BA700 Winter 2021

Project 1 (20%)

Due February 21, 10PM

Upload a single SQL Query Script containing all of the responses to the questions below. Be sure to comment to denote each question (i.e., /\*Question 1\*/)

Insert a screenshot of your result set panel and action panel for each of the following questions.

Example submission:

Graphical user interface, text, application

Description automatically generated

**Use employee\_master to complete the following:**

**Question 1 (2 points)**

Write a query that does the following:

1. Includes the columns Employee\_ID, Employee\_Name, Employee\_Hire\_Date, Salary, City, Department, and Job\_Title.
2. Filters the rows to include only employees from Australia (AU) who have salaries less than $100,000.

c. Sorts the data by ascending employee name.

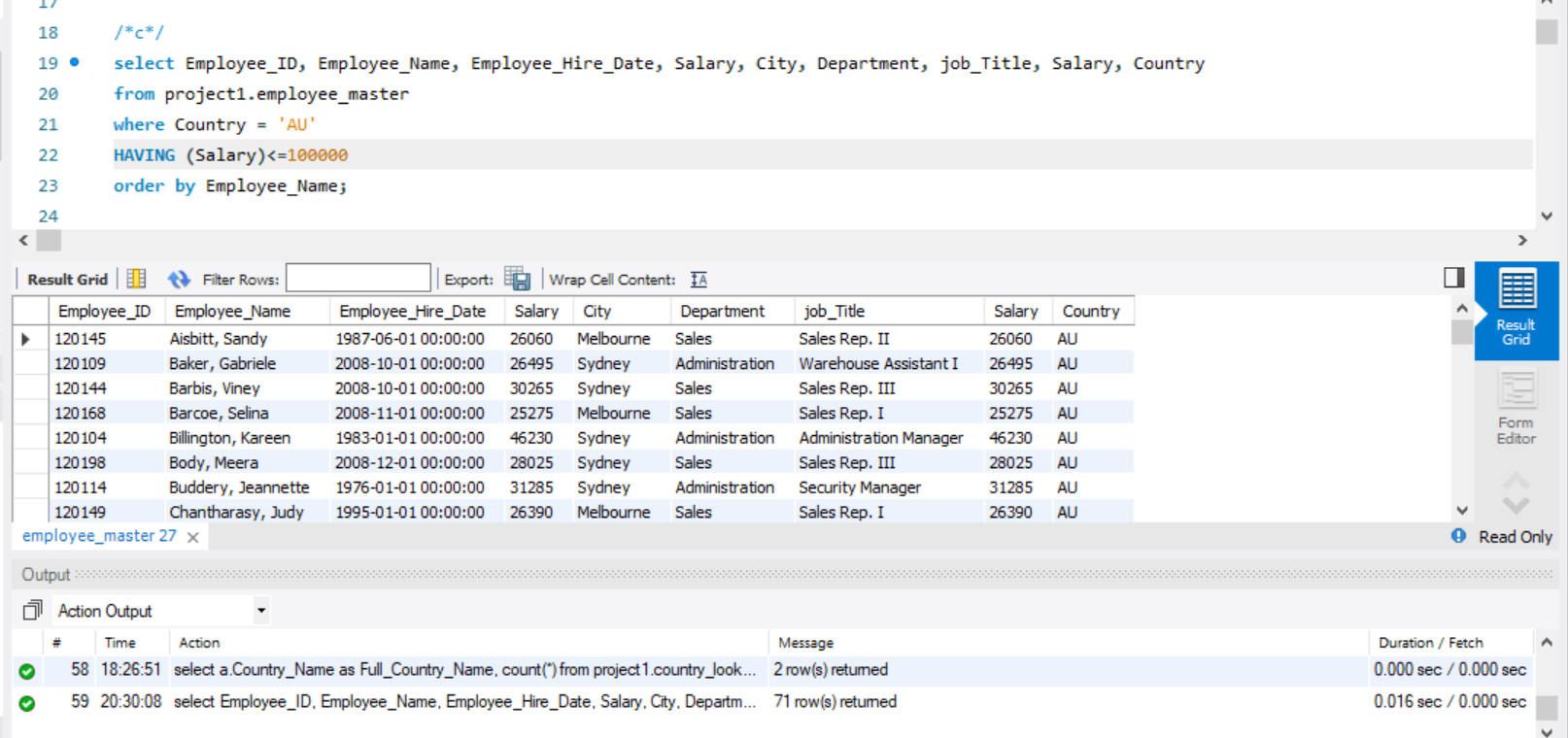
select Employee\_ID, Employee\_Name, Employee\_Hire\_Date, Salary, City, Department, job\_Title, Salary, Country

from project1.employee\_master

where Country = 'AU'

HAVING (Salary)<=100000

order by Employee\_Name;

