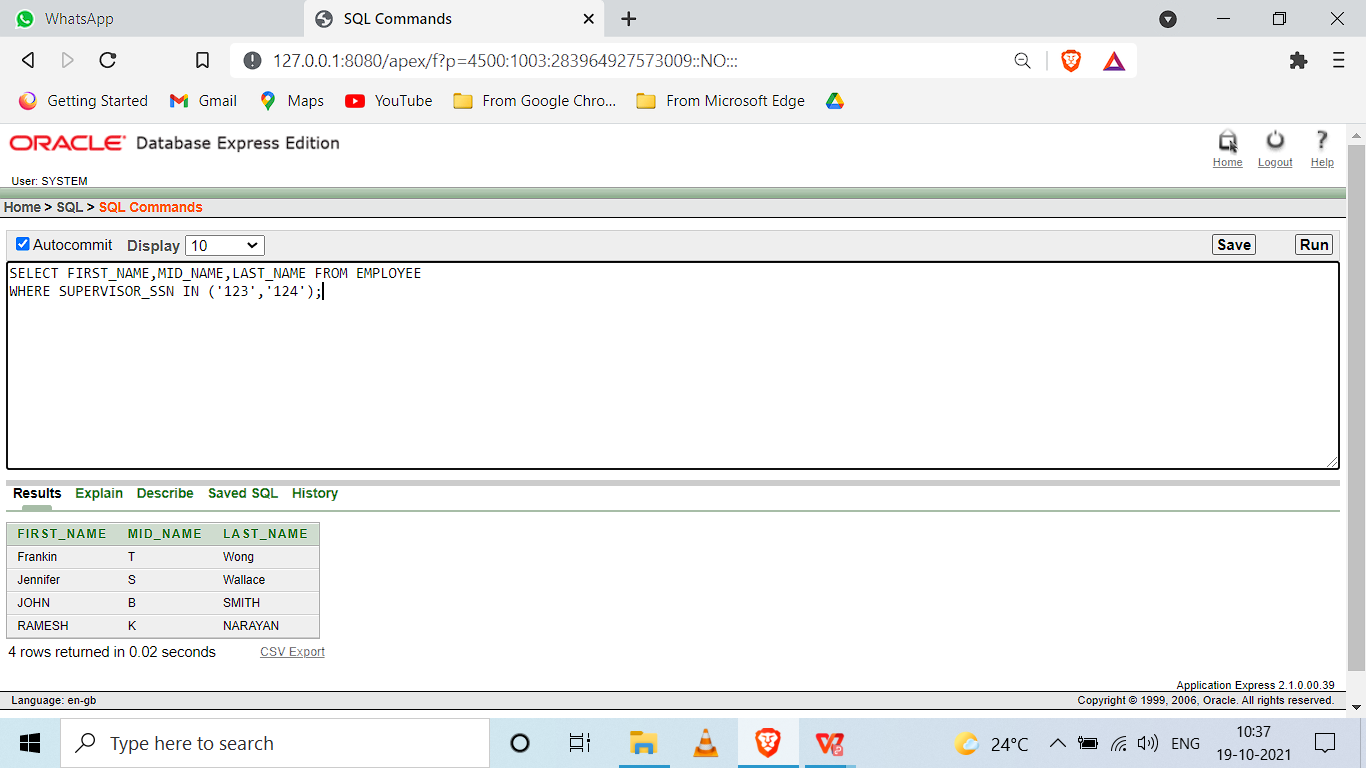
select dept\_name from dept where dept\_name like '%E';



1. Display the names of all the employees having supervisor with any of the following SSN 123, 124

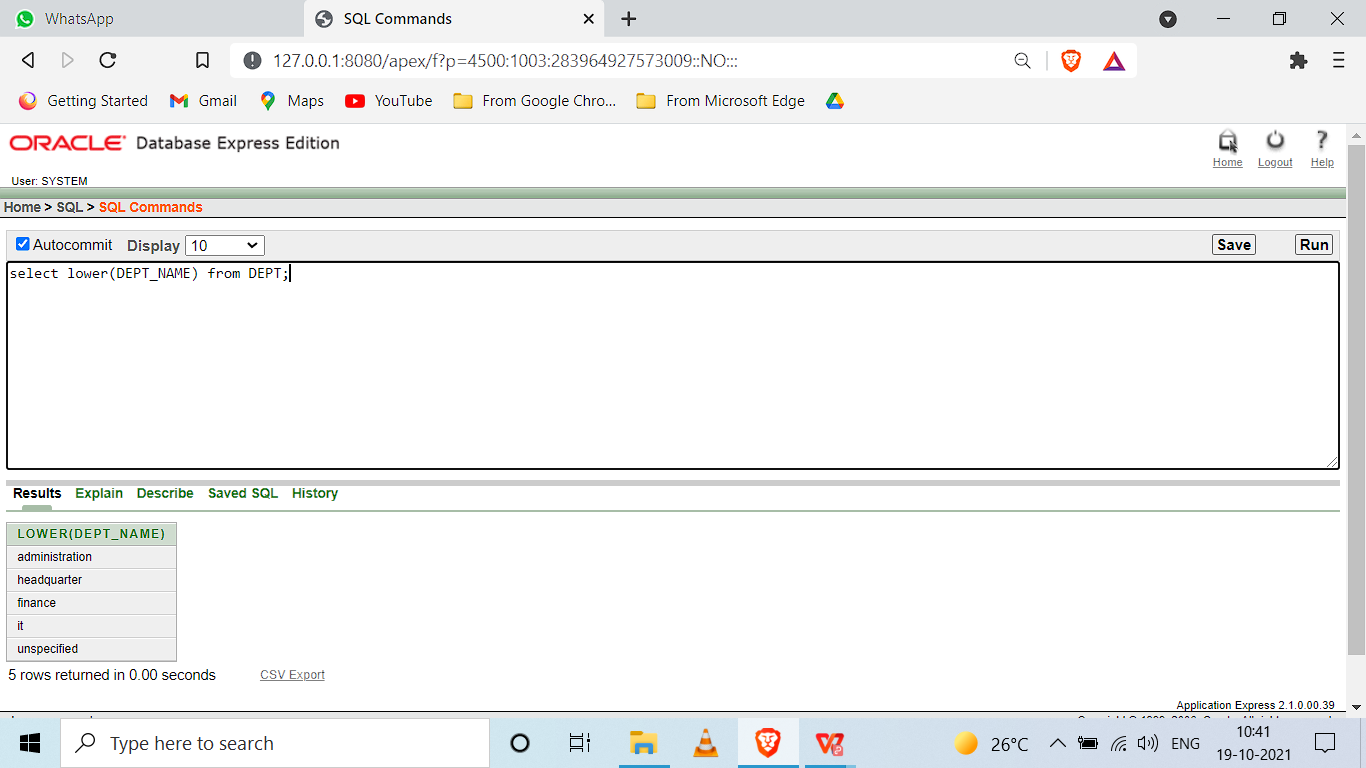
SELECT FIRST\_NAME,MID\_NAME,LAST\_NAME FROM EMPLOYEE

WHERE SUPERVISOR\_SSN IN ('123','124');

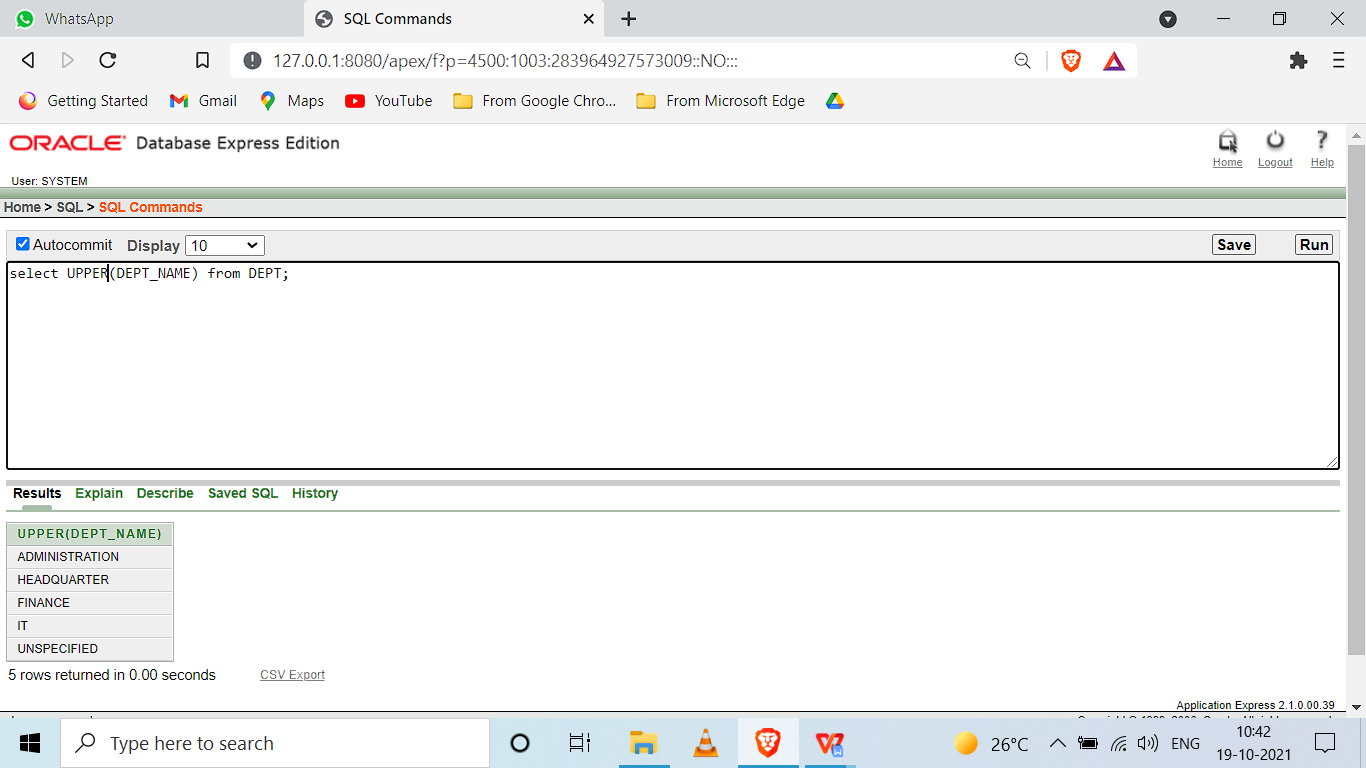


1. Display all the department names in upper case and lower case.

select lower(DEPT\_NAME) from DEPT;

