**Problem 1**: /\* Problem 1: Display last\_name, first\_name, and job\_id and the following calculated column from the employees table:

Multiply the salary by 18.273% which represents the default federal and state withholding. Round the result to two decimal places and name this calculated column Fed\_State\_Witholding. Filter by job\_id values of FI\_ACCOUNT and IT\_PROG. Order the resulting data set by job\_id and last\_name in ascending order.

\*/

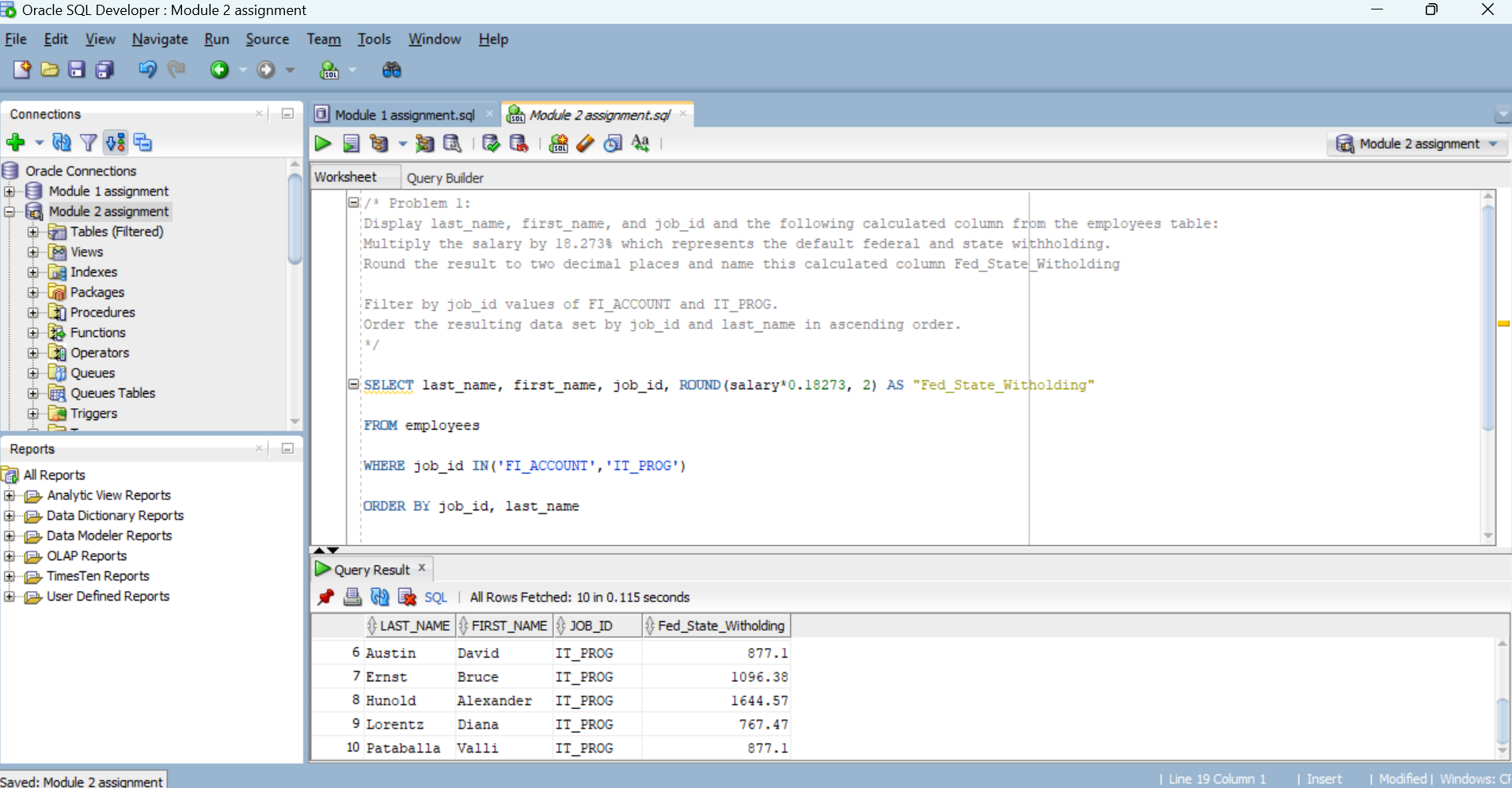
SELECT last\_name, first\_name, job\_id, ROUND(salary\*0.18273, 2) AS "Fed\_State\_Witholding"

