Shanmuka Siva Ganesh Palakula

ganeshkv1395@gmail.com

Hr Data Analysis Solutions

1. Retrieve the total number of employees in the dataset.

Solution:

```
select count(ename) from gdata;
```

count(ename)
4382

2. List all unique job roles in the dataset.

Solution:

```
select distinct jobrole from gdata;
```

jobrole
Healthcare Representative
Research Scientist
Sales Executive
Human Resources
Research Director
Laboratory Technician
Manufacturing Director
Sales Representative
Manager

3. Find the average age of employees.

Solution:

```
select avg(age) from gdata;
```

avg(age)
36.9334

4. Retrieve the names and ages of employees who have worked at the company for more than 5 years.

Solution:

```
select ename, age from gdata
where YearsAtCompany > 5;
```

ename	age
RENEE MARQUARDT	38
HARVEY ELWIN	32
LEON WHITE	46
NATHAN HARDY	31
SUSAN BUCHBINDER	25
KIRSTEN BARASH	45
DENNIS SUTTER	36
JOHN BROWN	55
KATHRYN BALLOU	47
GRAD GREEN	35
DARCY KELLER	38
SAMUEL ROMERO	26
ALEXANDER CHEN	50
THOMAS HARVEY	29
MARTIN BELTRAN	55
ROBERT TAI	37
EUGENE GALEANO	36

5. Get a count of employees grouped by their department.

Solution:

```
SELECT count(ename), Department from gdata
group by department;
```

count(ename)	Department
1330	Sales
2865	Research & Development
187	Human Resources

6. List employees who have 'High' Job Satisfaction.

Solution:

```
SELECT ename from gdata
where EmployeeId IN
(SELECT EmployeeId from esdata
where JobSatisfaction In (select Max(jobsatisfaction)
from esdata));
```

ename
ALBERTO PEDRUCO
RENEE MARQUARDT
NATHAN HARDY
KIRSTEN BARASH
DONALD FIELDS
LUIS HERRERA
MARTIN LALOR JR
THOMAS HARVEY
MARTIN BELTRAN
ROBERT TAI
PIERRE FRANCOIS
TROY JOLLIFF
BRIAN DELAHUNTY
ROBERT SERRANO
GERALD MANSUR JR
ROLAND PICKENS
RAYMOND KOENIG

7. Find the highest Monthly Income in the dataset.

Solution:

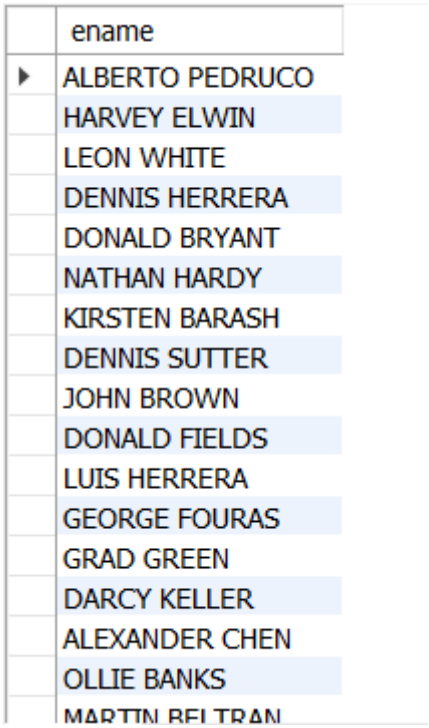
```
SELECT max(MonthlyIncome)from gdata;
```

max(MonthlyIncome)
199990

8. List employees who have 'Travel_Rarely' as their BusinessTravel type.

Solution:

```
SELECT ename from gdata where BusinessTravel = 'Travel_Rarely';
```