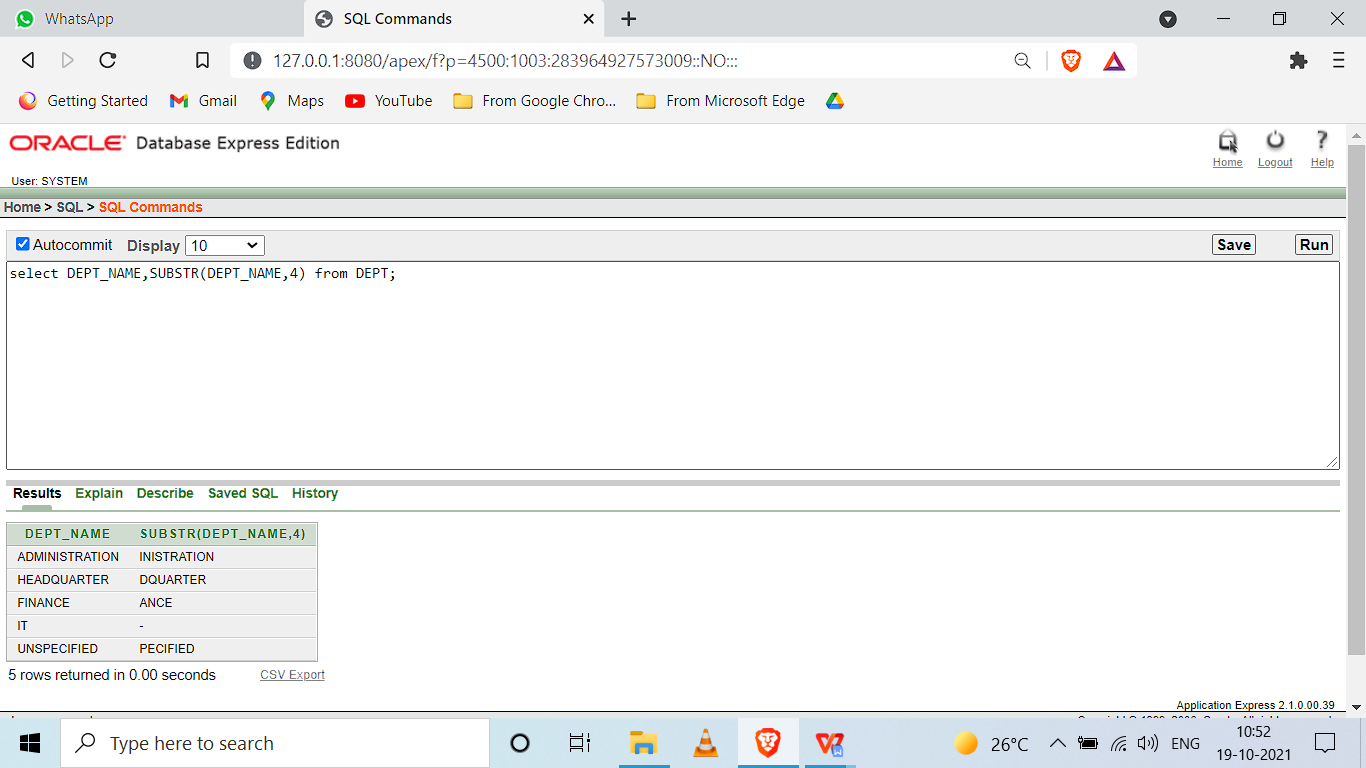


select UPPER(DEPT\_NAME) from DEPT;

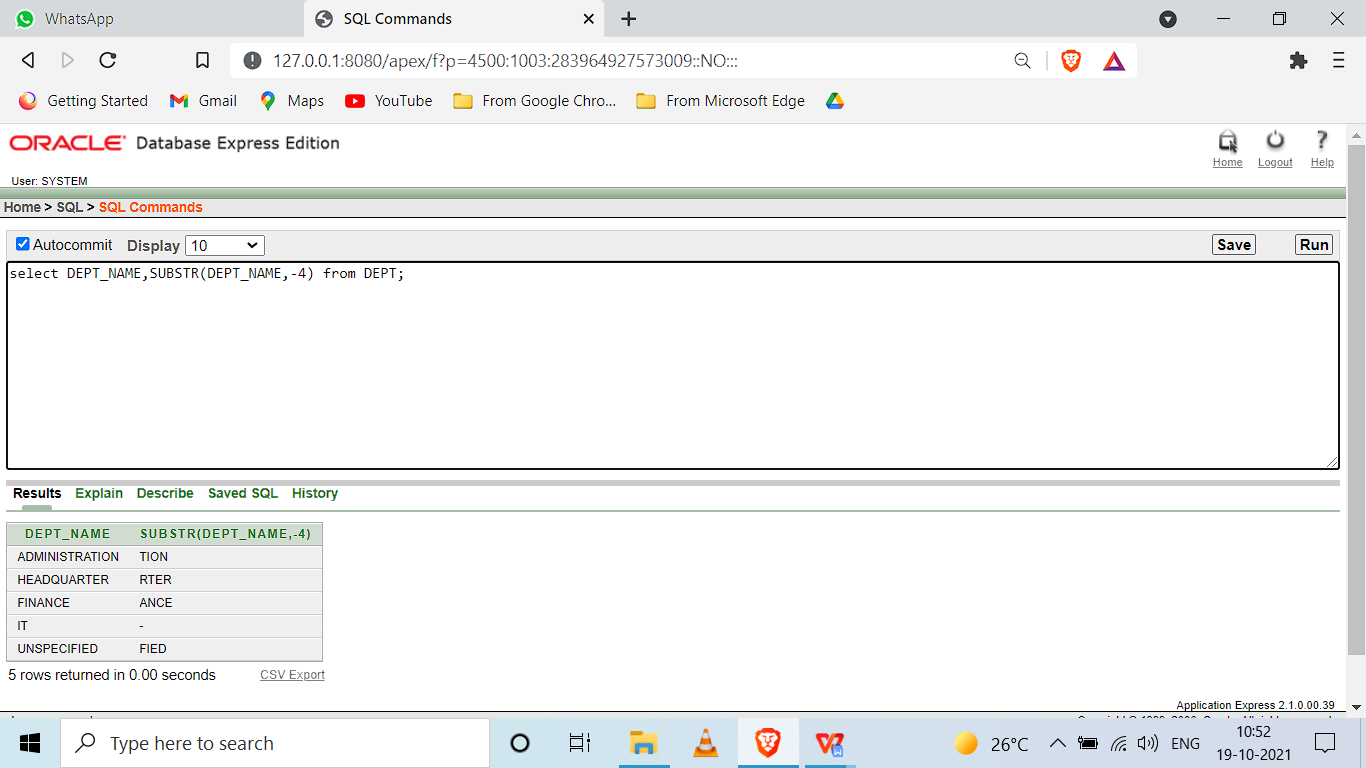


1. Display the first four characters and last four of the department names using substring function

select DEPT\_NAME,SUBSTR(DEPT\_NAME,4) from DEPT;

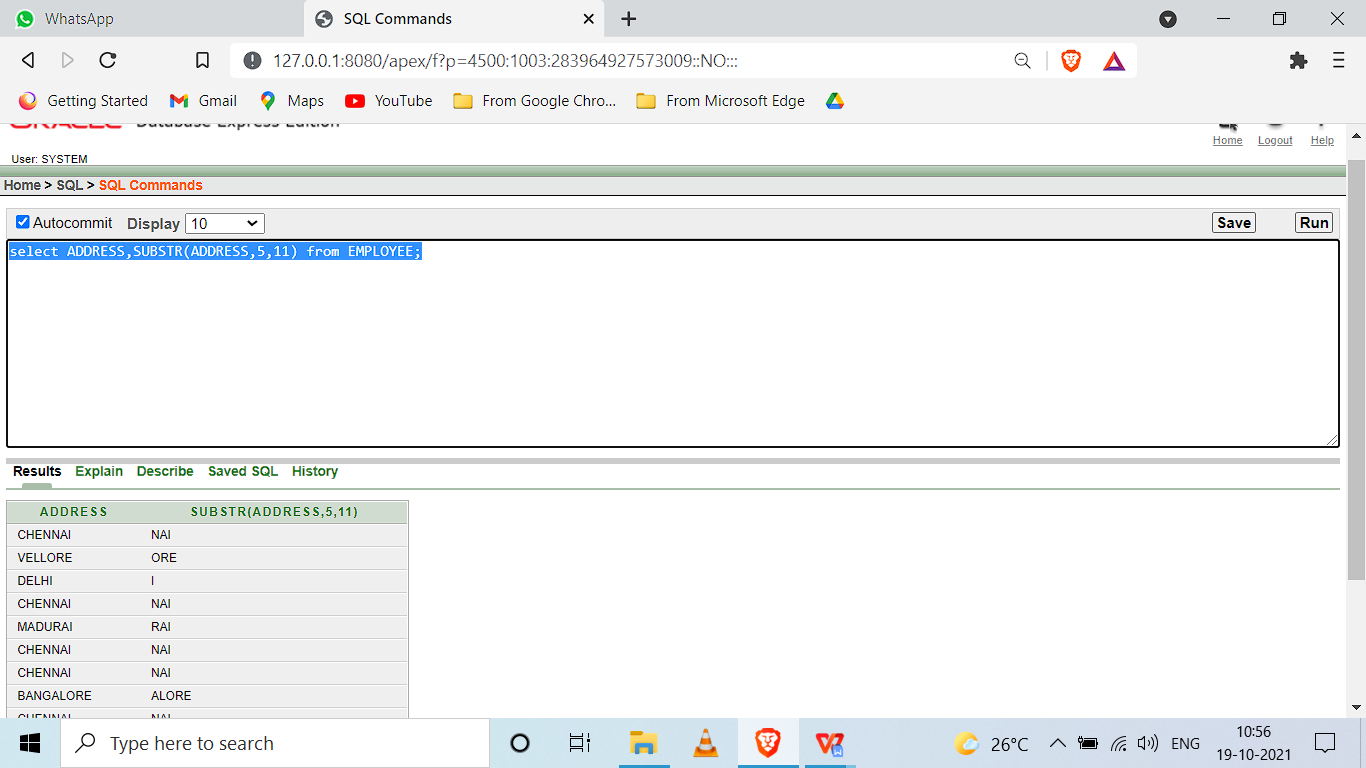


select DEPT\_NAME,SUBSTR(DEPT\_NAME,-4) from DEPT;



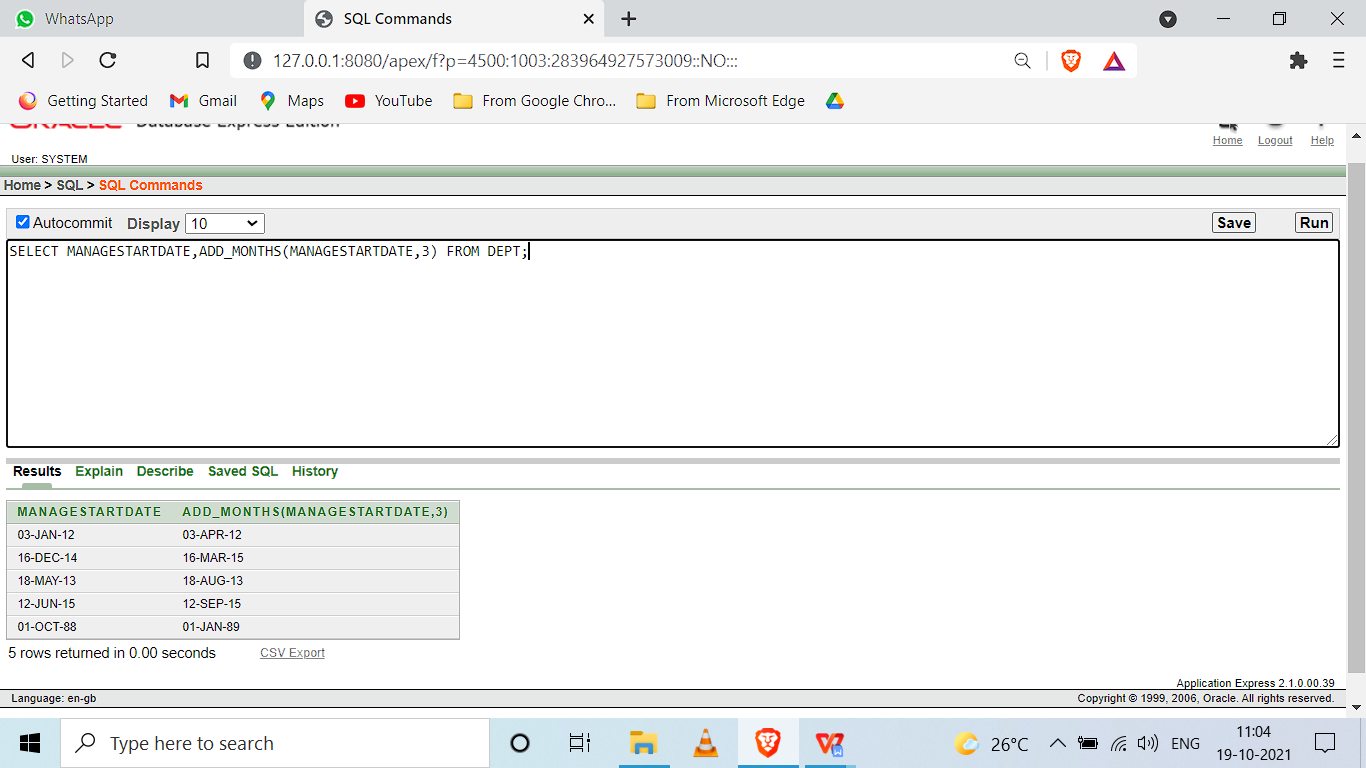
1. Display the substring of the Address (starting from 5th position to 11 th position) of all employees

select ADDRESS,SUBSTR(ADDRESS,5,11) from EMPLOYEE;