FROM employees

WHERE job\_id IN('FI\_ACCOUNT','IT\_PROG')

ORDER BY job\_id, last\_name





/\***Problem 2**:

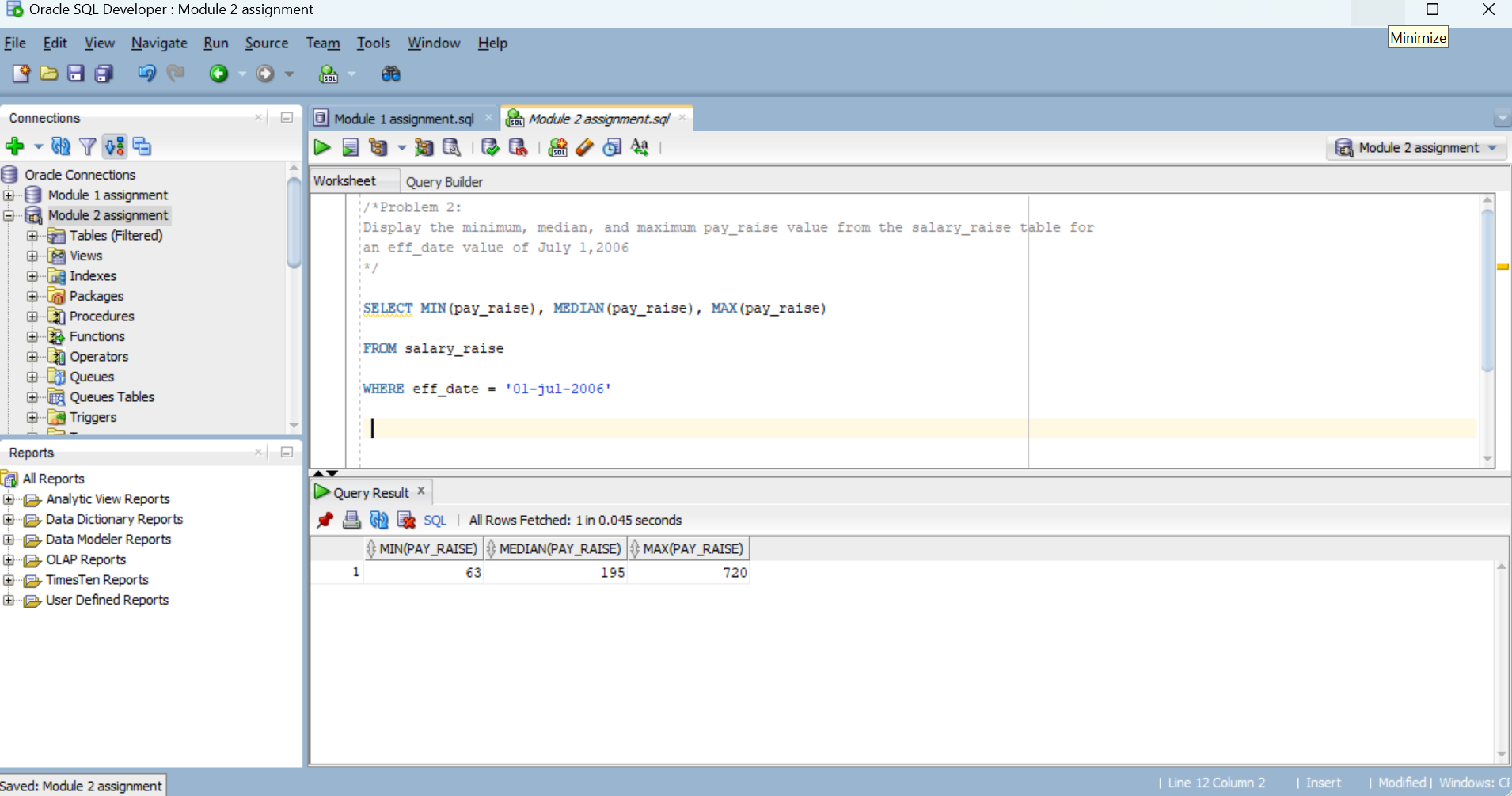
Display the minimum, median, and maximum pay\_raise value from the salary\_raise table for an eff\_date value of July 1, 2006

\*/

SELECT MIN(pay\_raise), MEDIAN(pay\_raise), MAX(pay\_raise)

FROM salary\_raise

WHERE eff\_date = '01-jul-2006'



**/\*Problem 3**:

Display location\_id, city, state\_province and the following derived column from the locations table:

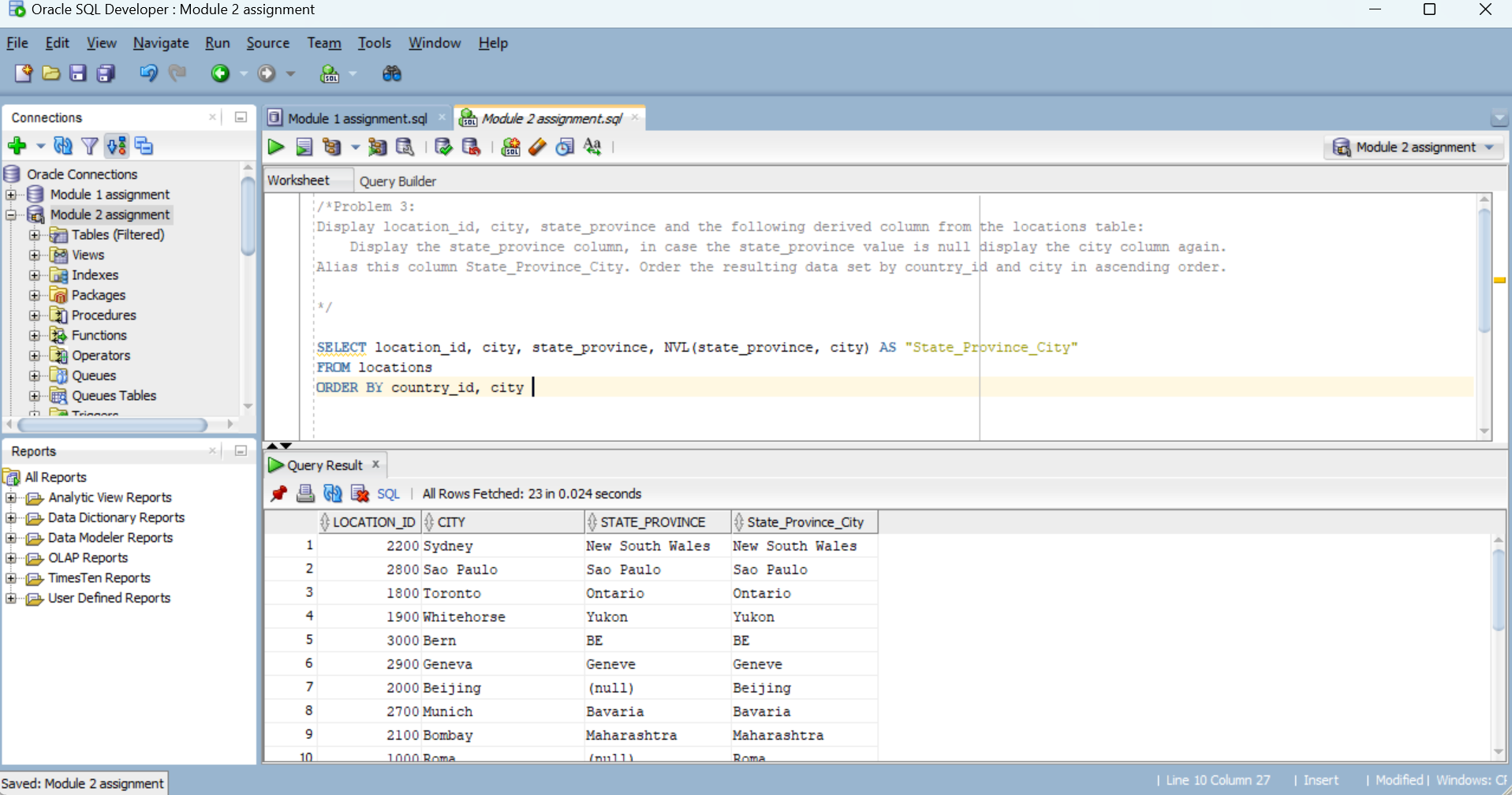
Display the state\_province column, in case the state\_province value is null display the city column again. Alias this column State\_Province\_City. Order the resulting data set by country\_id and city in ascending order.

