ASSIGNMENT 5: SQL QUERYING

Akhilesh Keerthi

GID: G01353729

Data Analytics Engineering, MS

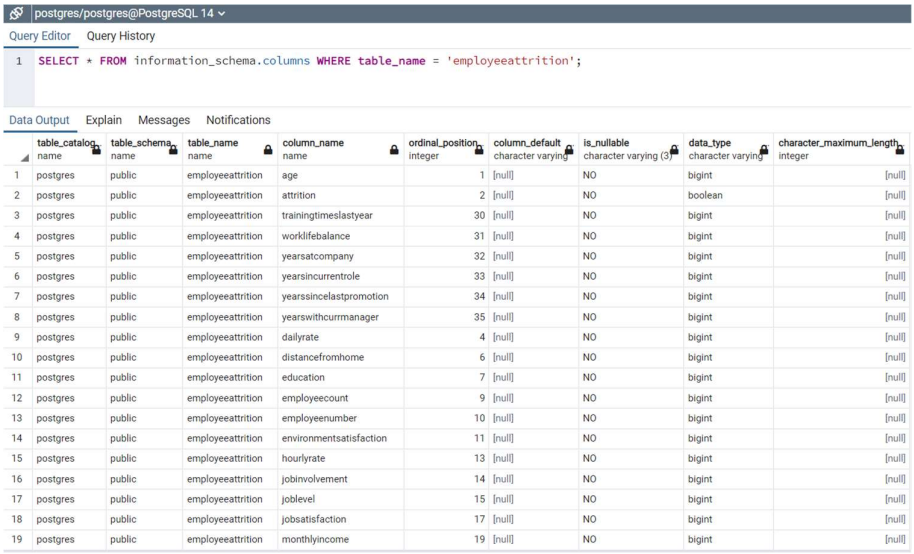
AIT-580 Analytics: Big Data to Information

Prof. Myeong Lee

Feb 24, 2022

SQL QUERYING

1. Write an SQL query to create table for given dataset. Use the SQL command below to display the characteristics of the table.
   Reasoning: -
   SELECT * FROM information_schema.columns WHERE table_name = 'employeeattrition';



postgres/postgres@PostgreSQL 14

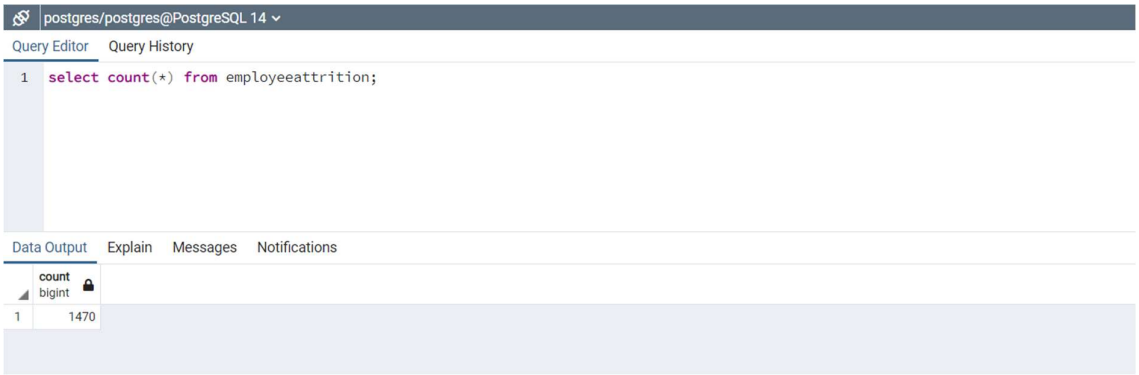
Query Editor | Query History

```
SELECT * FROM information_schema.columns WHERE table_name = 'employeeattrition';
```