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**Question 2 (2 points)**

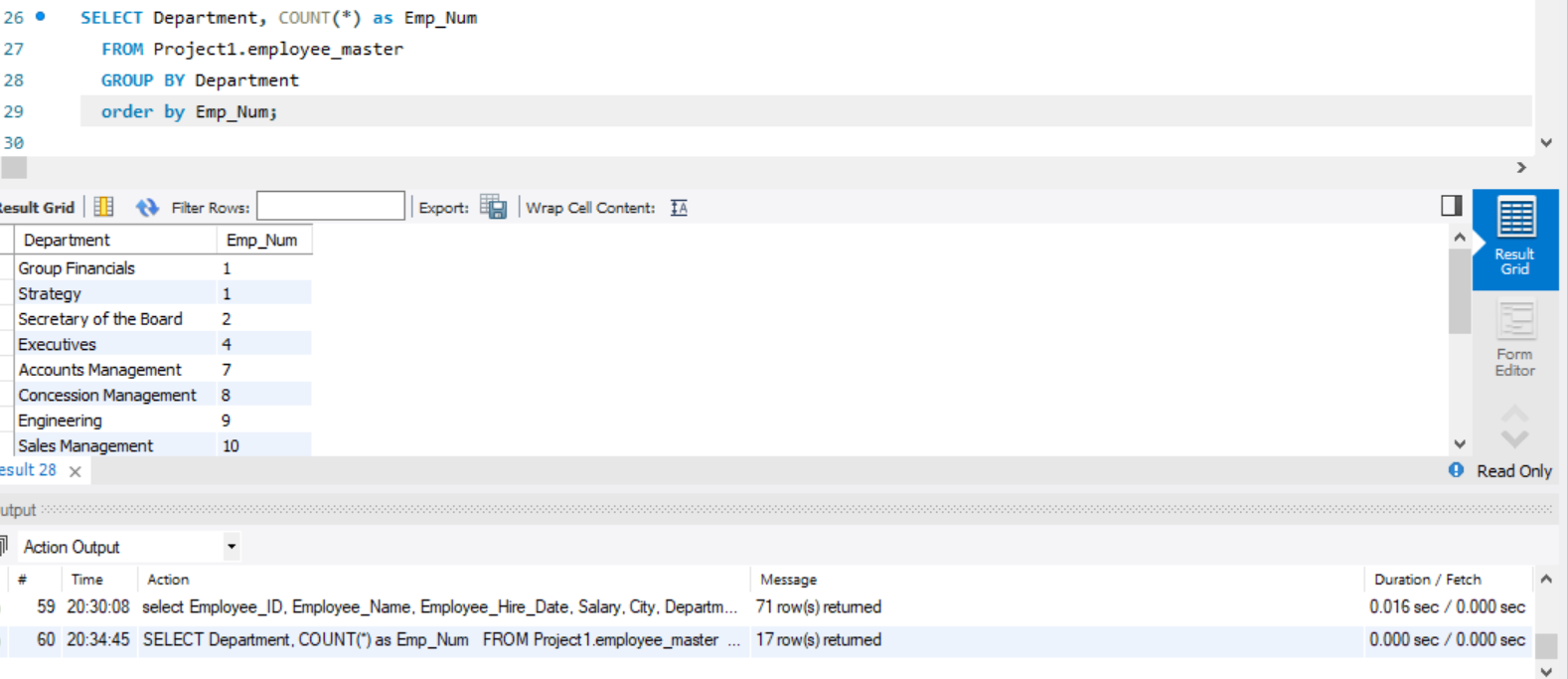
Generate a list of departments and the number of employees within each department. Sort by the number of employees within department.

SELECT Department, COUNT(\*) as Emp\_Num

FROM Project1.employee\_master

GROUP BY Department

order by Emp\_Num;