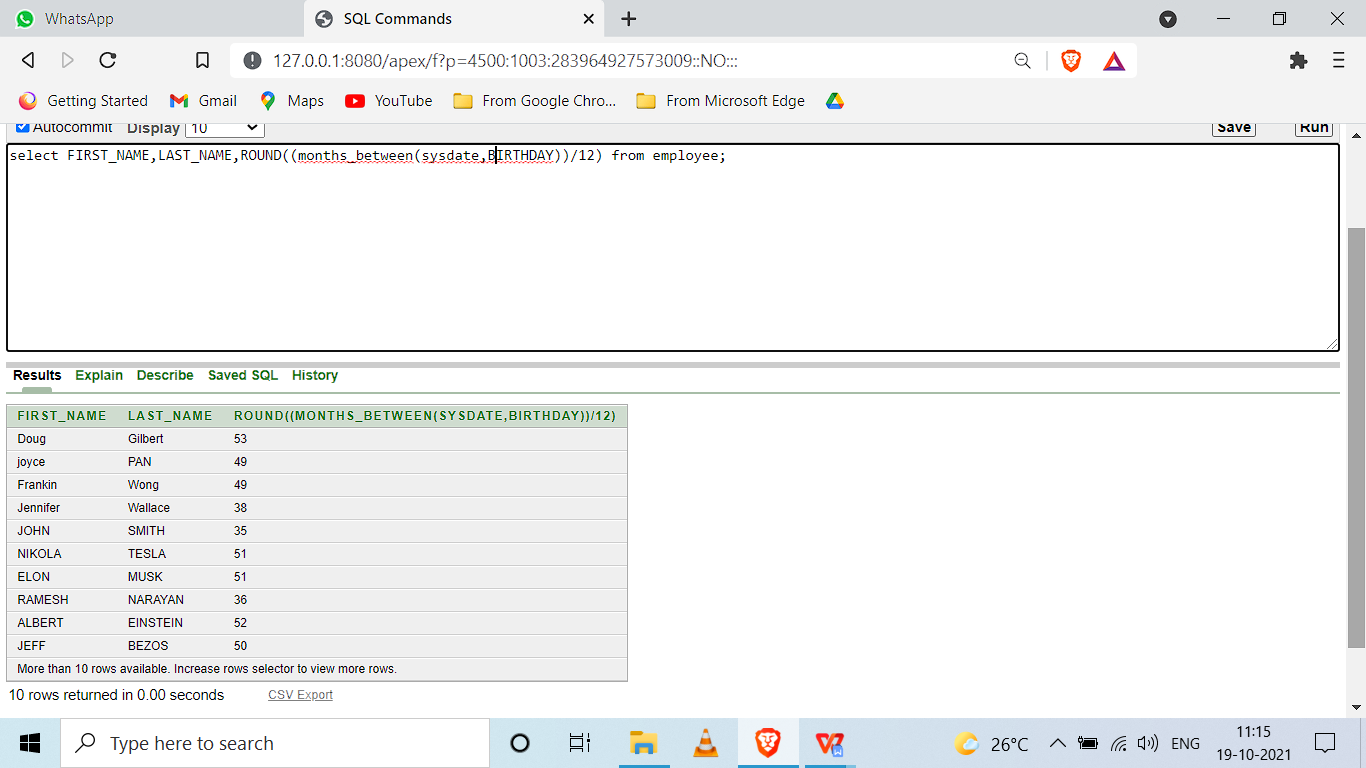
1. Display the Mgrstartdate on adding three months to it.

SELECT MANAGESTARTDATE,ADD\_MONTHS(MANAGESTARTDATE,3) FROM DEPT;



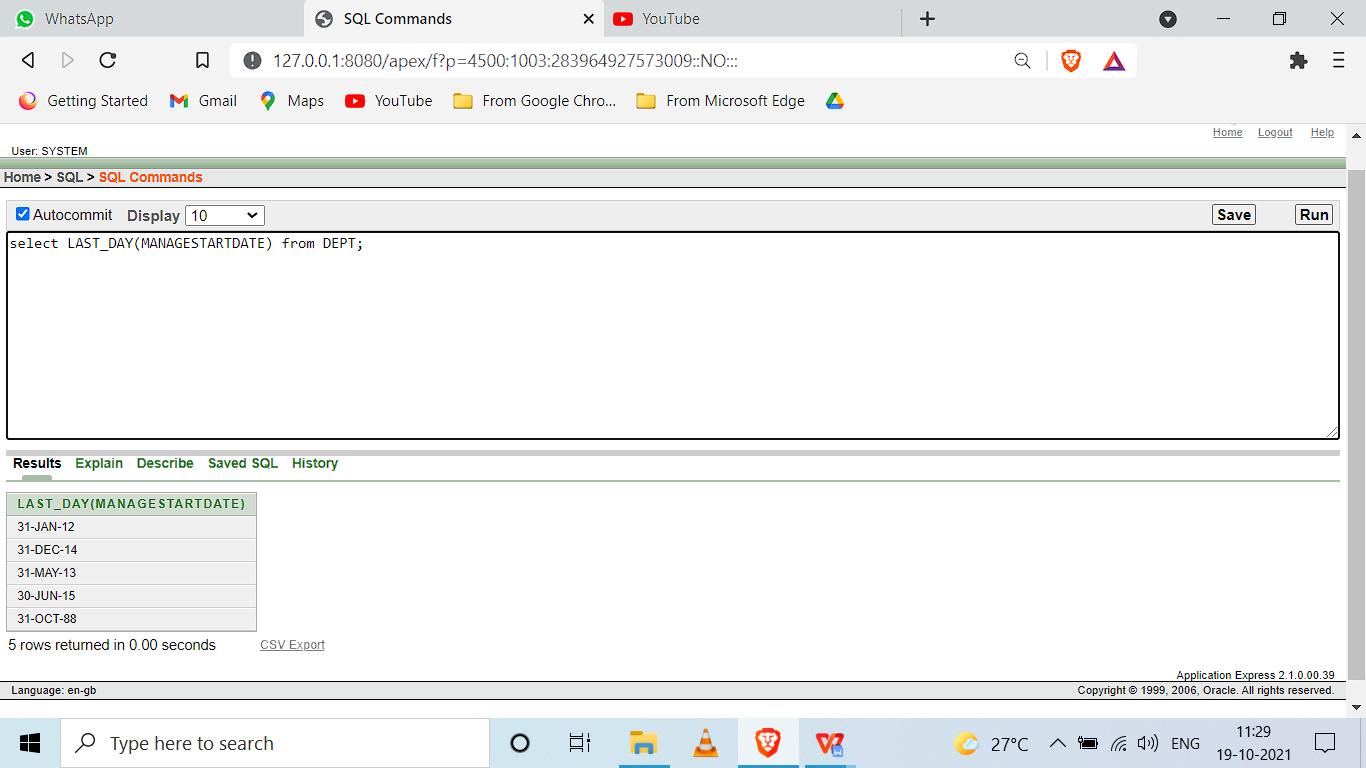
1. Display the age of all the employees rounded to two digits.

select FIRST\_NAME,LAST\_NAME,ROUND((months\_between(sysdate,BIRTHDAY))/12) from employee;

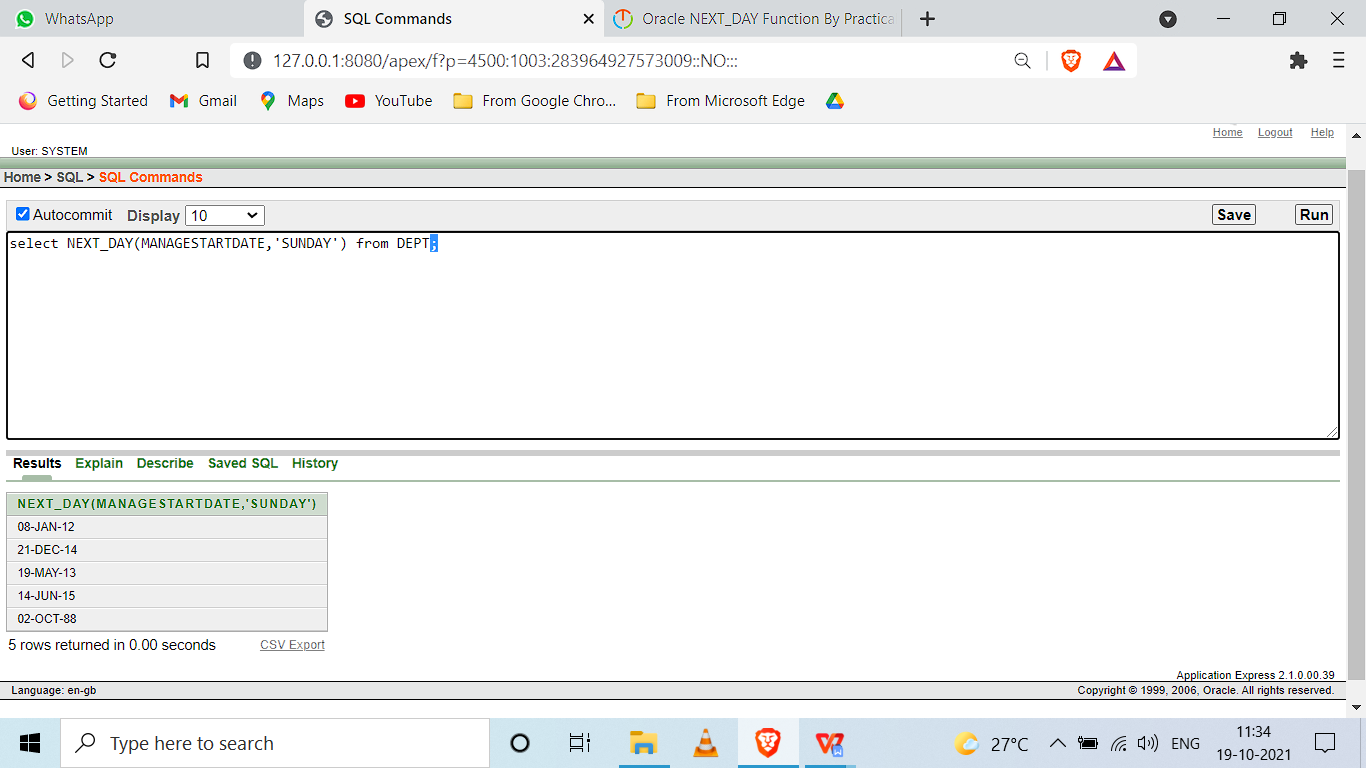


1. Find the last day and next day of the month in which each manager has joined.

select LAST\_DAY(MANAGESTARTDATE) from DEPT;