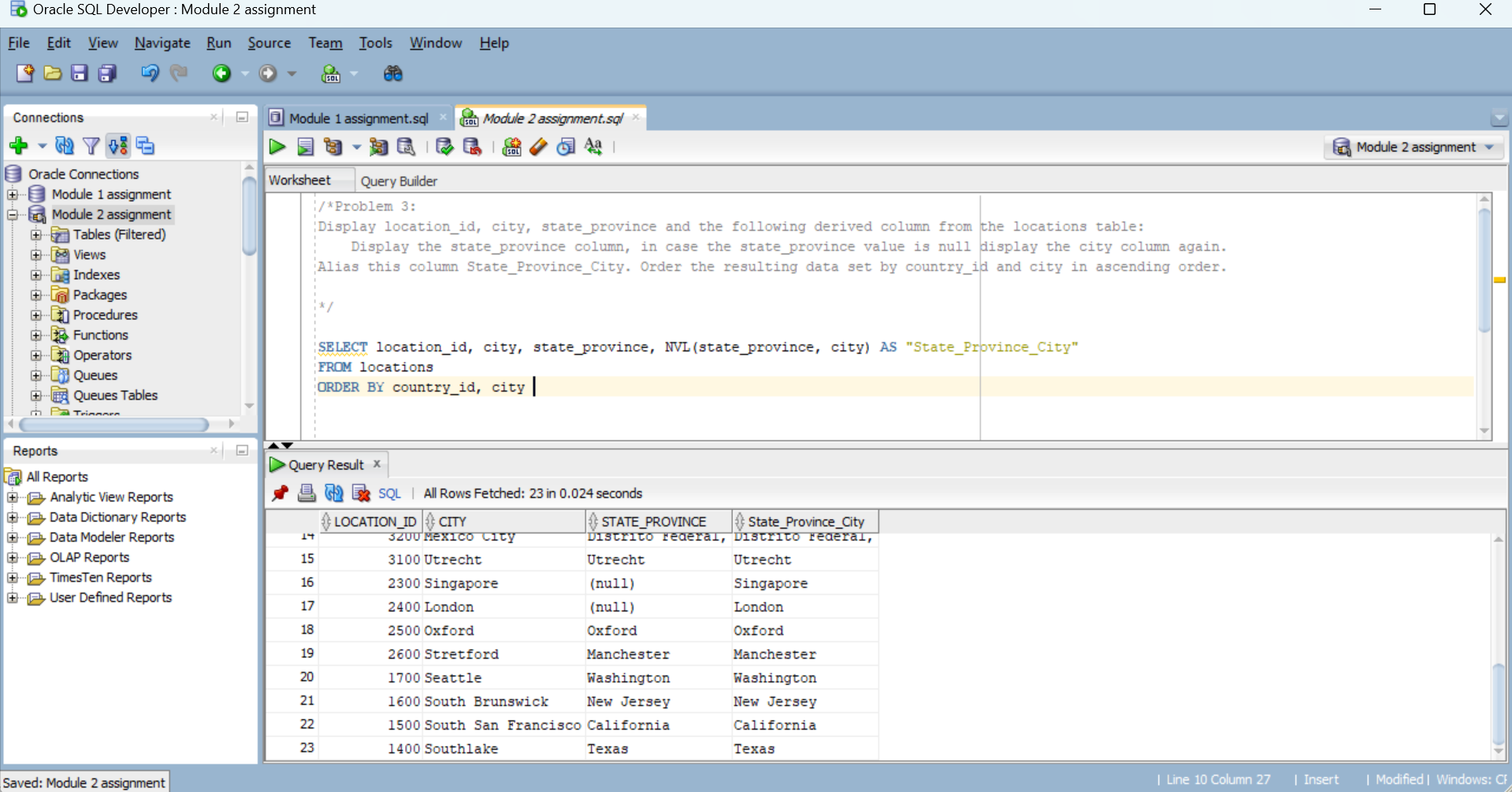
\*/

SELECT country\_id, location\_id, city, state\_province, NVL(state\_province, city) AS "State\_Province\_City"

FROM locations

ORDER BY country\_id, city





**/\*Problem 4**:  
Display last\_name, hire\_date, department\_id and the following derived columns from the emplyees table:  
 Round the hire\_date by month (still display the entire date) and alias this column round\_hire\_date  
 Truncate the hire\_date by month (still display the entire date) and alias this column trunc\_hire\_date  
Filter by department\_id 60 and sort it by last\_name.  
Based on the output, explain why for some hire\_date values the rounded and truncated dates are the same and for  
other hire\_date values they are different.