**Question 3 (2 points)**

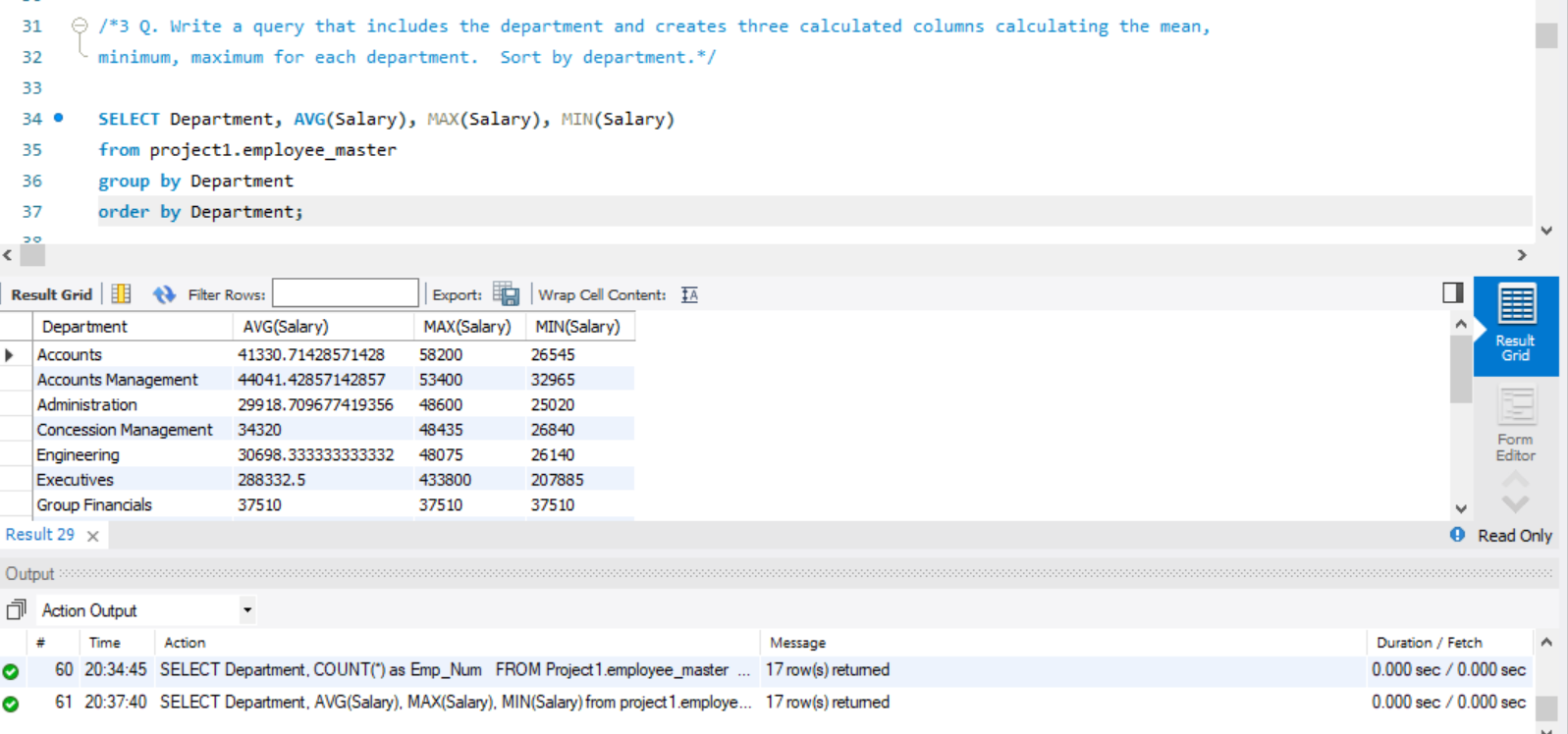
Write a query that includes the department and creates three calculated columns calculating the mean, minimum, maximum **Salary** for each department. Sort by department.

SELECT Department, AVG(Salary), MAX(Salary), MIN(Salary)

from project1.employee\_master

group by Department

order by Department;



**Question 4 (2 points)**

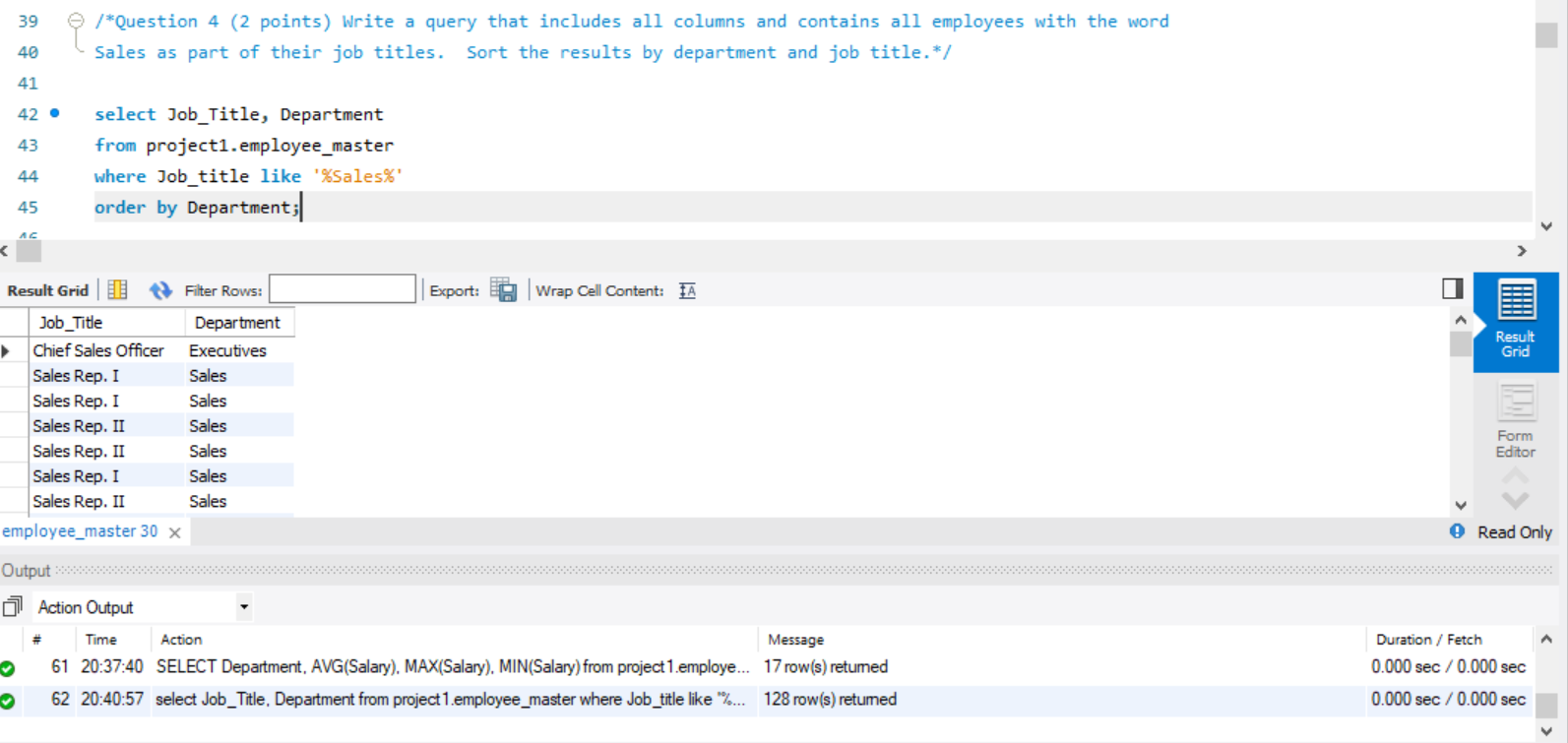
Write a query that includes all columns and contains all employees with the word Sales as part of their job titles. Sort the results by department and job title.

