PSYLIQ

# INTERNSHIP PROJECT

# HR DATA ANALYSIS USING SQL

BY

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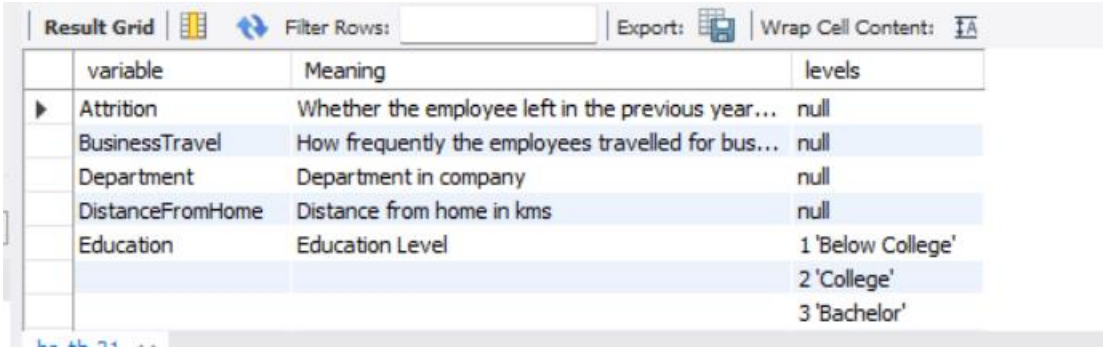
## LOADING THE DATA



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

| variable | Meaning | levels |
|---|---|---|
| Attrition | Whether the employee left in the previous year... | null |
| BusinessTravel | How frequently the employees travelled for bus... | null |
| Department | Department in company | null |
| DistanceFromHome | Distance from home in kms | null |
| Education | Education Level | 1 'Below College' |
| | | 2 'College' |
| | | 3 'Bachelor' |

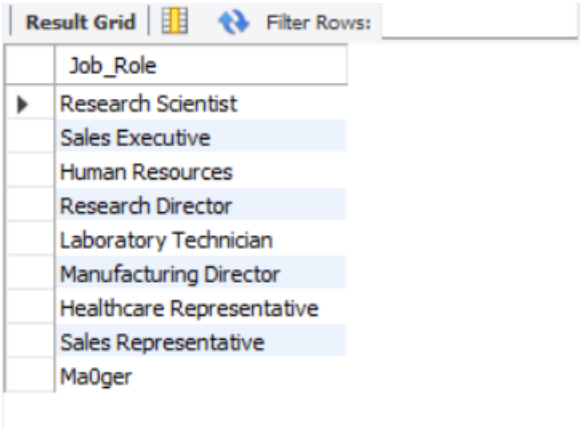
## 1. Retrieve the total number of employees in the dataset

SELECT COUNT(Empoyee_id) As no_of_Employees FROM hr_tb1;

| no_of_Employees |
|---|
| 8818 |

## 2. List all unique job roles in the dataset.

SELECT DISTINCT(Job_Role) FROM hr_tb1;

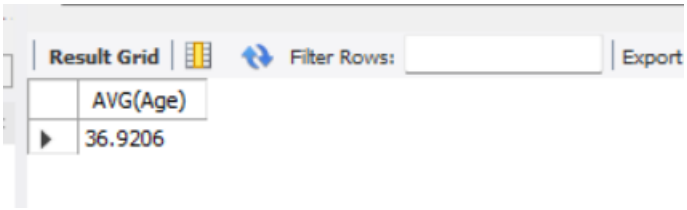


Result Grid | Filter Rows:

| Job_Role |
|---|
| Research Scientist |
| Sales Executive |
| Human Resources |
| Research Director |
| Laboratory Technician |
| Manufacturing Director |
| Healthcare Representative |
| Sales Representative |
| Ma0ger |

## 3. Find the average age of employees.

SELECT AVG(Age) FROM hr_tb1;