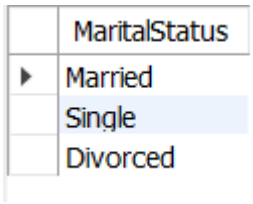


ename
ALBERTO PEDRUCO
HARVEY ELWIN
LEON WHITE
DENNIS HERRERA
DONALD BRYANT
NATHAN HARDY
KIRSTEN BARASH
DENNIS SUTTER
JOHN BROWN
DONALD FIELDS
LUIS HERRERA
GEORGE FOURAS
GRAD GREEN
DARCY KELLER
ALEXANDER CHEN
OLLIE BANKS
MARTIN BELTRAN

9. Retrieve the distinct MaritalStatus categories in the dataset.

Solution:

```
SELECT DISTINCT MaritalStatus from gdata;
```



MaritalStatus
Married
Single
Divorced

10. Get a list of employees with more than 2 years of work experience but less than 4 years in their current role.

Solution:

```
SELECT ename from gdata
where TotalWorkingYears > 2 and
YearsSinceLastPromotion < 4;
```

ename
LAWRENCE LEE
DWAYNE CURRY
HARVEY ELWIN
DENNIS HERRERA
DONALD BRYANT
SUSAN BUCHBINDER
DONALD FIELDS
LUIS HERRERA
GEORGE FOURAS
MARTIN LALOR JR
SAMUEL ROMERO
ALEXANDER CHEN
OLLIE BANKS
THOMAS HARVEY
MARTIN BELTRAN
LORI BORGHI
CHRISTOPHER HAZEN

11. List employees who have changed their job roles within the company (JobLevel and JobRole differ from their previous job).

Solution:

```
select
    emp1.employeeid,
    emp1.ename as previousemployeename,
    emp1.joblevel as previousjoblevel,
    emp1.jobrole as previousjobrole,
    emp2.ename as currentemployeename,
    emp2.joblevel as currentjoblevel,
```

```
    emp2.jobrole as currentjobrole
from
    gdata emp1
join
    gdata emp2 on emp1.employeeid = emp2.employeeid
where
    emp1.employeeid = emp2.employeeid
    and (emp1.joblevel <> emp2.joblevel or
emp1.jobrole <> emp2.jobrole)
```

employeeid	previousemployeename	previousjoblevel	previousjobrole	currentemployeename	currentjoblevel	currentjobrole

12. Find the average distance from home for employees in each department.

Solution:

```
SELECT AVG(DistanceFromHome), department from gdata
group by department;
```

AVG(DistanceFromHome)	department
9.2414	Sales
9.2387	Research & Development
8.2888	Human Resources

13. Retrieve the top 5 employees with the highest MonthlyIncome.

Solution:

```
SELECT * from gdata order by MonthlyIncome DESC LIMIT
5;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

ename	Age	Attrition	BusinessTravel	Department	DistanceFromHome	Education	EducationField	EmployeeCount	EmployeeID	Gend
LAWRENCE LAU	42	No	Travel_Rarely	Research & Development	18	1	Technical Degree	1	3326	Femal
KEVIN LABANOWSKI	42	No	Travel_Rarely	Research & Development	18	1	Technical Degree	1	386	Femal
DAVID KUCIA	42	No	Travel_Rarely	Research & Development	18	1	Technical Degree	1	1856	Femal
NATHAN SZUTU	36	No	Travel_Rarely	Research & Development	2	2	Technical Degree	1	2412	Male
SHANNON STABILE	36	No	Travel_Rarely	Research & Development	2	2	Technical Degree	1	3882	Male

14. Calculate the percentage of employees who have had a promotion in the last year.

Solution:

```
SELECT (count(ename)*100/(SELECT count(ename) from gdata)) from gdata where gdata.YearsSinceLastPromotion = 1;
```

(count(ename)*100/(SELECT count(ename) from gdata))
24.2355

15. List the employees with the highest and lowest EnvironmentSatisfaction.

Solution:

```
SELECT ename from gdata

INNER JOIN

esdata ON gdata.EmployeeID = esdata.EmployeeID

where esdata.EnvironmentSatisfaction = (select MAX(EnvironmentSatisfaction) from esdata) or esdata.EnvironmentSatisfaction = (select MIN(EnvironmentSatisfaction) from esdata);
```

ename
RENEE MARQUARDT
HARVEY ELWIN
DENNIS HERRERA
DONALD BRYANT
JOHN BROWN
KATHRYN BALLOU
DONALD FIELDS
GEORGE FOURAS
MARTIN LALOR JR
DARCY KELLER
ALEXANDER CHEN
LORI BORGHI
ROBERT TAI
CHRISTOPHER HAZ...

16. Find the employees who have the same JobRole and MaritalStatus.

Solution:

```
SELECT gd1.ename, gd1.JobRole, gd1.MaritalStatus from gdata gd1
INNER JOIN
gdata gd2 ON gd1.JobRole = gd2.JobRole AND gd1.MaritalStatus = gd2.MaritalStatus AND gd1.EmployeeID <> gd2.EmployeeID
```

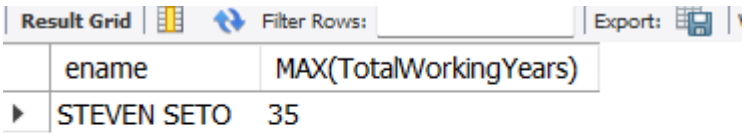
ename	JobRole	MaritalStatus
VIVIAN CURD	Healthcare Representative	Married
KEITH BARAKA	Healthcare Representative	Married
WILSON LO	Healthcare Representative	Married
MARK OKUPNIK	Healthcare Representative	Married
ROBBIN HEWITT	Healthcare Representative	Married
PAUL DAVIES	Healthcare Representative	Married
BRADFORD BENSON	Healthcare Representative	Married
RUTH WANG	Healthcare Representative	Married
JAMES SUTTER	Healthcare Representative	Married
CARMEL DEBONO	Healthcare Representative	Married
SENG NGUY	Healthcare Representative	Married
RICHARD THALL-JR	Healthcare Representative	Married
SUSAN HOU	Healthcare Representative	Married
JUDY LIZARDO	Healthcare Representative	Married

17. List the employees with the highest TotalWorkingYears who also have a PerformanceRating of 4.

Solution:

```
SELECT ename, MAX(TotalWorkingYears) from gdata
INNER JOIN
mdata ON gdata.EmployeeID = mdata.EmployeeID
where mdata.PerformanceRating = 4
group by ename
order by max(TotalWorkingYears) desc
```

```
LIMIT 1;
```



ename	MAX(TotalWorkingYears)
STEVEN SETO	35

18. Calculate the average Age and JobSatisfaction for each BusinessTravel type.

Solution:

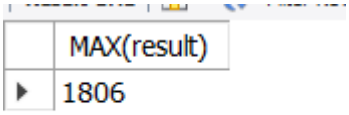
```
SELECT AVG(g1.Age), esdata.JobSatisfaction from gdata g1
INNER JOIN gdata g2 ON g1.BusinessTravel = g2.BusinessTravel
INNER JOIN esdata ON g1.EmployeeID = esdata.EmployeeID
group by esdata.JobSatisfaction
order by esdata.JobSatisfaction;
```

AVG(g1.Age)	JobSatisfaction
37.1201	1
36.8223	2
36.9194	3
37.2777	4

19. Retrieve the most common EducationField among employees.

Solution:

```
SELECT EducationField, MAX(result)
from (select count(*) as result, EducationField from gdata group by EducationField) as counts
group by EducationField
order by max(result) DESC
LIMIT 1;
```

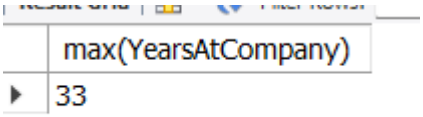


	MAX(result)
▶	1806

20. List the employees who have worked for the company the longest but haven't had a promotion.

Solution:

```
SELECT max(YearsAtCompany) from gdata
where YearsSinceLastPromotion = 0;
```



	max(YearsAtCompany)
▶	33