select Job\_Title, Department

from project1.employee\_master

where Job\_title like '%Sales%'

order by Department;



**Question 6 (5 points)**

Write a query that does the following:

a. IncludesDepartment and the appropriate calculated columns

b. Calculate the number of employees, the average salary, and the total salary for each department.

c. Filter the query to include only those departments with more than 10 employees.

d. Sort the data by decreasing department size, based on the number of employees.

SELECT

Department, COUNT(\*), AVG(Salary), SUM(Salary) total\_salary

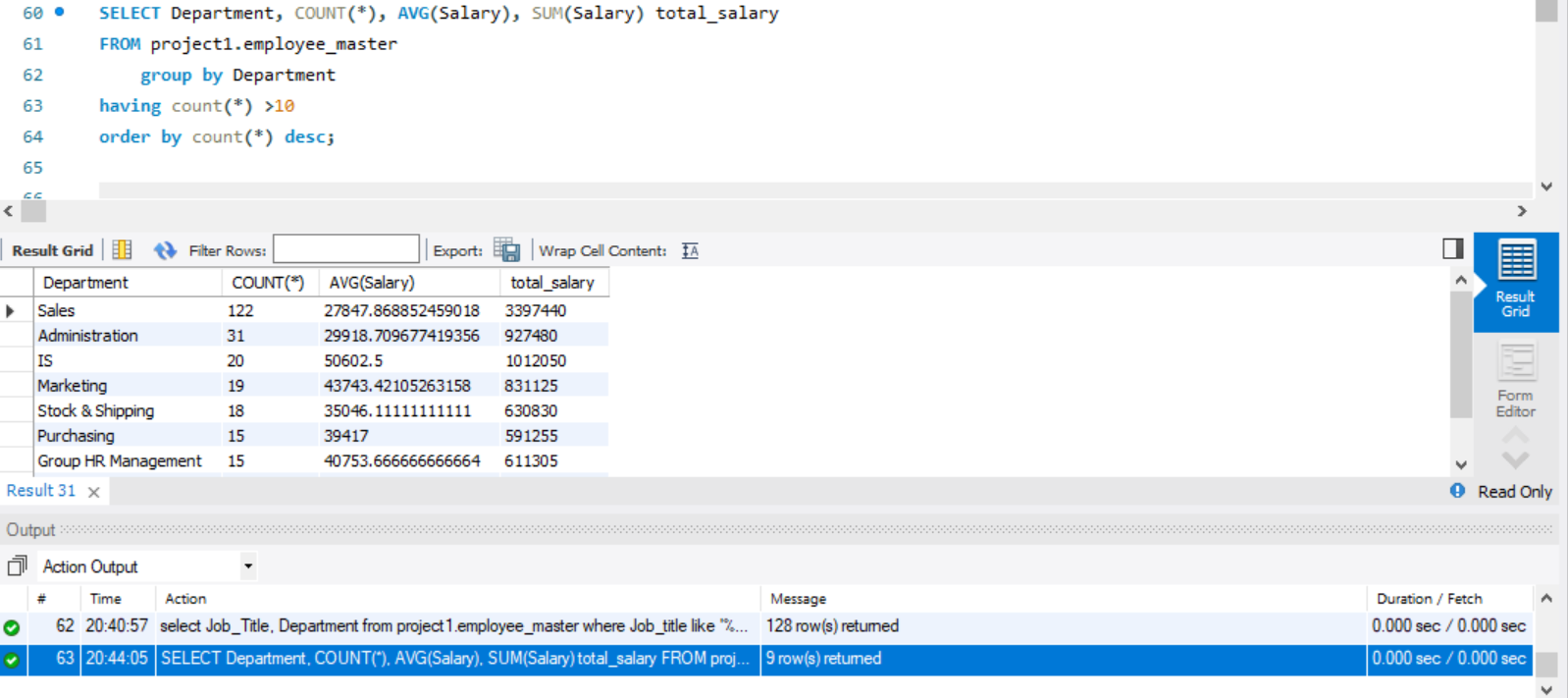
FROM

project1.employee\_master

group by Department

having count(\*) >10

order by count(\*) desc;

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**Use the employee\_addresses table to complete the following:**