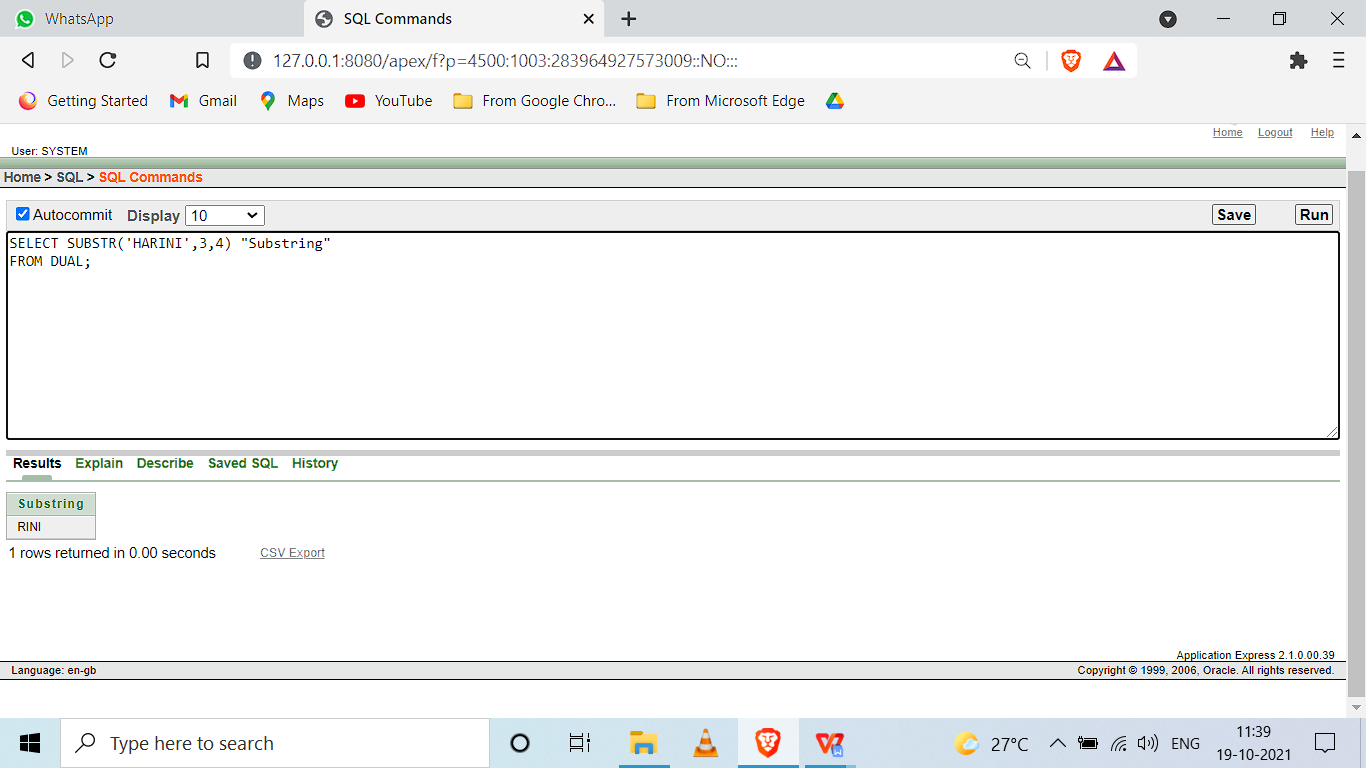
select NEXT\_DAY(MANAGESTARTDATE,'SUNDAY') from DEPT;



1. Print a substring from the string ‘Harini’.

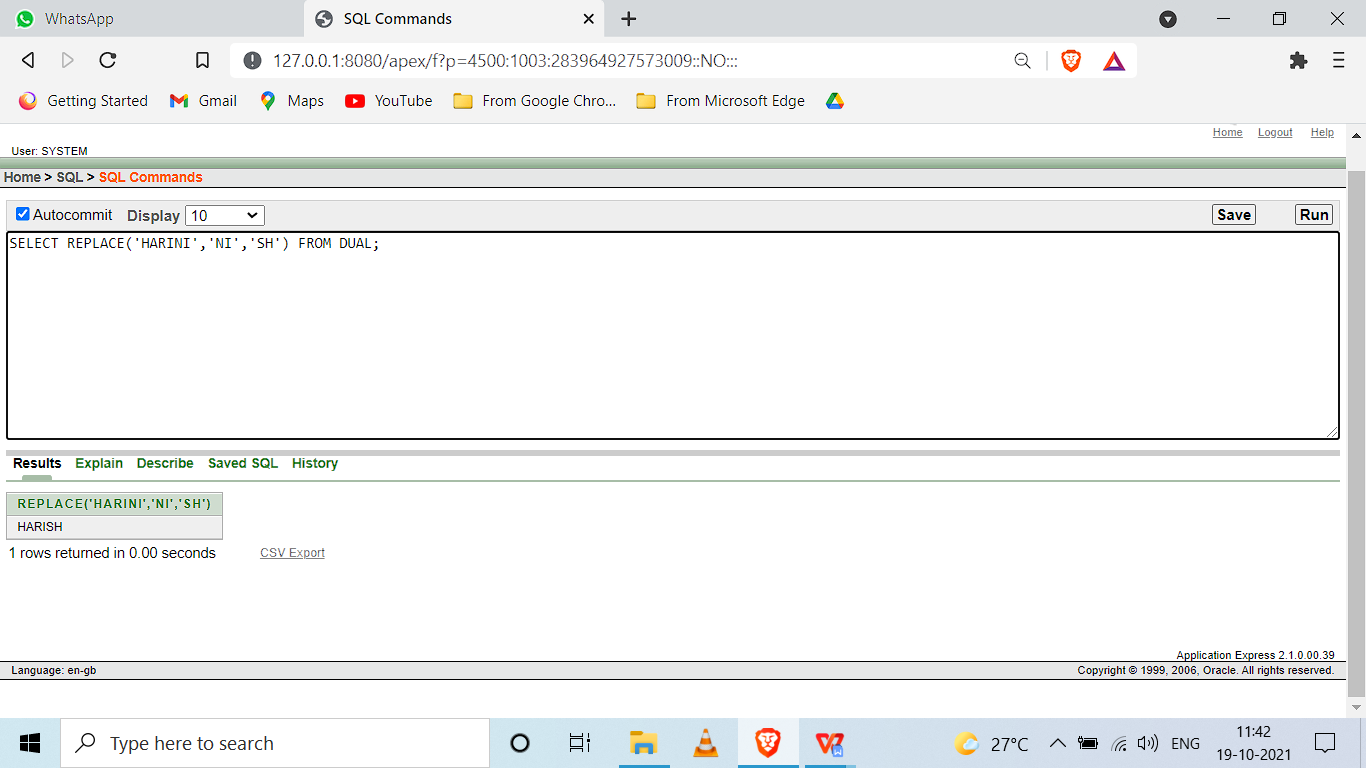
SELECT SUBSTR('HARINI',3,4) "Substring"

FROM DUAL;



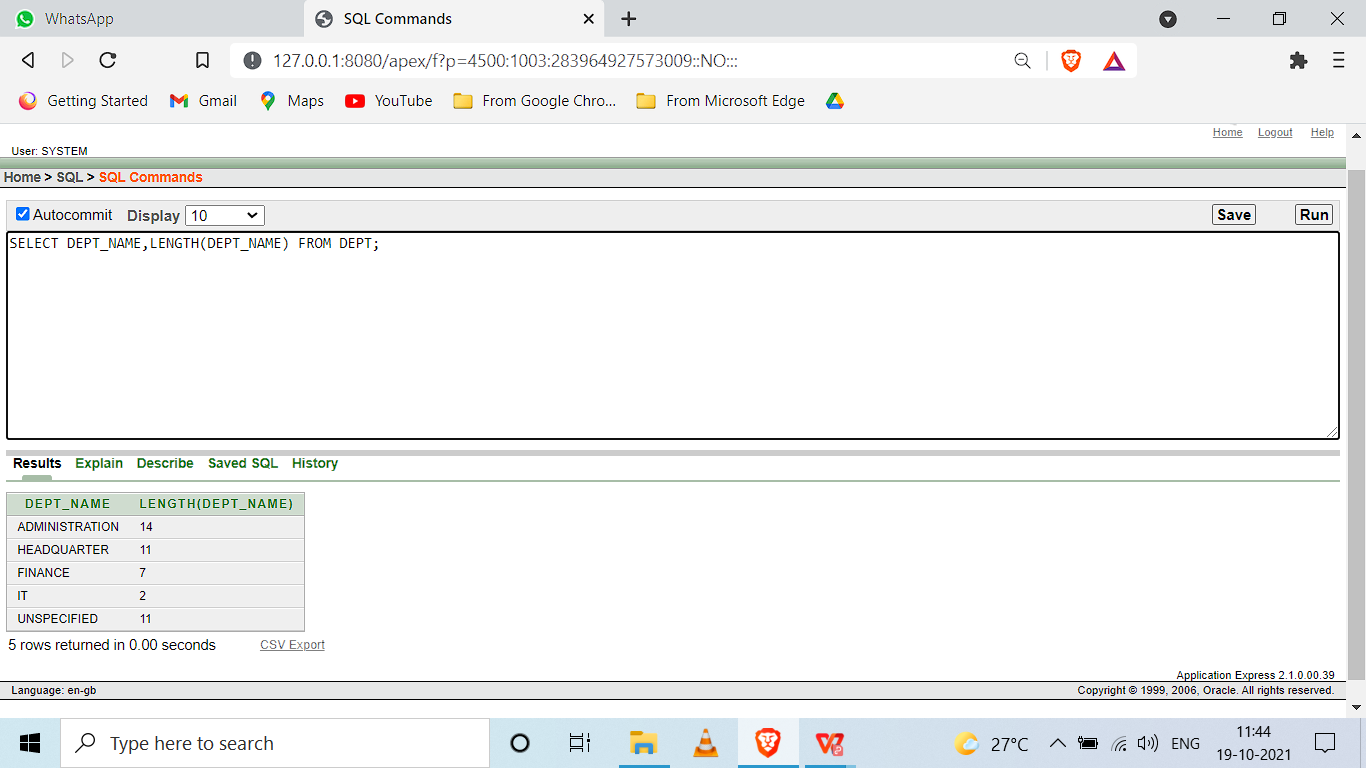
1. Replace the string ‘ni’ from ‘Harini’ by ‘sh’

SELECT REPLACE('HARINI','NI','SH') FROM DUAL;