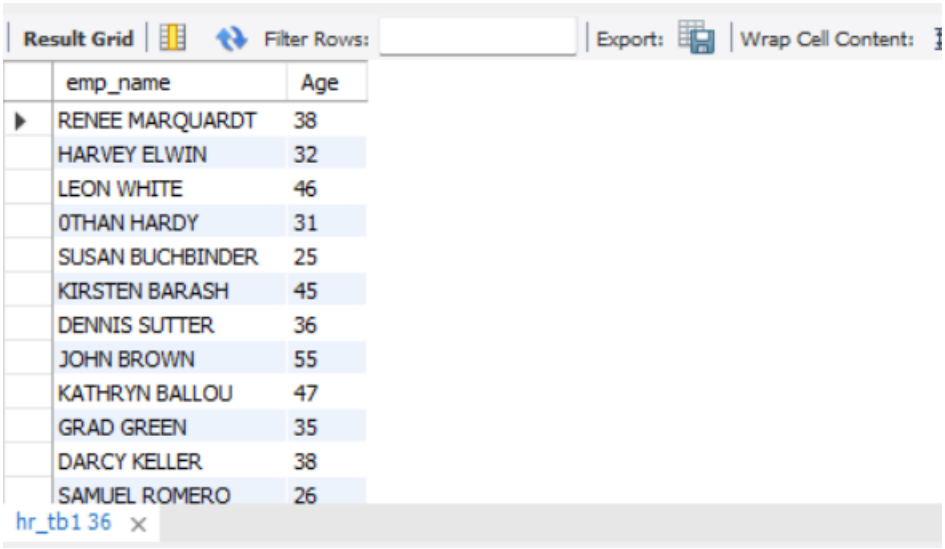



### 4. Retrieve the names and ages of employees who have worked at the company for more than 5 years.

SELECT emp_name, Age

FROM hr_tb1

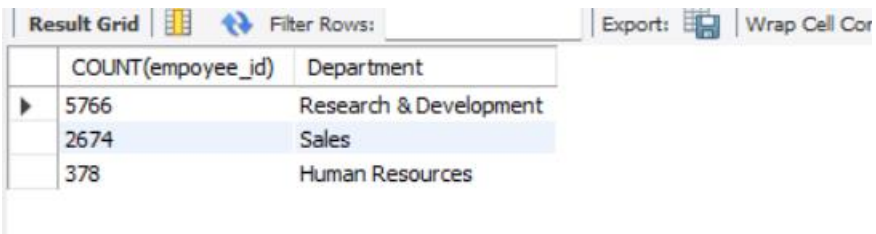
WHERE Years_At_Company > 5;




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

SELECT COUNT(empoyee_id),Department FROM hr_tb1 GROUP BY

Department;

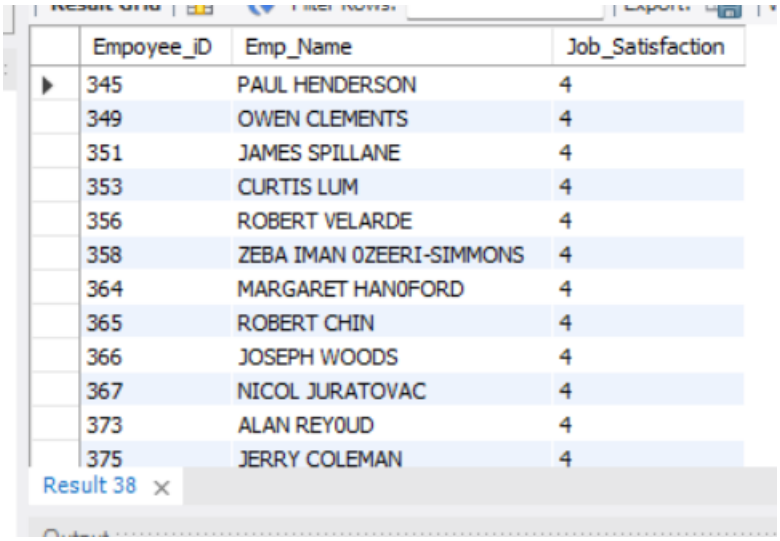



### 6. List employees who have 'High' Job Satisfaction.

SELECT hr_tb1.Empoyee_iD,Emp_Name,hr_tb2.Job_Satisfaction

FROM hr_tb1 JOIN hr_tb2 ON hr_tb1.Empoyee_iD =

hr_tb2.Employee_ID ORDER BY Job_Satisfaction DESC;

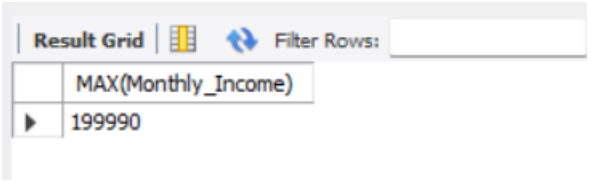


| Empoyee_iD | Emp_Name | Job_Satisfaction |
|---|---|---|
| 345 | PAUL HENDERSON | 4 |
| 349 | OWEN CLEMENTS | 4 |
| 351 | JAMES SPILLANE | 4 |
| 353 | CURTIS LUM | 4 |
| 356 | ROBERT VELARDE | 4 |
| 358 | ZEBA IMAN 0ZEERI-SIMMONS | 4 |
| 364 | MARGARET HAN0FORD | 4 |
| 365 | ROBERT CHIN | 4 |
| 366 | JOSEPH WOODS | 4 |
| 367 | NICOL JURATOVAC | 4 |
| 373 | ALAN REY0UD | 4 |
| 375 | JERRY COLEMAN | 4 |

