

Create a SQL database and separate tables for both datasets EmployeeAttrition1.csv and EmployeeAttrition2.csv using a RDBMS (PostgreSQL preferred). You need to submit create table query as well in the final document.

### Creation of Table EmployeeAttrition1:

The screenshot shows the pgAdmin 4 interface. On the left, the Object Explorer displays the database structure, with the 'employeeattrition1' table selected under the 'public' schema. The main pane shows the SQL query editor with the following CREATE TABLE statement:

```
1 CREATE TABLE EmployeeAttrition1 (  
2 EmployeeNumber      INT,  
3 Age                 INT,  
4 BusinessTravel      VARCHAR(25),  
5 DailyRate           INT,  
6 Department          VARCHAR(25),  
7 DistanceFromHome    INT,  
8 Education            INT,  
9 EducationField       VARCHAR(25),  
10 EnvironmentSatisfaction INT,  
11 Gender              VARCHAR(25),  
12 HourlyRate          INT,  
13 JobInvolvement      INT,  
14 JobLevel            INT,  
15 JobRole              VARCHAR(25),  
16 JobSatisfaction     INT,  
17 MaritalStatus       VARCHAR(25),  
18 MonthlyIncome       INT,  
19 MonthlyRate         INT,  
20 NumCompaniesWorked  INT,  
21 PercentSalaryHike   INT,  
22 PerformanceRating   INT,  
23 RelationshipSatisfaction INT,  
24 StandardHours       INT,  
25 StockOptionLevel    INT,  
26 TotalWorkingYears   INT,  
27 TrainingTimesLastYear INT,  
28 WorkLifeBalance     INT,  
29 YearsAtCompany       INT,  
30 YearsInCurrentRole   INT,  
31 YearsSinceLastPromotion INT,  
32 YearsWithCurrManager INT,  
33 );
```

Below the query editor, the Messages tab shows the execution result: "CREATE TABLE" and "Query returned successfully in 63 msec."

## Creation of Table EmployeeAttrition2:

The screenshot displays the pgAdmin 4 web interface. On the left, the 'Object Explorer' pane shows the database structure for 'PostgreSQL 16'. Under 'Databases (1)' > 'postgres', the 'Schemas (1)' > 'public' section is expanded, and 'Tables (2)' is selected. The table 'employeeattrition2' is highlighted. The main pane shows the SQL query editor with the following code:

```
29 -- YearsAtCompany          INT,  
30 -- YearsInCurrentRole      INT,  
31 -- YearsSinceLastPromotion INT,  
32 -- YearsWithCurrManager    INT  
33 -- );  
34  
35 CREATE TABLE EmployeeAttrition2(  
36 EmployeeNumber      INT,  
37 Over18              VARCHAR(1),  
38 OverTime             VARCHAR(3),  
39 Attrition            VARCHAR(3)  
40 );  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62
```

Below the query editor, the 'Messages' tab shows the execution result:

```
CREATE TABLE  
  
Query returned successfully in 106 msec.
```

**Load/Import the dataset into the table.**

Importing Data from CSV file:

**Process completed**

Copying table data 'public.employeeattrition1' on database 'postgres' and server 'PostgreSQL 16 (localhost:5432)'

[View Processes](#)

**Process started**

Copying table data 'public.employeeattrition1' on database 'postgres' and server 'PostgreSQL 16 (localhost:5432)'

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File Object Tools Help

Object Explorer

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Query Query History

```
33 -- );
34
35 -- CREATE TABLE EmployeeAttrition2(
36 -- EmployeeNumber INT,
37 -- Over18 VARCHAR(1),
38 -- OverTime VARCHAR(3),
39 -- Attrition VARCHAR(3)
40 -- );
41
42 select * from EmployeeAttrition1;
43
44
45
46
```

Data Output Messages Notifications

	employeenumber integer	age integer	businesstravel character varying (25)	dailyrate integer	department character varying (25)	distancefromhome integer	education integer	educationfield character varying (25)	environmentsatisfaction integer
1	1	41	Travel_Rarely	1102	Sales		1	2 Life Sciences	
2	2	49	Travel_Frequently	279	Research & Development		8	1 Life Sciences	
3	4	37	Travel_Rarely	1373	Research & Development		2	2 Other	
4	5	33	Travel_Frequently	1392	Research & Development		3	4 Life Sciences	
5	7	27	Travel_Rarely	591	Research & Development		2	1 Medical	
6	8	32	Travel_Frequently	1005	Research & Development		2	2 Life Sciences	
7	10	59	Travel_Rarely	1324	Research & Development		3	3 Medical	
8	11	30	Travel_Rarely	1358	Research & Development		24	1 Life Sciences	
9	12	38	Travel_Frequently	216	Research & Development		23	3 Life Sciences	
10	13	36	Travel_Rarely	1299	Research & Development		27	3 Medical	
11	14	35	Travel_Rarely	809	Research & Development		16	3 Medical	
12	15	29	Travel_Rarely	153	Research & Development		15	2 Life Sciences	