**Question 7 (2 points)**

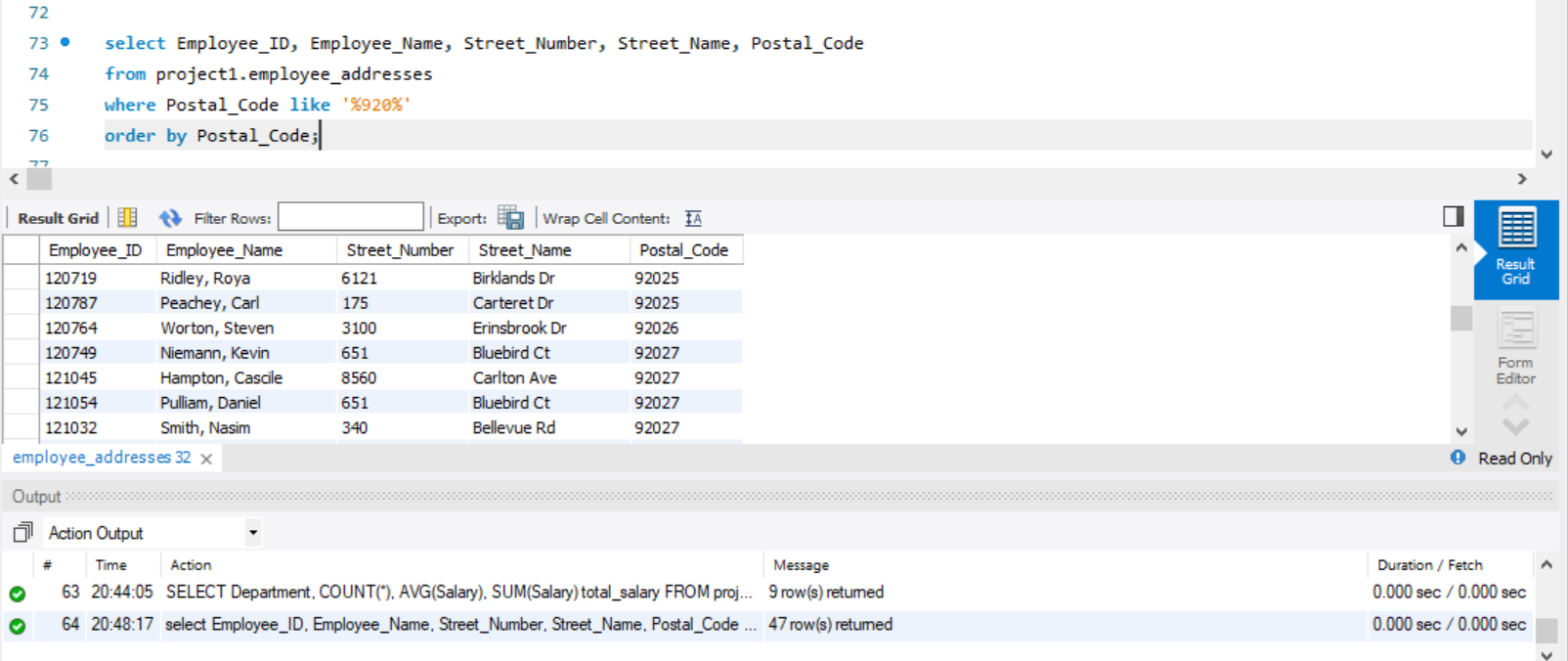
Write a query that includes Employee\_ID, Employee\_Name, Street\_Number, Street\_Name, and Postal\_Code. Only include only those employees who have a Postal\_Code value that begins with the characters 920.Order the output table in ascending postal code order.

select Employee\_ID, Employee\_Name, Street\_Number, Street\_Name, Postal\_Code

from project1.employee\_addresses

where Postal\_Code like '%920%'

order by Postal\_Code;

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**Use the employee\_payroll table to complete the following:**