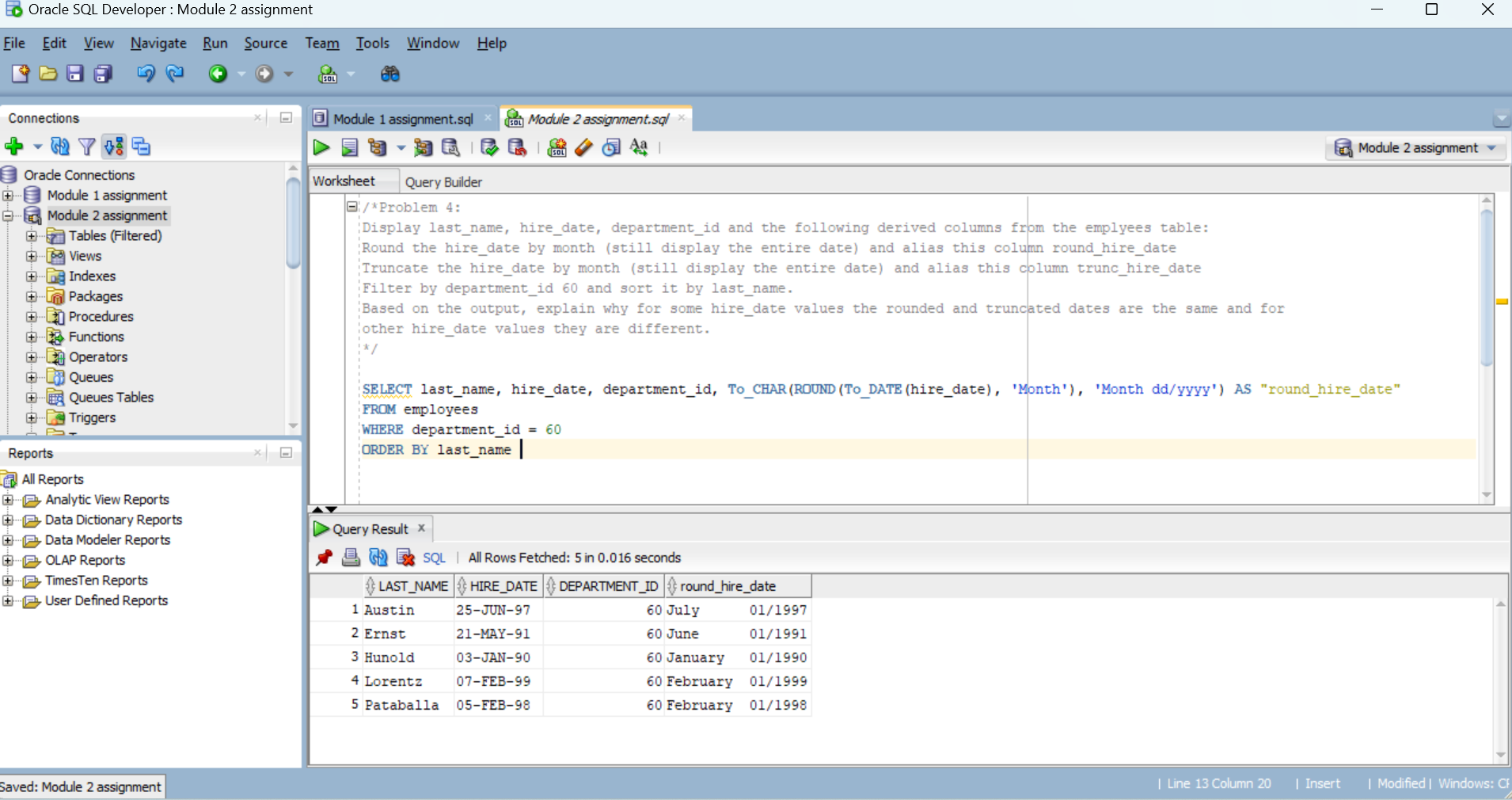
\*/

SELECT last\_name, hire\_date, department\_id, To\_CHAR(ROUND(To\_DATE(hire\_date), 'Month'), 'Month dd/yyyy') AS "round\_hire\_date"