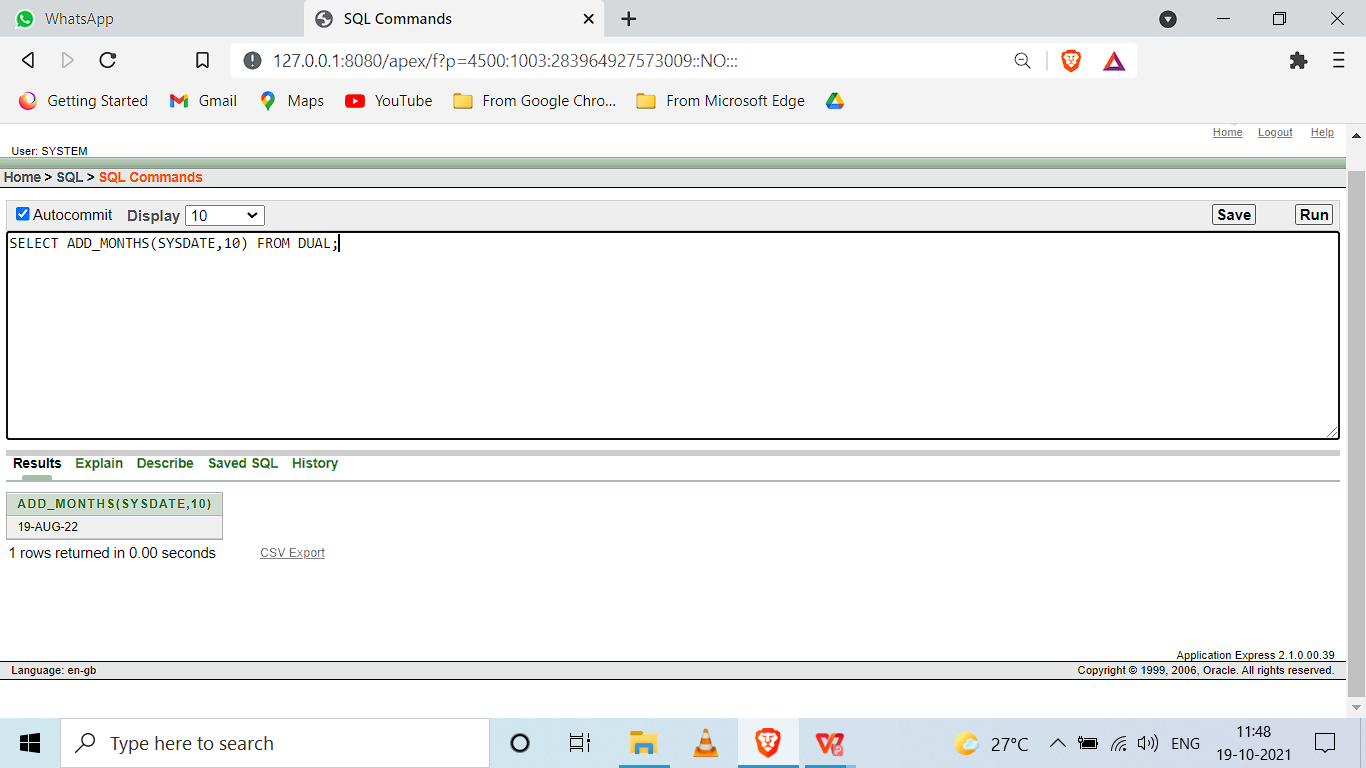
1. Print the length of all the department names.

SELECT DEPT\_NAME,LENGTH(DEPT\_NAME) FROM DEPT;



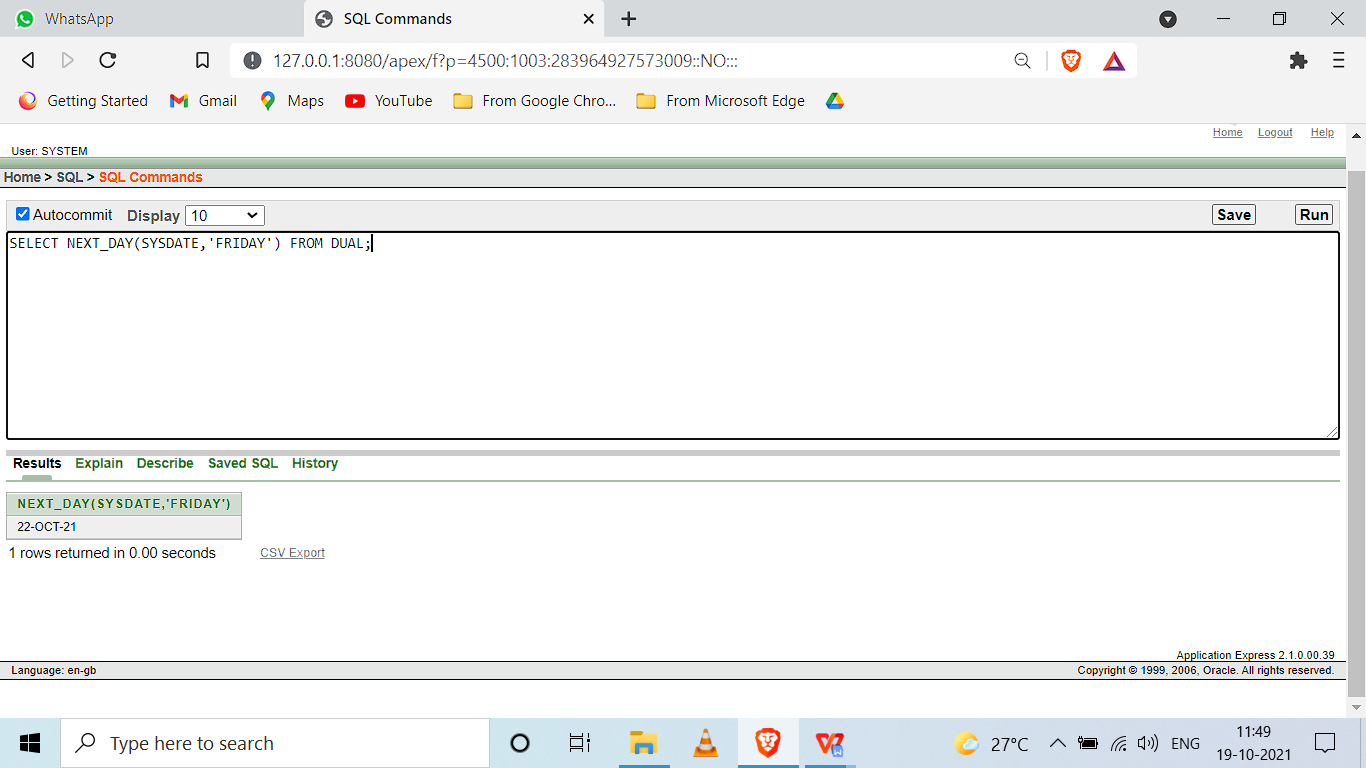
1. Display the date after 10 months from current date.

SELECT ADD\_MONTHS(SYSDATE,10) FROM DUAL;



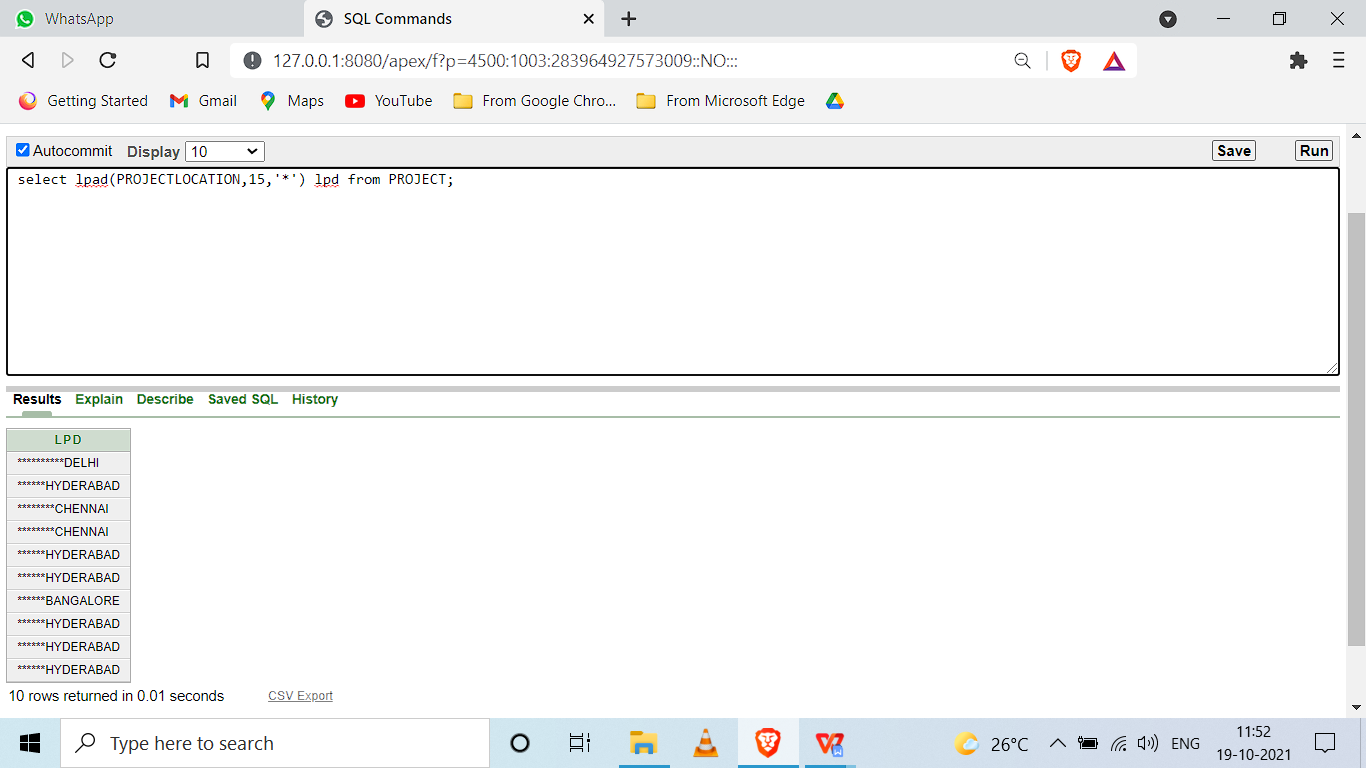
1. Display the next occurrence of Friday in this month.