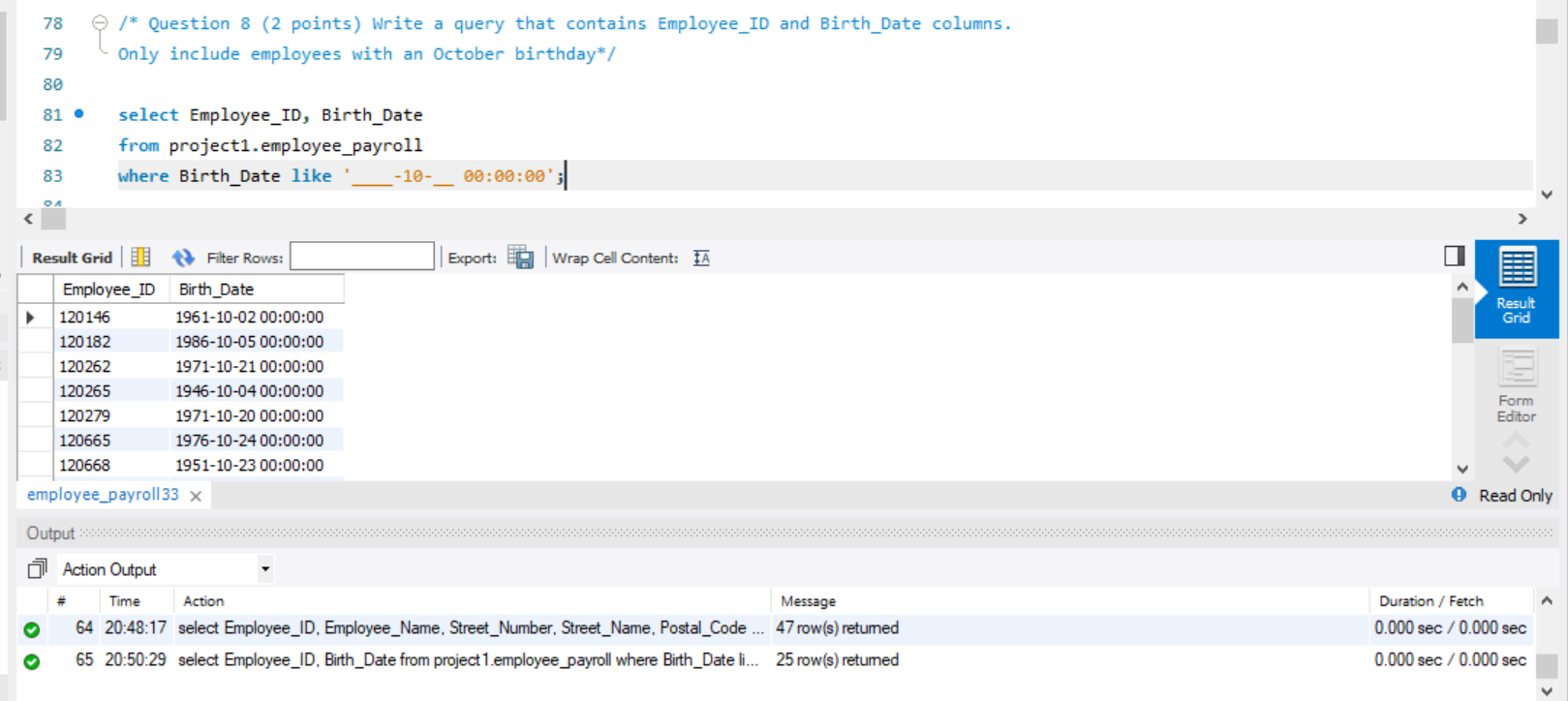
**Question 8 (2 points)**

Write a query that containsEmployee\_ID and Birth\_Date columns. Only include employees with an October birthday.

select Employee\_ID, Birth\_Date

from project1.employee\_payroll

where Birth\_Date like '\_\_\_\_-10-\_\_ 00:00:00';



**Question 9 (3 points)**

Write a query that does the following:

a. Includes Employee\_ID, Employee\_Gender, Salary, Birth\_Date, and Employee\_Hire\_Date.

b. Modify the properties of the Salary column to change the column name to Old\_Salary.

c. Include only active employees who have a missing value for Employee\_Term\_Date.

d. Create a new column named New\_Salary that is the current salary plus a 2% raise.

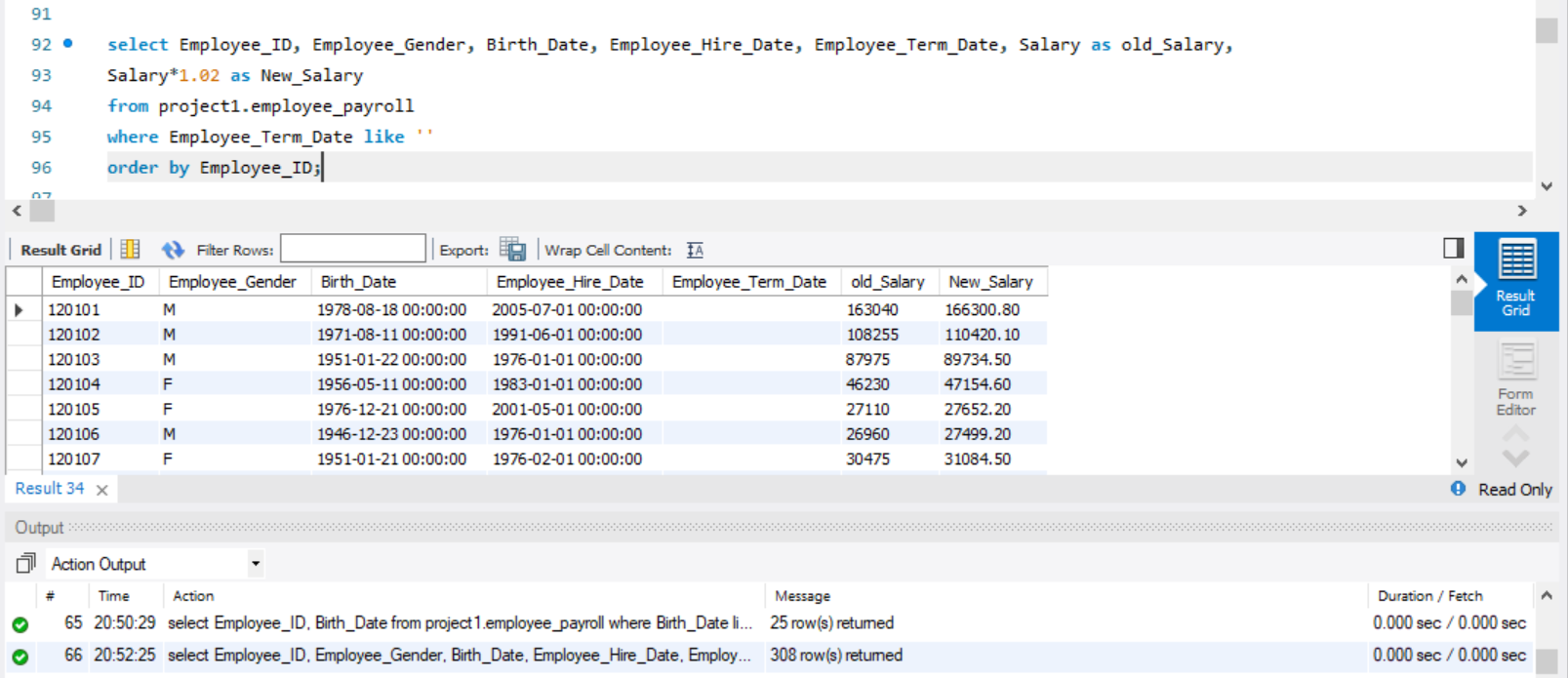
select Employee\_ID, Employee\_Gender, Birth\_Date, Employee\_Hire\_Date, Employee\_Term\_Date, Salary as old\_Salary,