FROM employees

WHERE department\_id = 60

ORDER BY last\_name

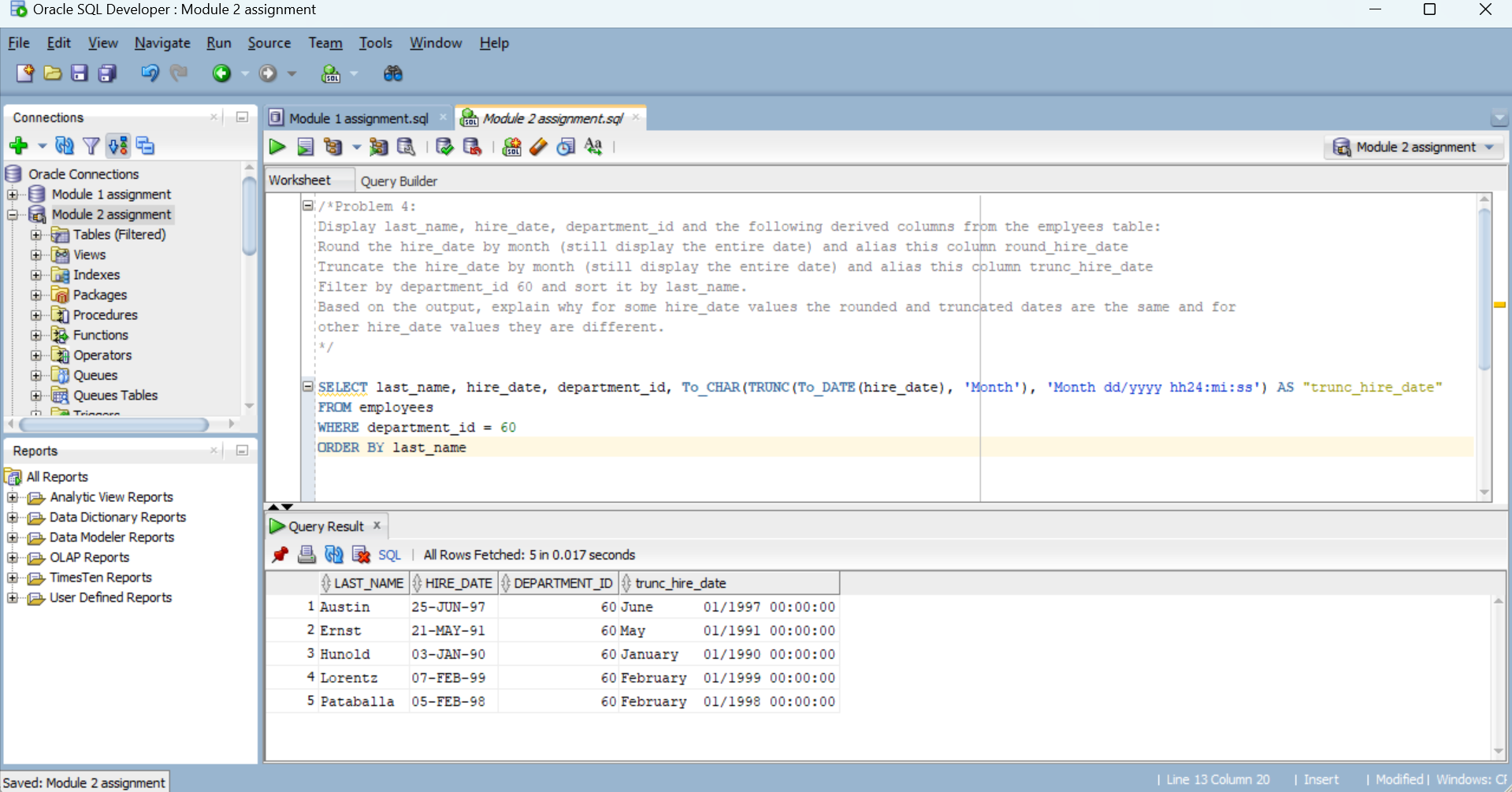


SELECT last\_name, hire\_date, department\_id, To\_CHAR(TRUNC(To\_DATE(hire\_date), 'Month'), 'Month dd/yyyy hh24:mi:ss') AS "trunc\_hire\_date"

FROM employees

WHERE department\_id = 60

ORDER BY last\_name



Explanation:

Since we are rounding date by month, the month of the date with the day before 15 would be the same month and the month of the date with the day after 15 would be the changed to next month. On the other hand, when we are truncating date by month, the month would be the same no matter what the day is.

As a result, 25-JUN-97 and 21-MAY-91 would be July 01/1997 and June 01/1991 after rounded by month and June 01/1997 00:00:00 and May 01/1991 00:00:00 after truncated by month. (hire\_date values are the different)

03-JAN-90, 07-FEB-99 and 05-FEB-98 would be January 01/1990, February 01/1999 and February 01/1998 after rounded by month and January 01/1990 00:00:00, February 01/1999 00:00:00 and February 01/1998 00:00:00 after truncated by month. (hire\_date values are the same)

/\* **Problem 5**:

Display hire\_date, job\_id and the following derived column based on first and last name from the employees table:  
 Concatenate the last\_name, a comma and blank space, and the first name together and alias this columnfull\_name. Convert the last name to upper case and the first name to init case.  
Limit the output by employees having a job\_id starting with ST (= STOCK).