SELECT NEXT\_DAY(SYSDATE,'FRIDAY') FROM DUAL;



1. Display the project location padded with \*\*\*\* on left side.

select lpad(PROJECTLOCATION,15,'\*') lpd from PROJECT;

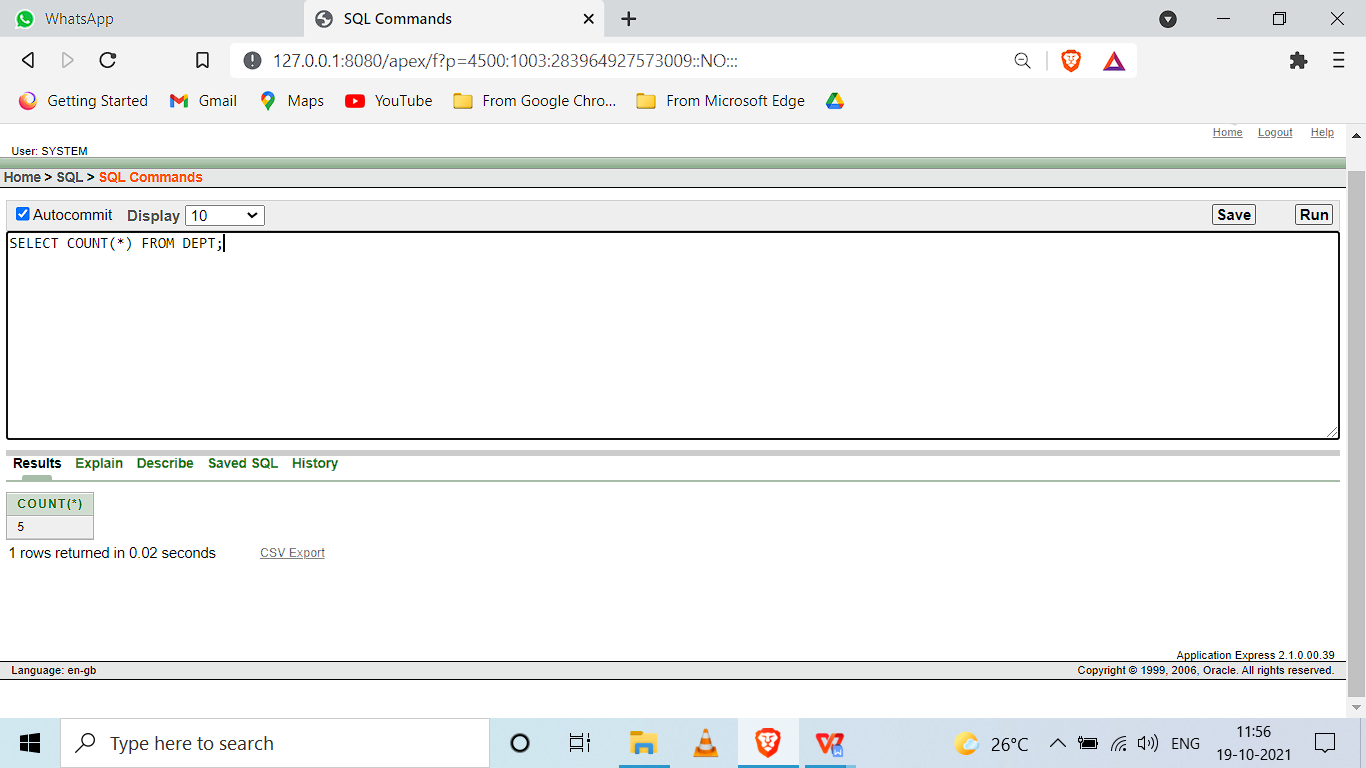


**Exercise: IV**

**Group Functions**

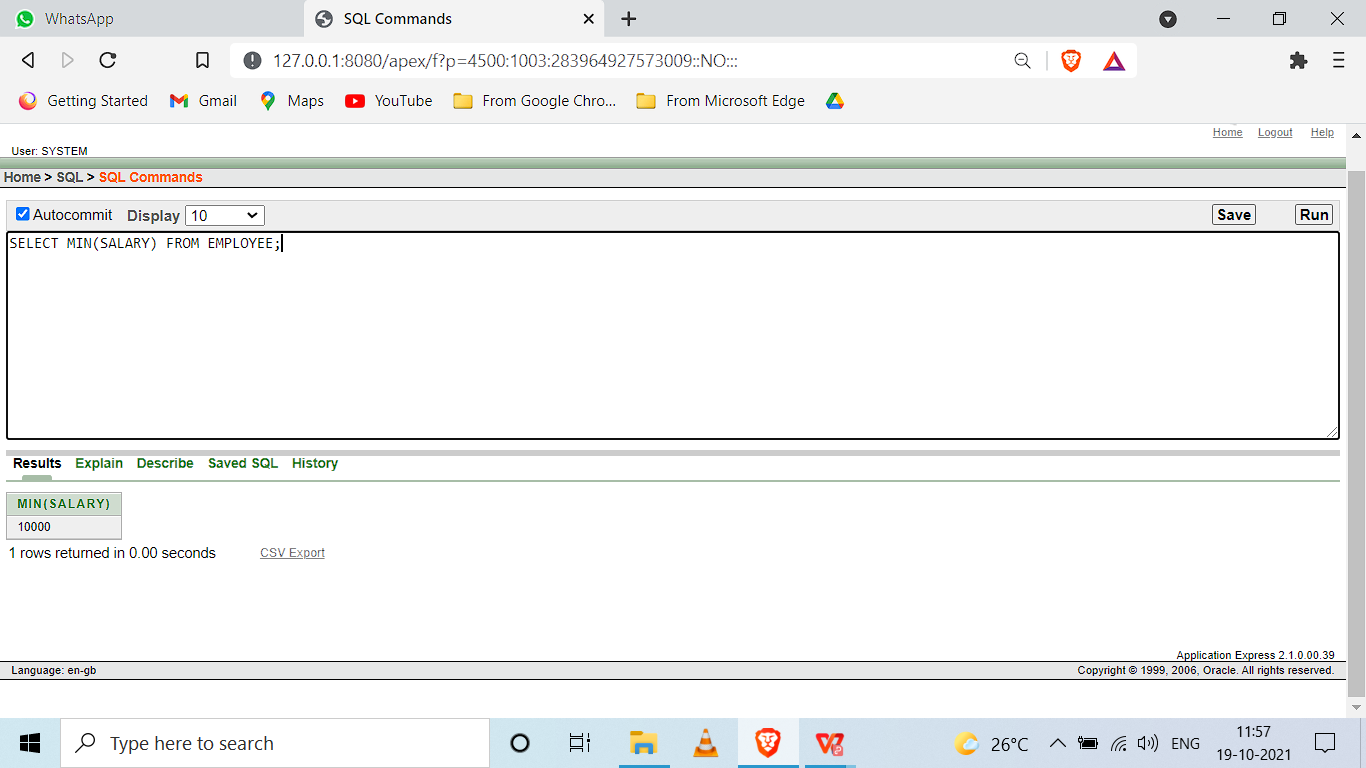
1. How many different departments are there in the ‘employee’ table

SELECT COUNT(\*) FROM DEPT;

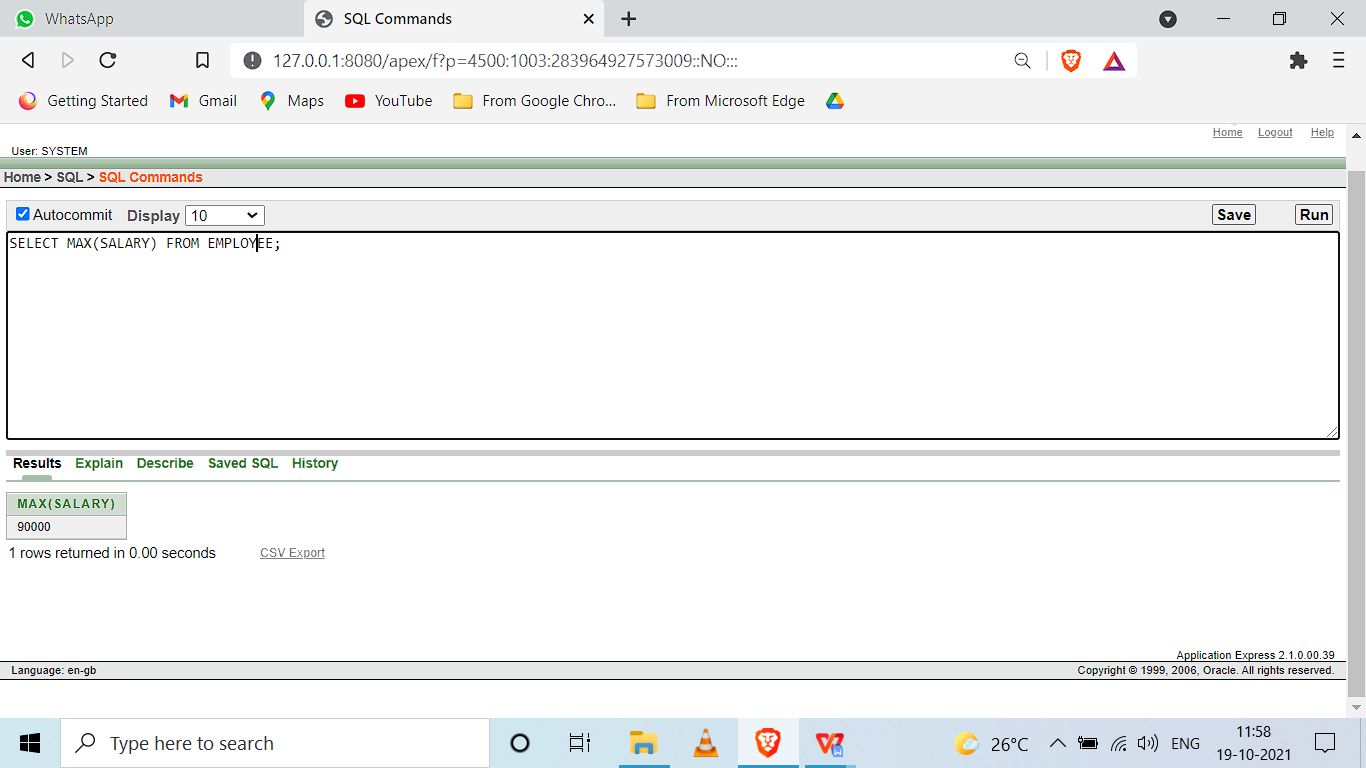


1. For each department display the minimum and maximum employee salaries

SELECT MIN(SALARY) FROM EMPLOYEE;

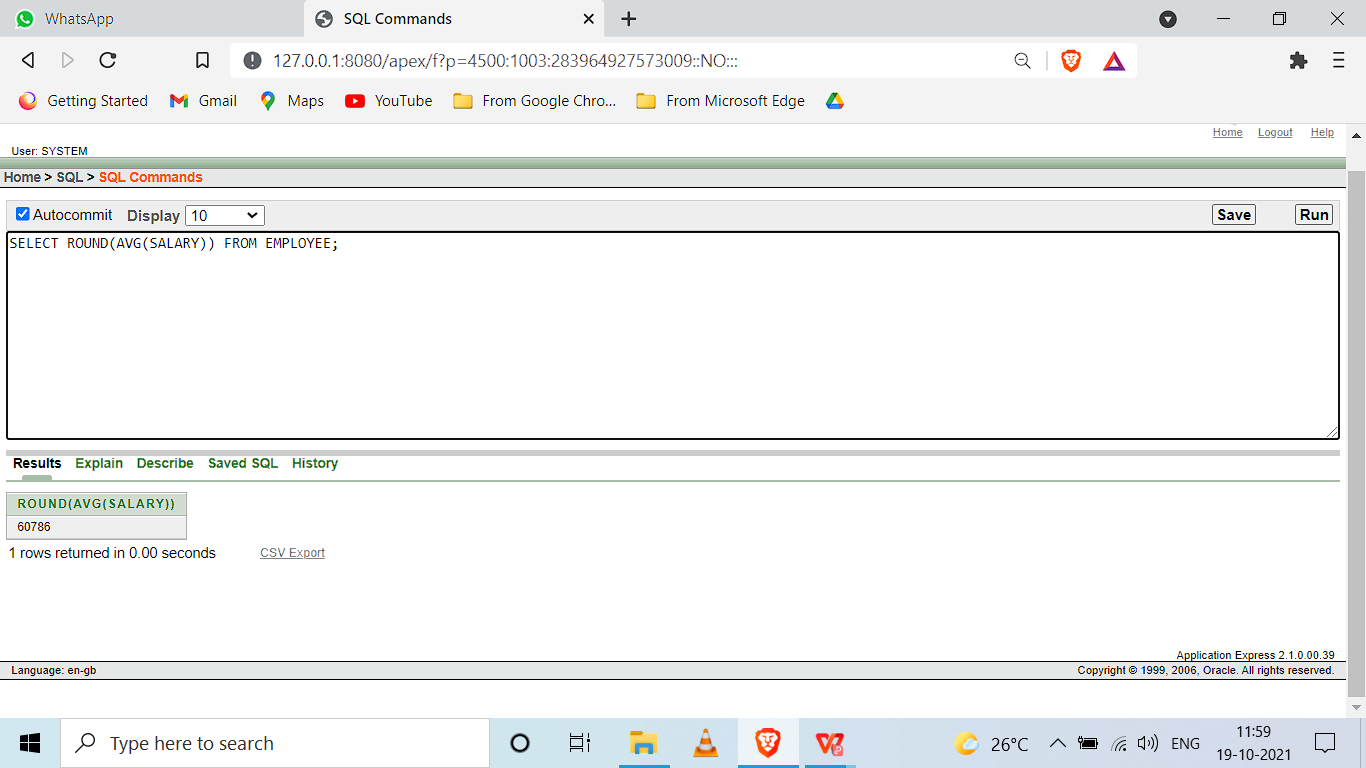


SELECT MAX(SALARY) FROM EMPLOYEE;