character varying (3) 🔒

**Process completed** ✕

Copying table data 'public.employeeattrition2' on database 'postgres' and server 'PostgreSQL 16 (localhost:5432)'

 [View Processes](#)**Process started** ✕

Copying table data 'public.employeeattrition2' on database 'postgres' and server 'PostgreSQL 16 (localhost:5432)'

 [View Processes](#)

File Object Tools Help

Object Explorer

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Dashboard Properties SQL Statistics Dependencies Dependents Processes pos

postgres/postgres@PostgreSQL 16

Query Query History

```
33 -- );
34
35 -- CREATE TABLE EmployeeAttrition2(
36 -- EmployeeNumber      INT,
37 -- Over18               VARCHAR(1),
38 -- OverTime              VARCHAR(3),
39 -- Attrition             VARCHAR(3)
40 -- );
41
42 select * from EmployeeAttrition2;
43
44
45
46
```

Data Output Messages Notifications

	employeenumber integer	over18 character varying (1) 🔒	overtime character varying (3) 🔒	attrition character varying (3) 🔒
1		1	Y	Yes
2		2	Y	No
3		4	Y	Yes
4		5	Y	No
5		7	Y	No
6		8	Y	No
7		10	Y	Yes
8		11	Y	No
9		12	Y	No
10		13	Y	No
11		14	Y	No

### The count of total number of records in the table

```
41
42 select count(*) from EmployeeAttrition1;
43
44
```

Data Output Messages Notifications

	count bigint
1	1470

✓ Successfully run. Total query runtime: 67 msec. 1 rows affected. ✕

### The count of records for each JobRole in descending order of count

```
44
45 select jobrole, count(jobrole)
46 from EmployeeAttrition1
47 GROUP BY jobrole
48 ORDER BY count(jobrole) desc
49
50
51
52
53
54
55
56
```

Data Output Messages Notifications

	jobrole character varying (25)	count bigint
1	Sales Executive	326
2	Research Scientist	292
3	Laboratory Technician	259
4	Manufacturing Director	145
5	Healthcare Representative	131
6	Manager	102
7	Sales Representative	83
8	Research Director	80
9	Human Resources	52

✓ Successfully run. Total query runtime: 85 msec. 9 rows affected. ✕

## The average MonthlyIncome and PercentSalaryHike for each JobRole in ascending order of JobRole

Query

Query History

Scratch Pad

```
44
45 select jobrole,
46 AVG(MonthlyIncome) as "AVG Monthly Income",
47 AVG(PercentSalaryHike) as "AVG PercentSalaryHike"
48 from EmployeeAttrition1
49 GROUP BY jobrole
50 ORDER BY jobrole asc
51
52
53
54
55
56
--
```

Data Output

Messages

Notifications

	jobrole character varying (25)	AVG Monthly Income numeric	AVG PercentSalaryHike numeric
1	Healthcare Representative	7528.7633587786259542	15.4503816793893130
2	Human Resources	4235.7500000000000000	14.8076923076923077
3	Laboratory Technician	3237.1698841698841699	15.0463320463320463
4	Manager	17181.676470588235	15.1372549019607843
5	Manufacturing Director	7295.1379310344827586	15.5931034482758621
6	Research Director	16033.55000000000000	14.9500000000000000
7	Research Scientist	3239.9726027397260274	15.4486301369863014
8	Sales Executive	6924.2791411042944785	14.8895705521472393
9	Sales Representative	2626.0000000000000000	15.6746987951807229

✓ Successfully run. Total query runtime: 129 msec. 9 rows affected. ✕

## The average JobSatisfaction for each Gender and MaritalStatus

Query

Query History

Scratch Pad

```
44
45 select Gender,
46 AVG(JobSatisfaction) as "AVG JobSatisfaction"
47 from EmployeeAttrition1
48 GROUP BY Gender
49
50
51
52
53
54
55
56
--
```

Data Output

Messages

Notifications

	gender character varying (25)	AVG JobSatisfaction numeric
1	Female	2.6836734693877551
2	Male	2.7585034013605442