Data Output | Explain | Messages | Notifications

	table_catalog name	table_schema name	table_name name	column_name name	ordinal_position integer	column_default character varying	is_nullable character varying (3	data_type character varying	character_maximum_length integer
1	postgres	public	employeeattrition	age	1	[null]	NO	bigint	[null]
2	postgres	public	employeeattrition	attrition	2	[null]	NO	boolean	[null]
3	postgres	public	employeeattrition	trainingtimeslastyear	30	[null]	NO	bigint	[null]
4	postgres	public	employeeattrition	worklifebalance	31	[null]	NO	bigint	[null]
5	postgres	public	employeeattrition	yearsatcompany	32	[null]	NO	bigint	[null]
6	postgres	public	employeeattrition	yearsincurrentrole	33	[null]	NO	bigint	[null]
7	postgres	public	employeeattrition	yearssincelastpromotion	34	[null]	NO	bigint	[null]
8	postgres	public	employeeattrition	yearswithcurrmanager	35	[null]	NO	bigint	[null]
9	postgres	public	employeeattrition	dailyrate	4	[null]	NO	bigint	[null]
10	postgres	public	employeeattrition	distancefromhome	6	[null]	NO	bigint	[null]
11	postgres	public	employeeattrition	education	7	[null]	NO	bigint	[null]
12	postgres	public	employeeattrition	employeecount	9	[null]	NO	bigint	[null]
13	postgres	public	employeeattrition	employeenumber	10	[null]	NO	bigint	[null]
14	postgres	public	employeeattrition	environmentsatisfaction	11	[null]	NO	bigint	[null]
15	postgres	public	employeeattrition	hourlyrate	13	[null]	NO	bigint	[null]
16	postgres	public	employeeattrition	jobinvolvement	14	[null]	NO	bigint	[null]
17	postgres	public	employeeattrition	joblevel	15	[null]	NO	bigint	[null]
18	postgres	public	employeeattrition	jobsatisfaction	17	[null]	NO	bigint	[null]
19	postgres	public	employeeattrition	monthlyincome	19	[null]	NO	bigint	[null]

2. Write SQL commands that find the following:
   a. Count the total number of records in the table.
      Reasoning: -
      select count(*) from employeeattrition;



postgres/postgres@PostgreSQL 14

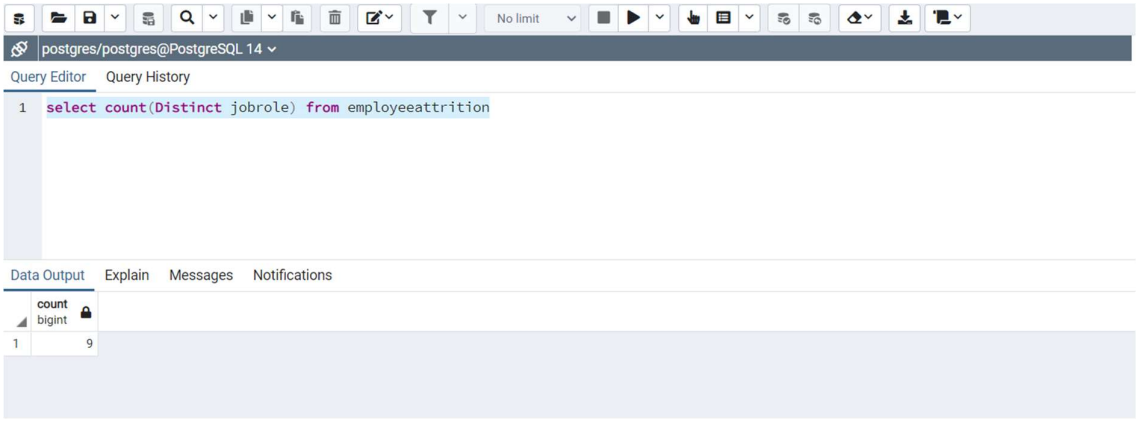
Query Editor | Query History

```
select count(*) from employeeattrition;
```

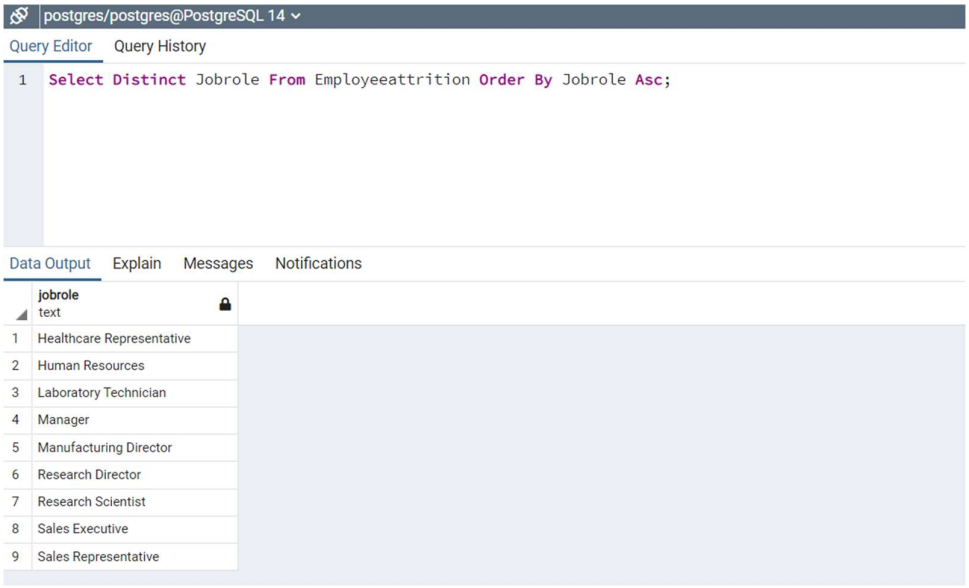
Data Output | Explain | Messages | Notifications

	count bigint
1	1470

   b. How many unique JOBROLE are there in the dataset. Order them by alphabetical order from A to Z.
      Reasoning: -
      select count(Distinct jobrole) from employeeattrition;