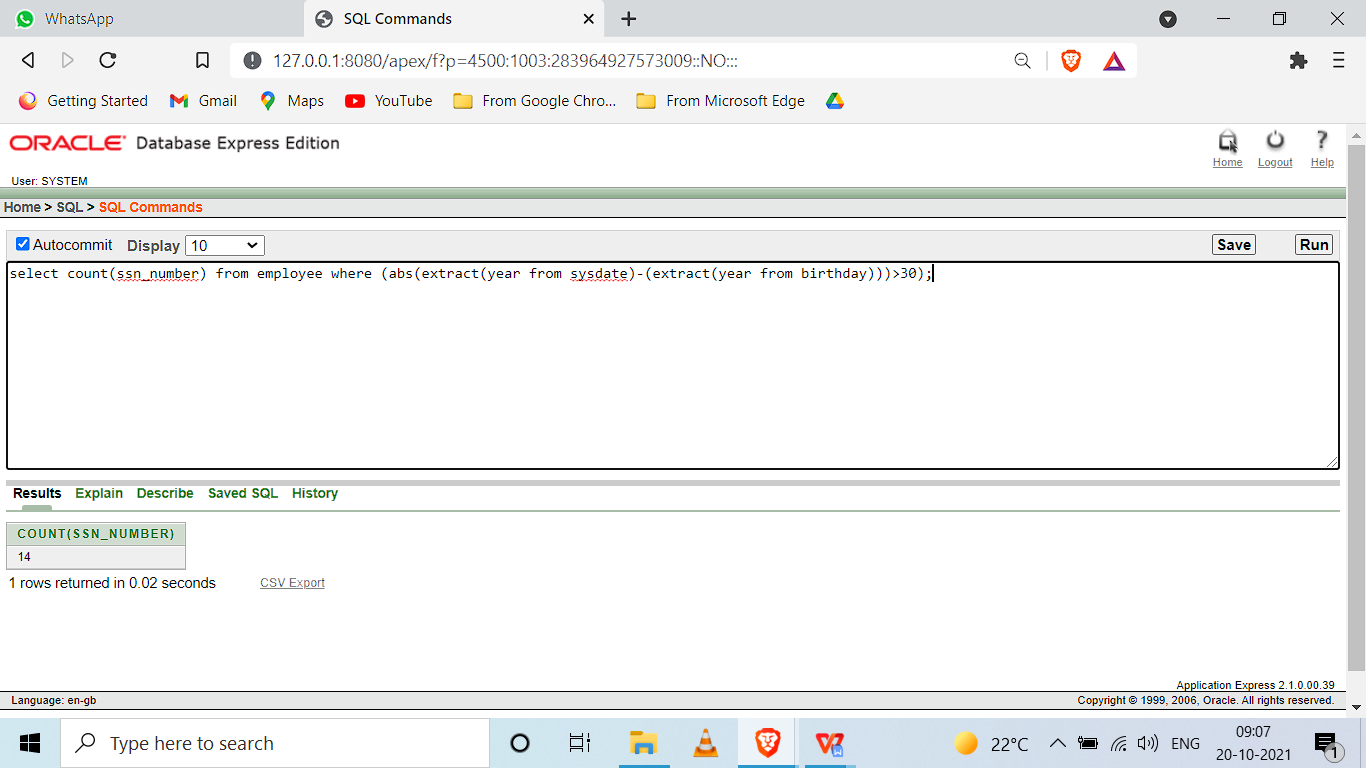
1. Print the average annual salary.

SELECT ROUND(AVG(SALARY)) FROM EMPLOYEE;



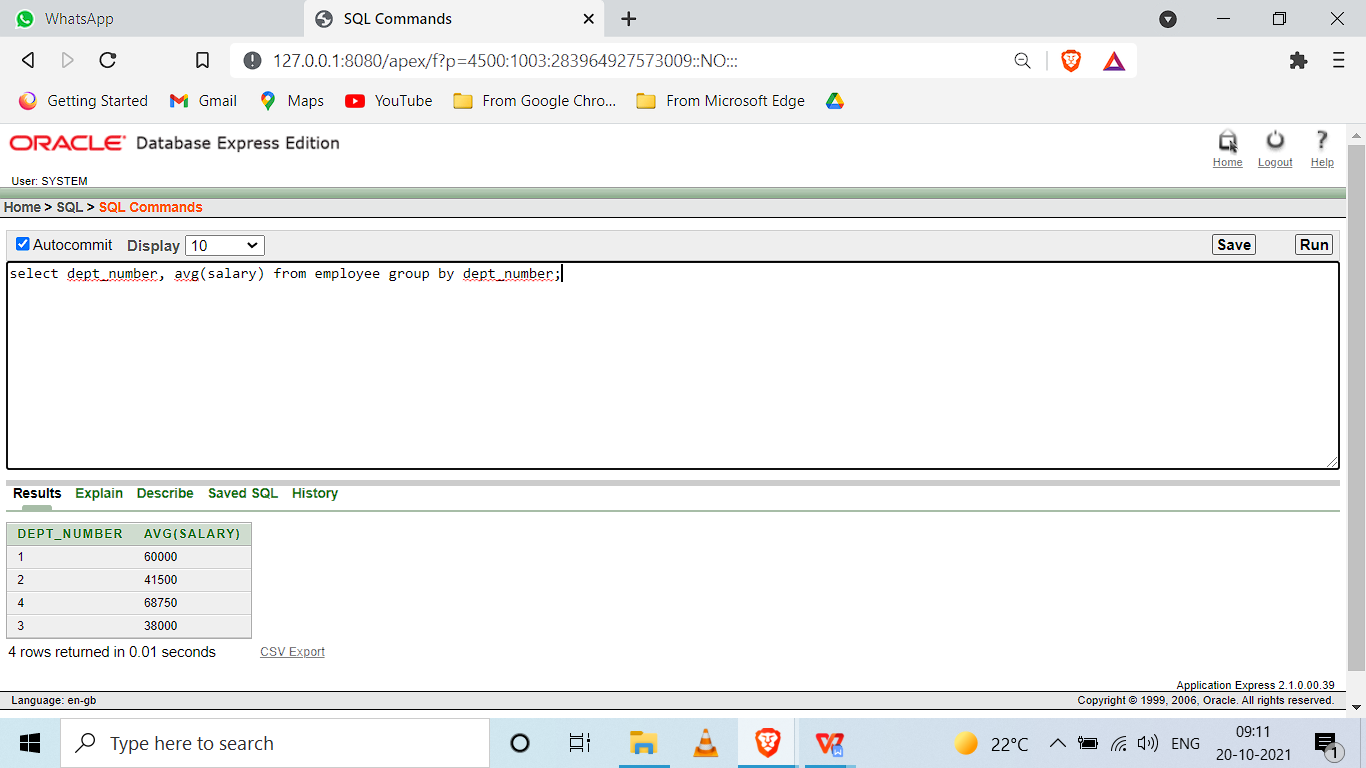
1. Count the number of employees over 30 age

select count(ssn\_number) from employee where (abs(extract(year from sysdate)-(extract(year from birthday)))>30);



1. Print the Department name and average salary of each department

select dept\_number, avg(salary) from employee group by dept\_number;