✓ Successfully run. Total query runtime: 162 msec. 2 rows affected. ✕

Total rows: 2 of 2 | Query complete 00:00:00.162 | In 45 Col 46

```
44
45 select MaritalStatus,
46 AVG(JobSatisfaction) as "AVG JobSatisfaction"
47 from EmployeeAttrition1
48 GROUP BY MaritalStatus
49
50
51
52
53
54
55
56
```

Data Output Messages Notifications

	maritalstatus character varying (25)	AVG JobSatisfaction numeric
1	Married	2.7161961367013373
2	Divorced	2.6972477064220183
3	Single	2.7680851063829787

✓ Successfully run. Total query runtime: 150 msec. 3 rows affected. ✕

```
44
45 select Gender, MaritalStatus,
46 AVG(JobSatisfaction) as "AVG JobSatisfaction"
47 from EmployeeAttrition1
48 GROUP BY Gender, MaritalStatus
49 Order BY Gender
50
51
52
53
54
55
56
```

Data Output Messages Notifications

	gender character varying (25)	maritalstatus character varying (25)	AVG JobSatisfaction numeric
1	Female	Divorced	2.5299145299145299
2	Female	Married	2.6838235294117647
3	Female	Single	2.7738693467336683
4	Male	Single	2.7638376383763838
5	Male	Divorced	2.7904761904761905
6	Male	Married	2.7381546134663342

✓ Successfully run. Total query runtime: 191 msec. 6 rows affected. ✕

## The range (Min and Max) of Age and HourlyRate for each JobRole

```

45 select JobRole,
46 Max(Age) as "Max Age",
47 Min(Age) as "Min Age",
48 Max(HourlyRate) as "Max HourlyRate",
49 Min(HourlyRate) as "Min HourlyRate"
50 from EmployeeAttrition1
51 GROUP BY JobRole
52 Order BY JobRole
53
54
55

```

Data Output Messages Notifications					
	jobrole character varying (25)	Max Age integer	Min Age integer	Max HourlyRate integer	Min HourlyRate integer
1	Healthcare Representative	60	24	100	30
2	Human Resources	59	19	100	31
3	Laboratory Technician	59	18	100	30
4	Manager	60	30	99	30
5	Manufacturing Director	59	22	100	30
6	Research Director	58	27	99	30
7	Research Scientist	59	18	100	30
8	Sales Executive	60	24	100	30
9	Sales Representative	53	18	100	30

✓ Successfully run. Total query runtime: 236 msec. 9 rows affected. ✕

## Join two tables for EmployeeAttrition1.csv and EmployeeAttrition2.csv and display 20 records with the following columns ▪ EmployeeNumber, Age, Gender, JobRole, OverTime and Attrition

```

59 select a.EmployeeNumber, a.Age, a.Gender, a.JobRole, b.OverTime, b.Attrition
60 from EmployeeAttrition1 as a, EmployeeAttrition2 as b
61 where a.EmployeeNumber = b.EmployeeNumber
62 fetch first 20 rows only
63
64

```

Data Output Messages Notifications						
	employeeNumber integer	age integer	gender character varying (25)	jobrole character varying (25)	overtime character varying (3)	attrition character varying (3)
1	1	41	Female	Sales Executive	Yes	Yes
2	2	49	Male	Research Scientist	No	No
3	4	37	Male	Laboratory Technician	Yes	Yes
4	5	33	Female	Research Scientist	Yes	No
5	7	27	Male	Laboratory Technician	No	No
6	8	32	Male	Laboratory Technician	No	No
7	10	59	Female	Laboratory Technician	Yes	No
8	11	30	Male	Laboratory Technician	No	No
9	12	38	Male	Manufacturing Director	No	No
10	13	36	Male	Healthcare Representative	No	No
11	14	35	Male	Laboratory Technician	No	No
12	15	29	Female	Laboratory Technician	Yes	No
13	16	31	Male	Research Scientist	No	No
14	18	34	Male	Laboratory Technician	No	No
15	19	28	Male	Laboratory Technician	Yes	Yes
16	20	29	Female	Manufacturing Director	No	No
17	21	32	Male	Research Scientist	Yes	No
18	22	22	Male	Laboratory Technician	Yes	No
19	23	53	Female	Manager	No	No
20	24	38	Male	Research Scientist	Yes	No

✓ Successfully run. Total query runtime: 84 msec. 20 rows affected. ✕

Total rows: 20 of 20 Query complete: 00:00:00.004