Sort the resulting data set in descending order by hire\_date.

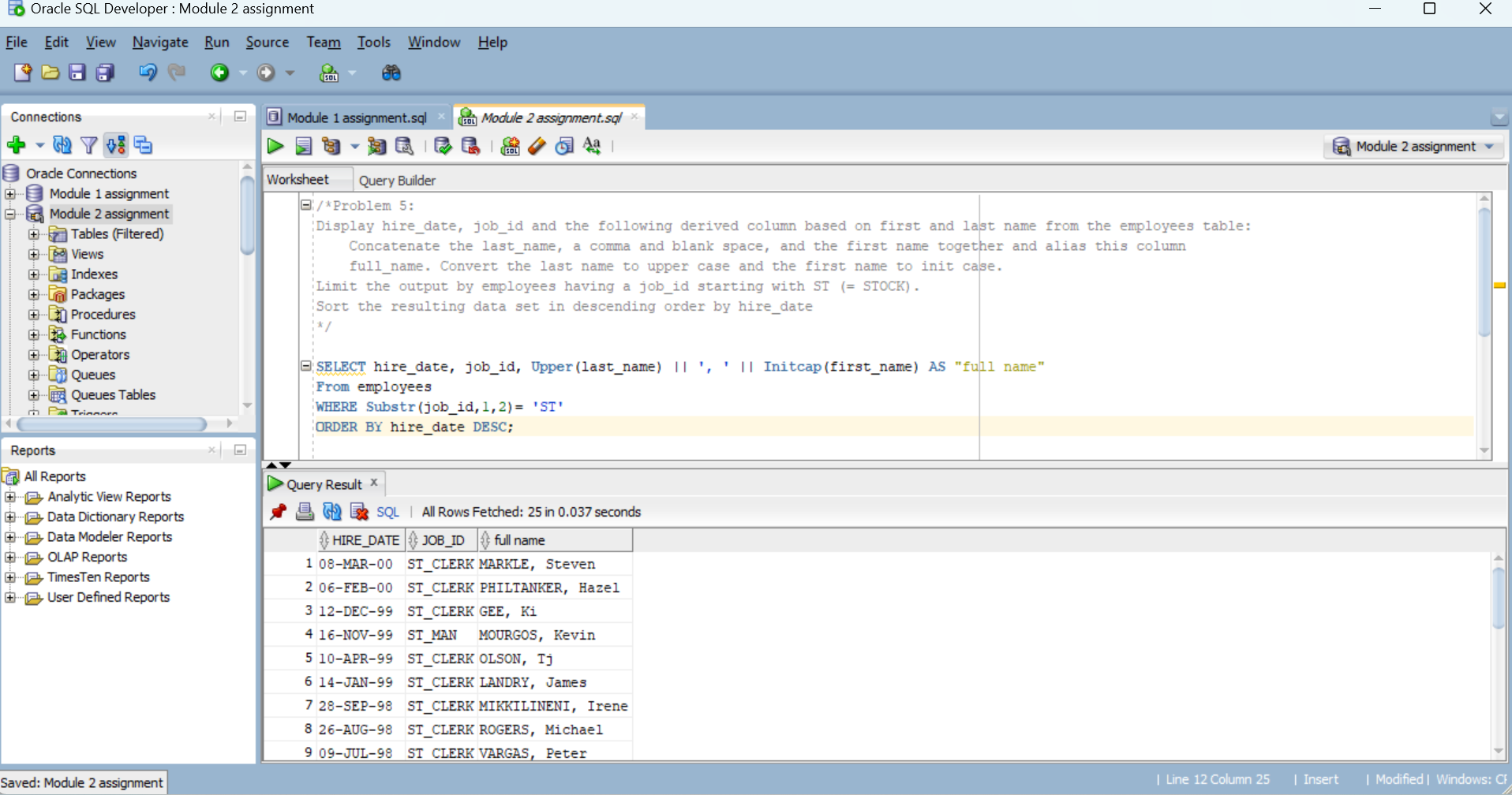
\*/

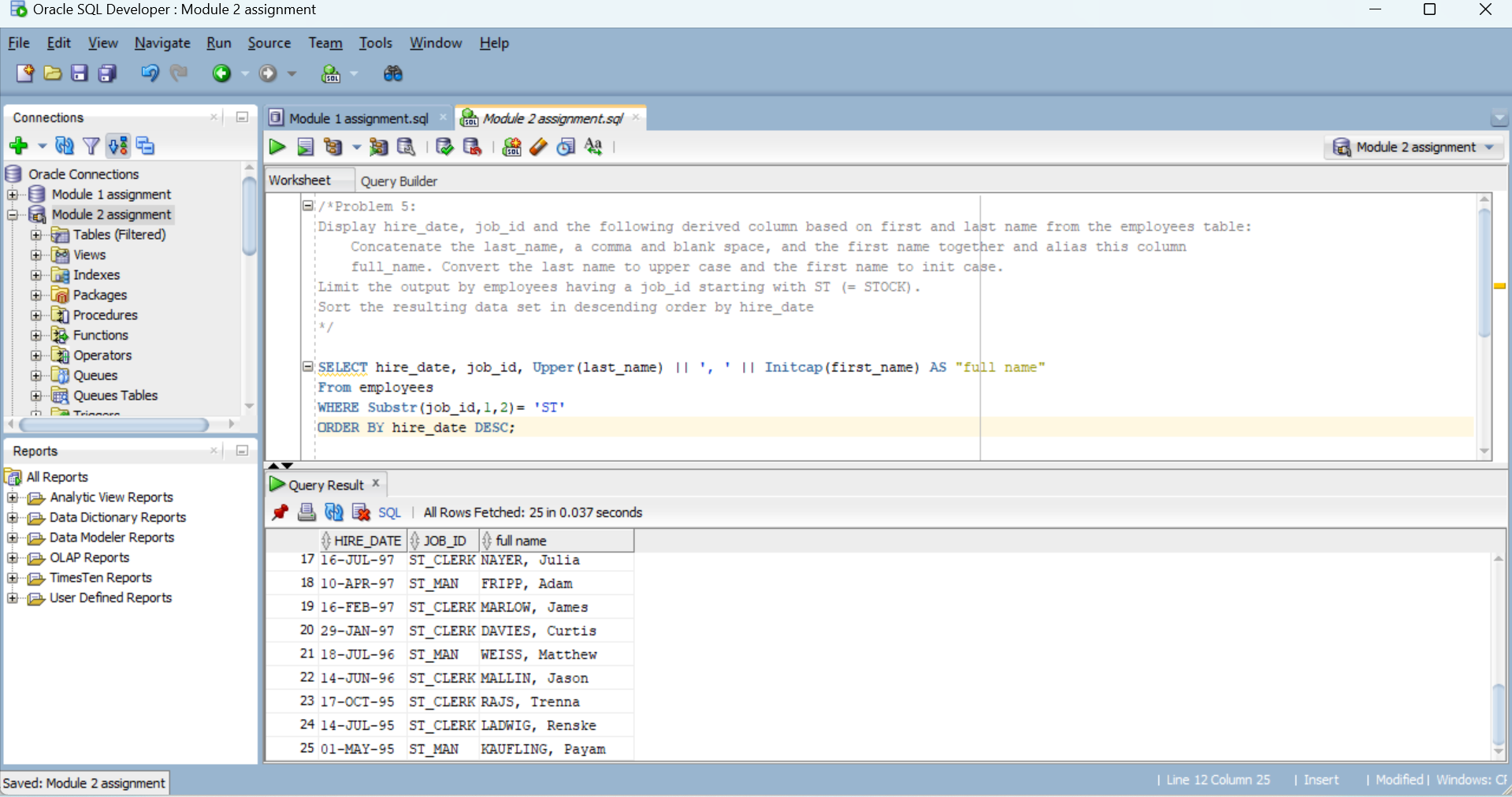
SELECT hire\_date, job\_id, Upper(last\_name) || ', ' || Initcap(first\_name) AS "full name"

From employees

WHERE Substr(job\_id,1,2)= 'ST'

ORDER BY hire\_date DESC;





/\***Problem 6**:

Display location\_id, city, country\_id and the following derived column from the locations table for location\_id values less

than 2000:

Display only the beginning street number values from the street\_address column and alias this column

street\_number. Make sure to remove any leading or trailing blank spaces from the street\_number expression.

Order the resulting set by country\_id and city.

To format the street\_number column use the following formatting command. Issue this command before issue the SQL

statement:

COLUMN street\_number FORMAT a20

\*/

COLUMN street\_number FORMAT a20

SELECT location\_id, city, country\_id, Trim(Substr(street\_address,1, Instr(street\_address, ' ',1,1)-1)) AS "street\_number"

From locations

WHERE location\_id <2000

ORDER BY country\_id, city