1. Display the department name which contains more than 2 employees.

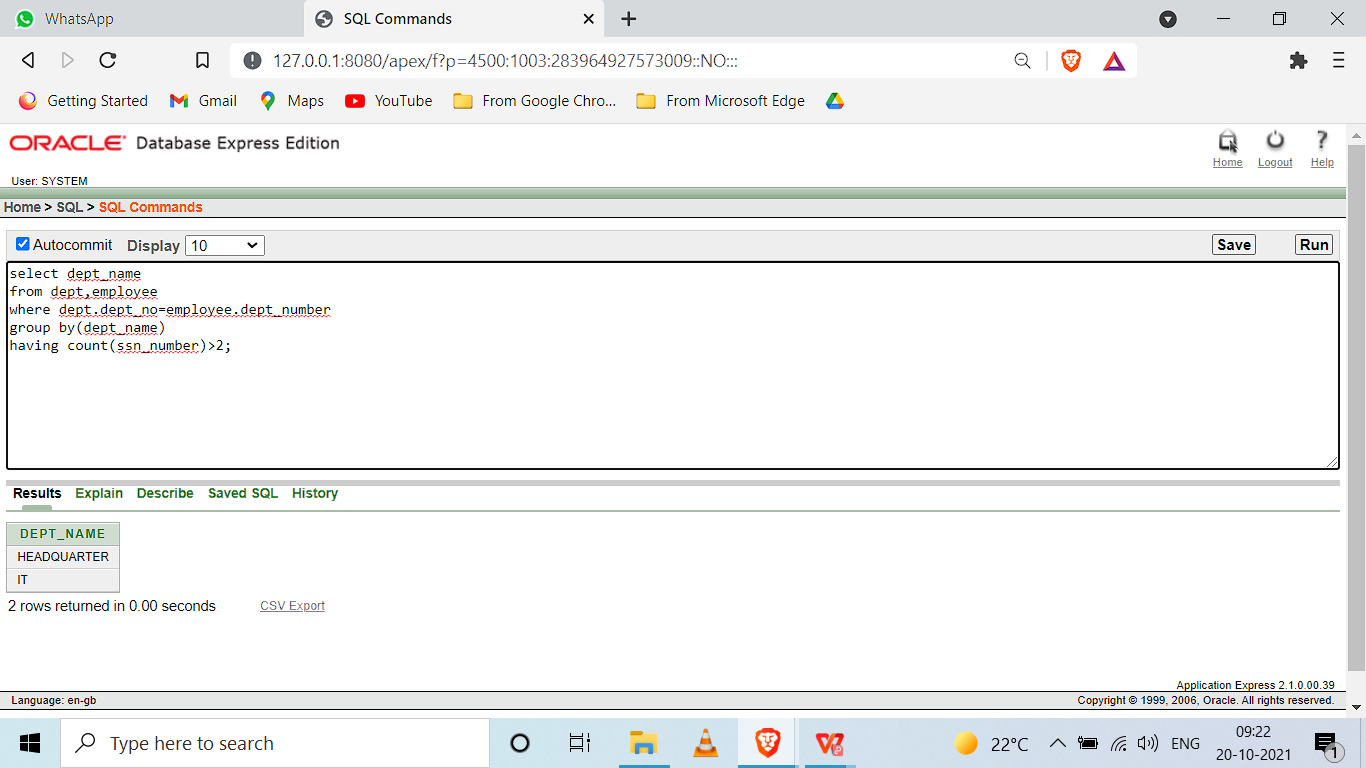
select dept\_name

from dept,employee

where dept.dept\_no=employee.dept\_number

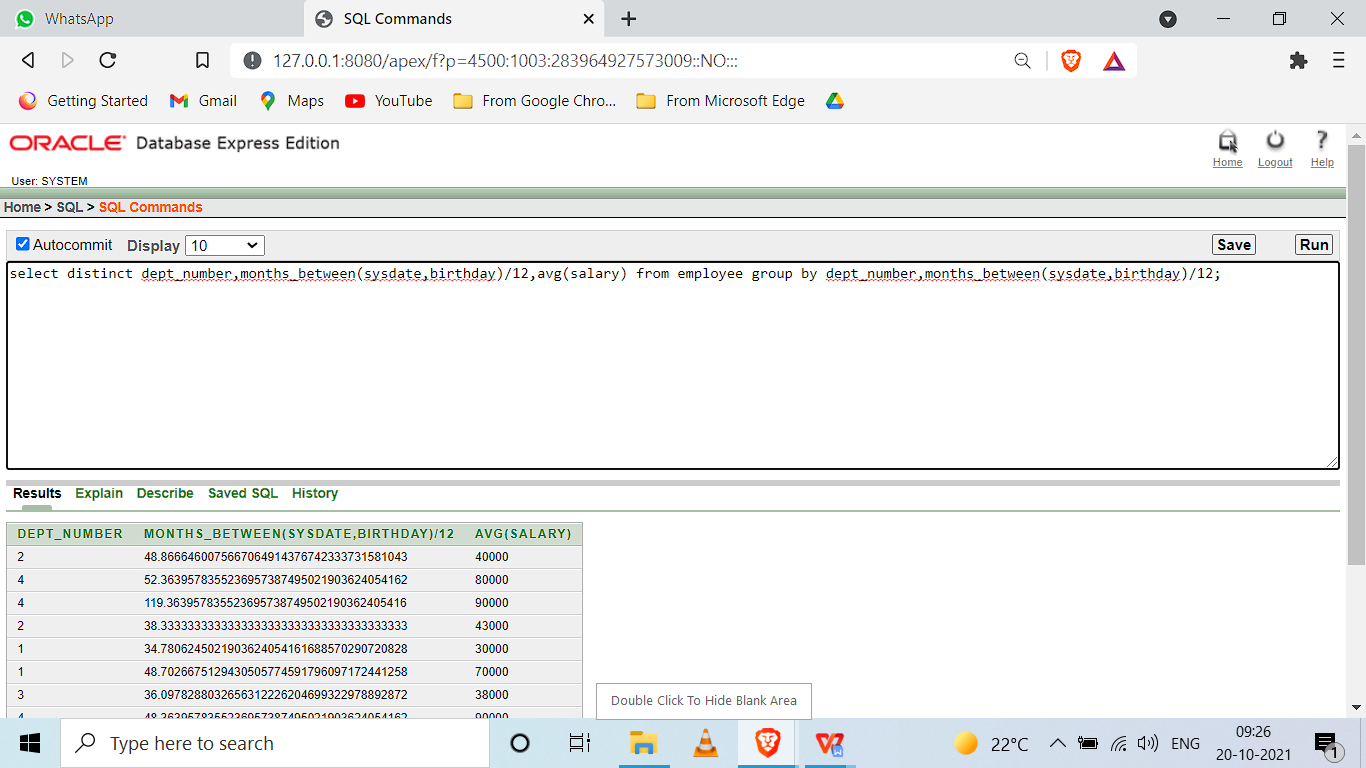
group by(dept\_name)

having count(ssn\_number)>2;



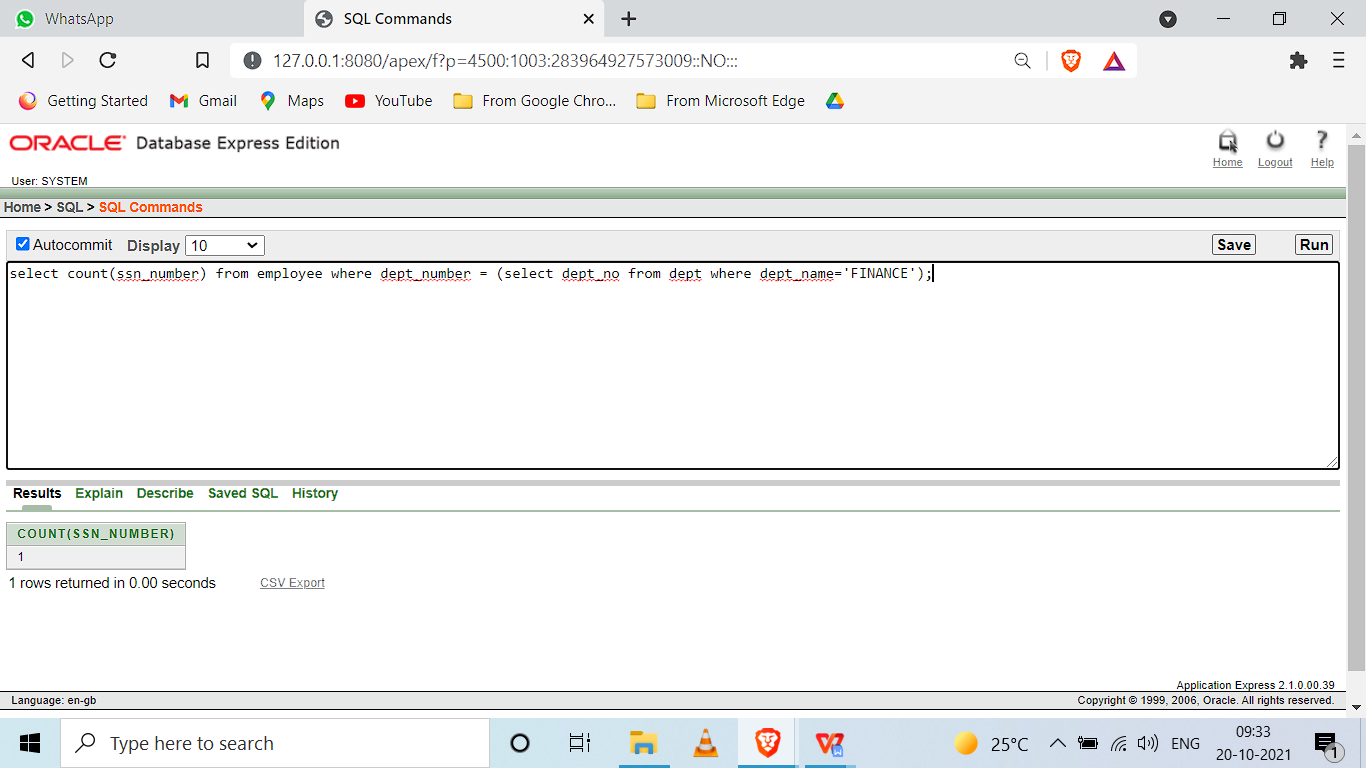
1. Calculate the average salary of employees by department and age

select distinct dept\_number,months\_between(sysdate,birthday)/12,avg(salary) from employee group by dept\_number,months\_between(sysdate,birthday)/12;

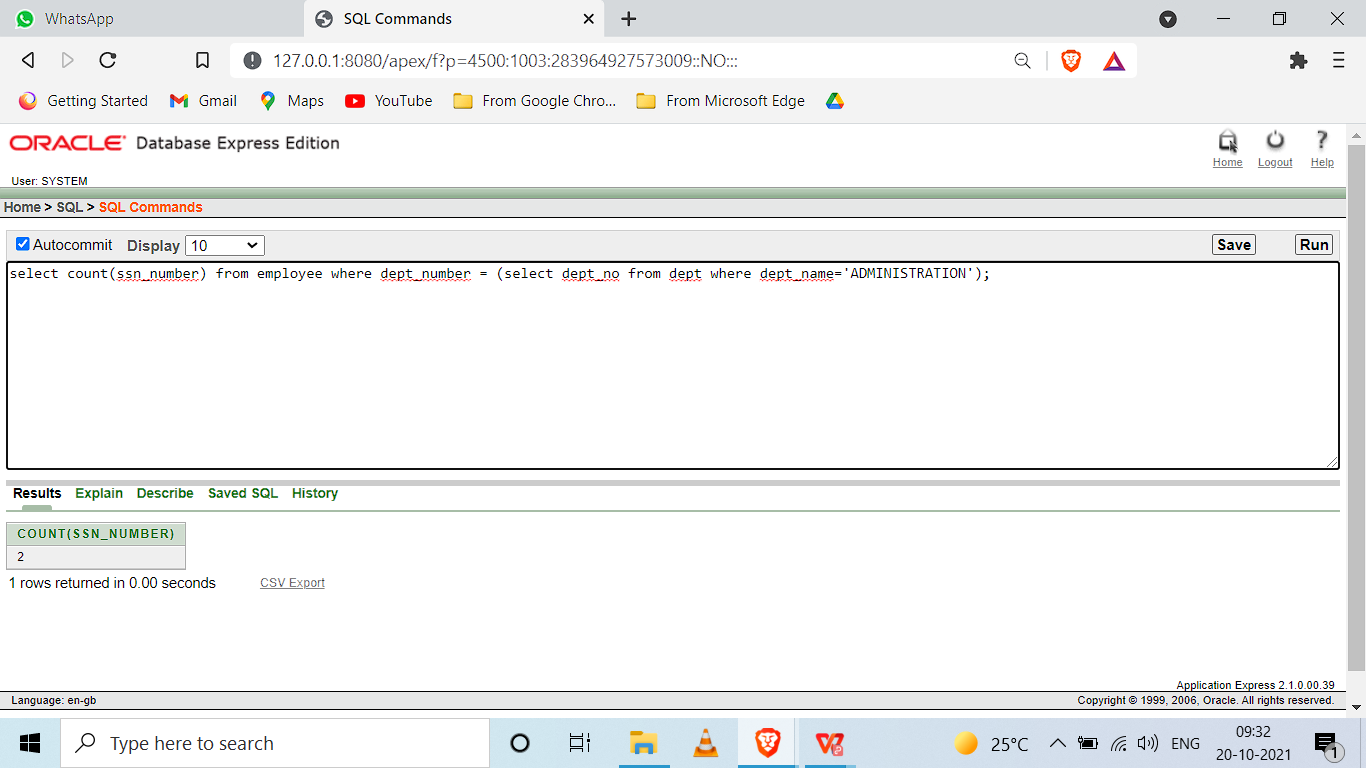


1. Count separately the number of employees in the finance and administration department.

select count(ssn\_number) from employee where dept\_number = (select dept\_no from dept where dept\_name='FINANCE');



select count(ssn\_number) from employee where dept\_number = (select dept\_no from dept where dept\_name='ADMINISTRATION');



1. List out the employees based on their seniority.

select first\_name,last\_name,months\_between(sysdate,birthday)/12 from employee order by months\_between(sysdate,birthday)/12 desc;