Salary\*1.02 as New\_Salary

from project1.employee\_payroll

where Employee\_Term\_Date like ''

order by Employee\_ID;



**Question 10 (3 points)**

Write a query that does the following:

a. Includes Employee\_ID and Employee\_Hire\_Date.

b. Onlyincludes employees without a termination date.

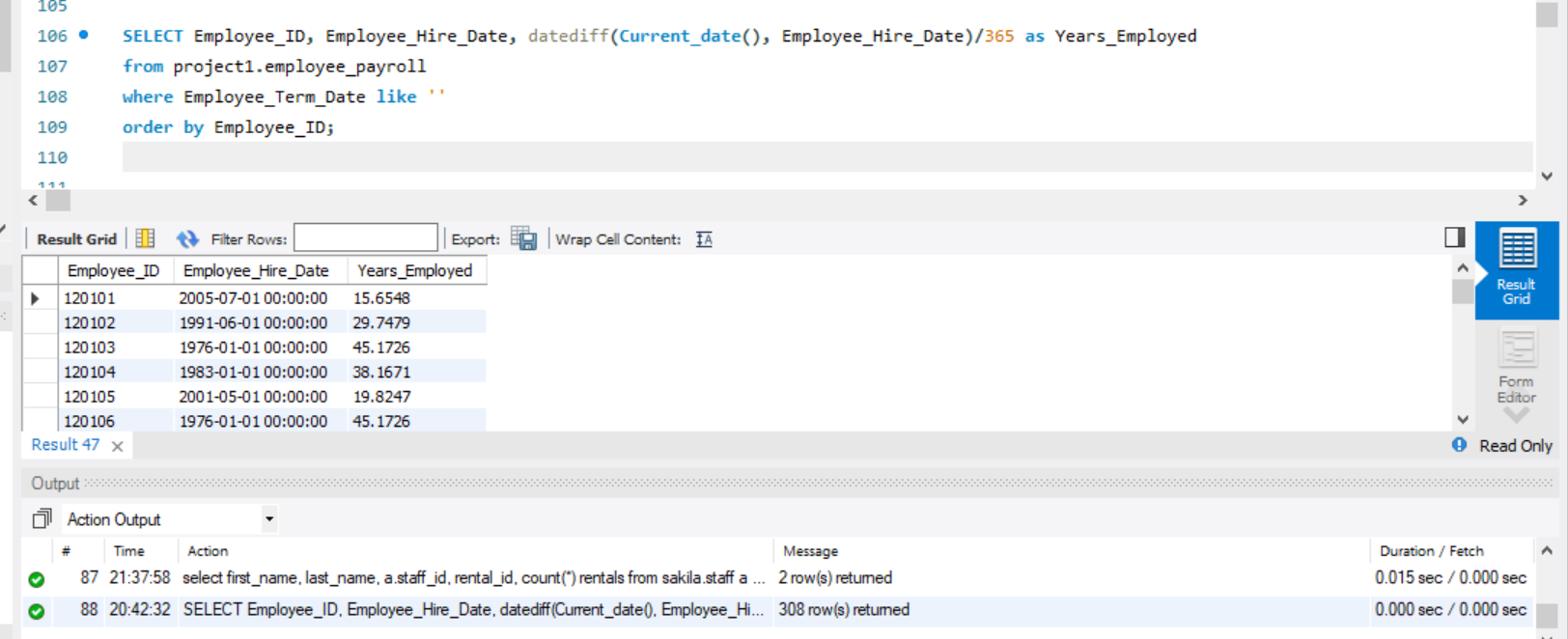
c. Creates a new column named Years\_Employed that calculates the number of years that each employee has worked at the company, based on the hire date and today's date.