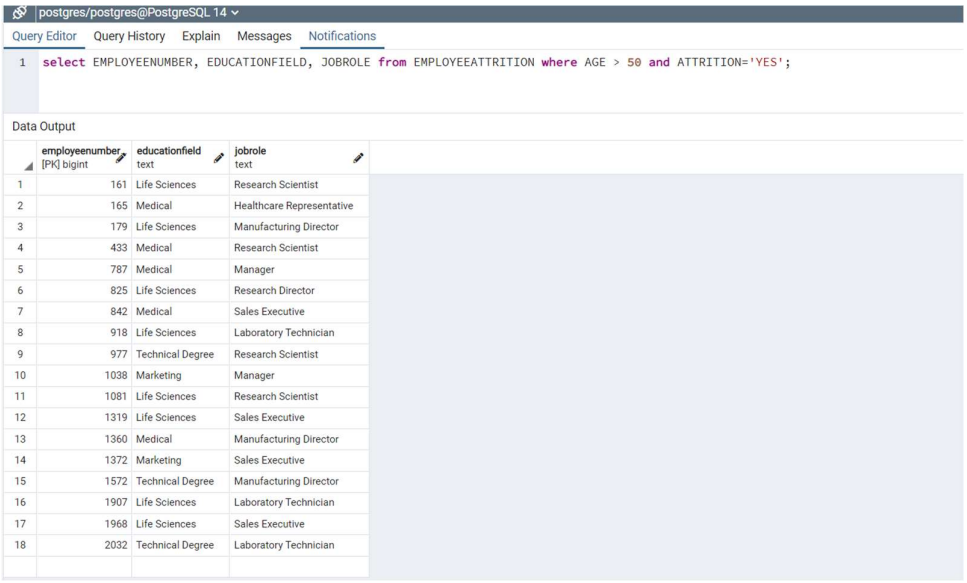
Select Distinct Jobrole From Employeeattrition Order By Jobrole Asc;



c. Find EMPLOYEENUMBER, EDUCATIONFIELD, JOBROLE for all the employees whose AGE is greater than 50 and ATTRITION is YES.

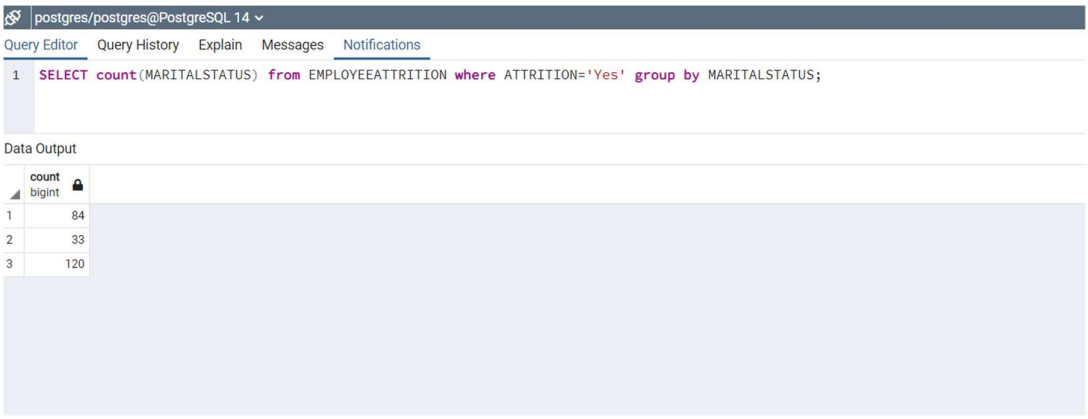
Reasoning: -

select EMPLOYEENUMBER, EDUCATIONFIELD, JOBROLE from EMPLOYEEATTRITION where AGE > 50 and ATTRITION='YES';



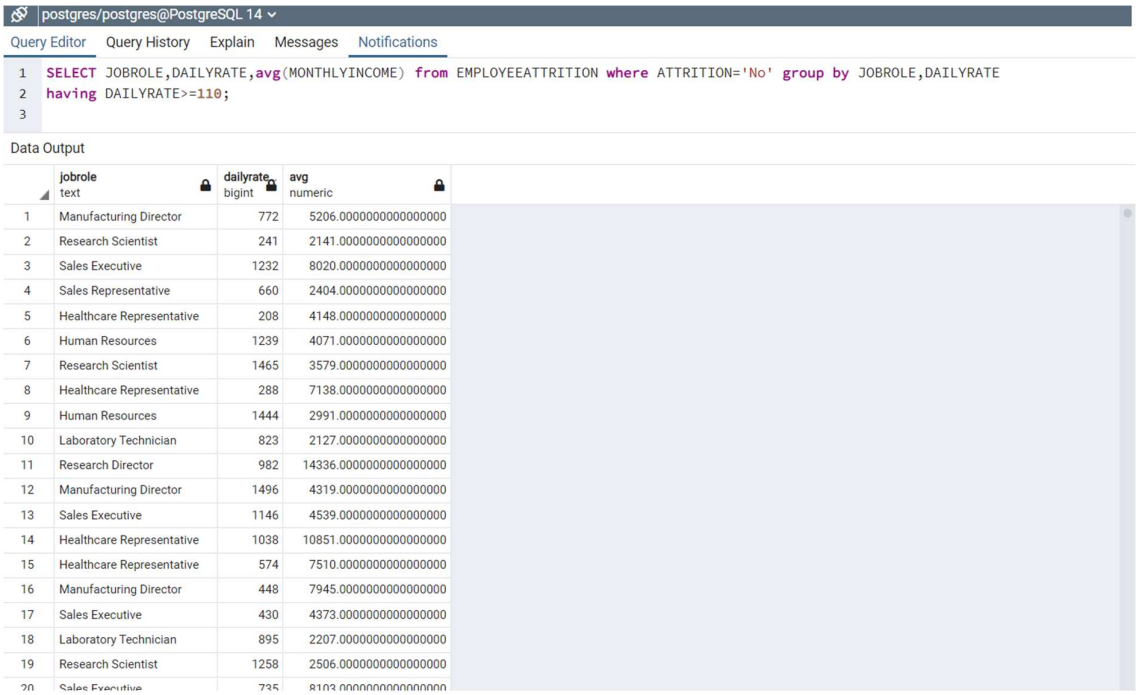
	employeenumber [PK] bigint	educationfield text	jobrole text
1	161	Life Sciences	Research Scientist
2	165	Medical	Healthcare Representative
3	179	Life Sciences	Manufacturing Director
4	433	Medical	Research Scientist
5	787	Medical	Manager
6	825	Life Sciences	Research Director
7	842	Medical	Sales Executive
8	918	Life Sciences	Laboratory Technician
9	977	Technical Degree	Research Scientist
10	1038	Marketing	Manager
11	1081	Life Sciences	Research Scientist
12	1319	Life Sciences	Sales Executive
13	1360	Medical	Manufacturing Director
14	1372	Marketing	Sales Executive
15	1572	Technical Degree	Manufacturing Director
16	1907	Life Sciences	Laboratory Technician
17	1968	Life Sciences	Sales Executive
18	2032	Technical Degree	Laboratory Technician

d. Count the different MARITALSTATUS when ATTRITION is YES in the dataset. Arrange the count in descending order (Hint: Use GROUP BY statement).
Reasoning: -
SELECT count(MARITALSTATUS) from EMPLOYEEATTRITION where ATTRITION='Yes' group by MARITALSTATUS;



	count bigint
1	84
2	33
3	120

e. For each JOBROLE when the ATTRITION is No, find the average MONTHLYINCOME for only those employees having DAILYRATE greater than or equal to 110 (Hint: Use GROUP BY and HAVING statements together).
Reasoning: -
SELECT JOBROLE,DAILYRATE,avg(MONTHLYINCOME) from EMPLOYEEATTRITION where ATTRITION='No' group by JOBROLE,DAILYRATE having DAILYRATE>=110;



	jobrole text	dailyrate bigint	avg numeric
1	Manufacturing Director	772	5206.0000000000000000
2	Research Scientist	241	2141.0000000000000000
3	Sales Executive	1232	8020.0000000000000000
4	Sales Representative	660	2404.0000000000000000
5	Healthcare Representative	208	4148.0000000000000000
6	Human Resources	1239	4071.0000000000000000
7	Research Scientist	1465	3579.0000000000000000
8	Healthcare Representative	288	7138.0000000000000000
9	Human Resources	1444	2991.0000000000000000
10	Laboratory Technician	823	2127.0000000000000000
11	Research Director	982	14336.0000000000000000
12	Manufacturing Director	1496	4319.0000000000000000
13	Sales Executive	1146	4539.0000000000000000
14	Healthcare Representative	1038	10851.0000000000000000
15	Healthcare Representative	574	7510.0000000000000000
16	Manufacturing Director	448	7945.0000000000000000
17	Sales Executive	430	4373.0000000000000000
18	Laboratory Technician	895	2207.0000000000000000
19	Research Scientist	1258	2506.0000000000000000
20	Sales Executive	735	8103.0000000000000000

Note:- For the above query there are 1158 rows generated.