SELECT Employee\_ID, Employee\_Hire\_Date, datediff(Current\_date(), Employee\_Hire\_Date)/365

from project1.employee\_payroll

where Employee\_Term\_Date like ''

order by Employee\_ID;



**Complete the following two join queries:**

**Question 11 (5 points)**

Join employee\_payroll and employee\_addresses on the Employee\_ID column.

a. Include the following columns Employee\_ID, Employee\_Name, Employee\_Gender, Birth\_Date, Salary, Street\_Number, Street\_Name, City, State,

and Country.

b. Create a new column named Bonus that represents 1.5% of the Salary column.

c. Include only active employees in the output table, or those that do not have a value for Employee\_Term\_Date.

SELECT a.Employee\_ID, a.Employee\_Name, a.Street\_Number, a.Street\_Name, a.City, a.State, a.Country, b.Employee\_Gender, b.Salary, b.Birth\_Date,

salary\*1.5/100 as new\_salary

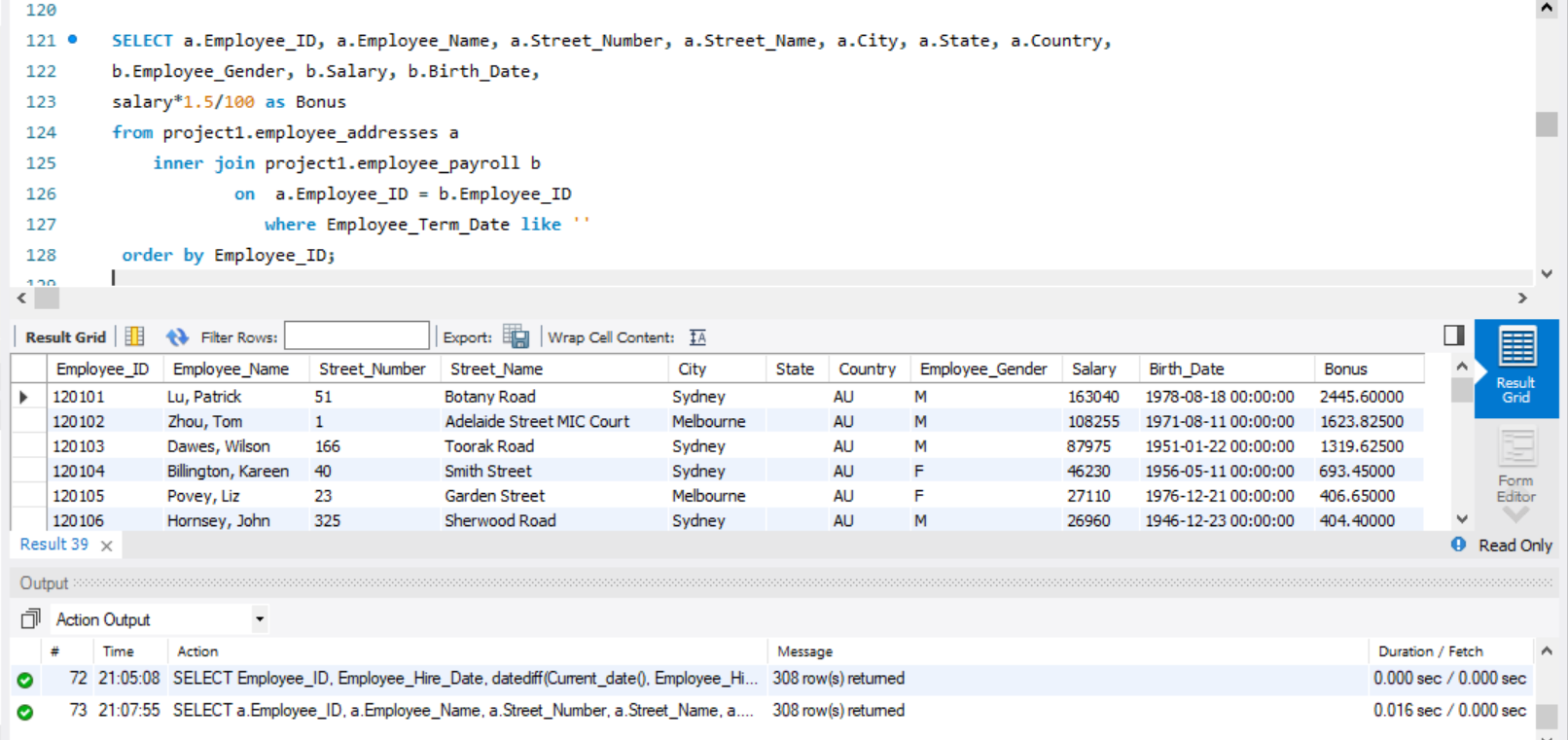
from project1.employee\_addresses a

inner join project1.employee\_payroll b

on a.Employee\_ID = b.Employee\_ID

where Employee\_Term\_Date like ''

order by Employee\_ID;



**Question 12 (4 points)**

Create a new query that adds country\_lookupto the above join.

a. Join country\_lookup and employee\_addresses by the common column. Note, The common column might be named differently in the two tables.

b. Remove the country column from the above query replace it with a column representing the full country name in the country\_lookup table.

select a.Country\_Name as Full\_Country\_Name, Country\_Key

from project1.country\_lookup a

inner join project1.employee\_addresses b

on a.Country\_Key = b.Country

group by Country\_Name;