Result 38

## 7. Find the highest Monthly Income in the dataset.

SELECT MAX(Monthly_Income) FROM hr_tb1;



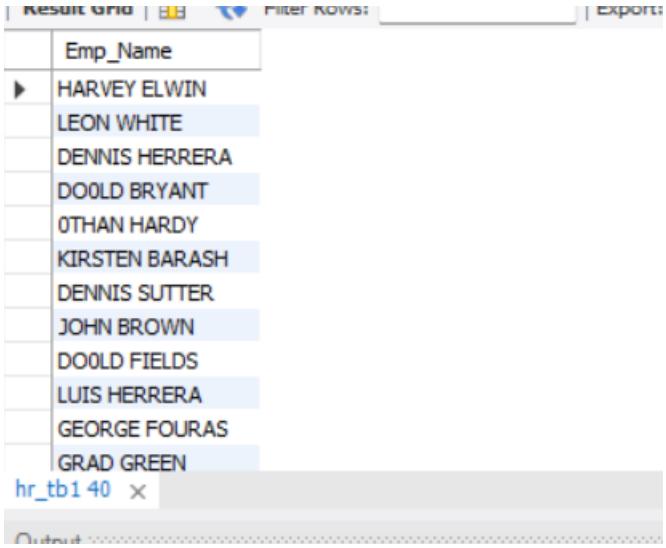
Result Grid | Filter Rows:

| MAX(Monthly_Income) |
|---|
| 199990 |

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

SELECT Emp_Name FROM hr_tb1 WHERE Business_Travel IN

('Travel_Rarely');

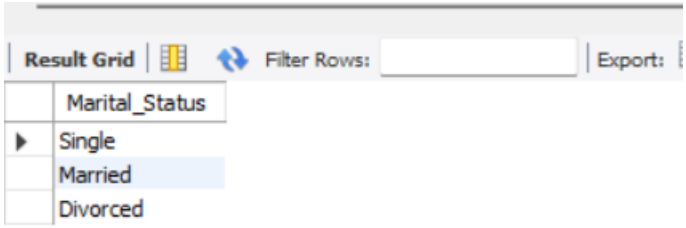


| Emp_Name |
|---|
| HARVEY ELWIN |
| LEON WHITE |
| DENNIS HERRERA |
| DO0LD BRYANT |
| 0THAN HARDY |
| KIRSTEN BARASH |
| DENNIS SUTTER |
| JOHN BROWN |
| DO0LD FIELDS |
| LUIS HERRERA |
| GEORGE FOURAS |
| GRAD GREEN |

hr_tb1 40

## 9. Retrieve the distinct MaritalStatus categories in the dataset.

SELECT DISTINCT(Marital_Status) FROM hr_tb1;

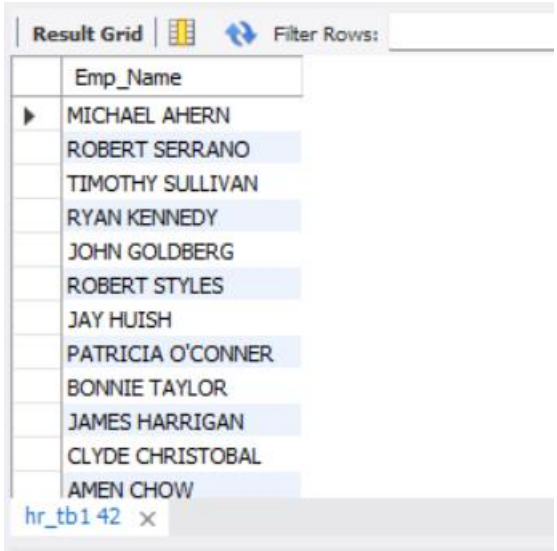


Result Grid | Filter Rows: | Export:

| Marital_Status |
|---|
| Single |
| Married |
| Divorced |

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

SELECT Emp_Name FROM hr_tb1 WHERE Total_Working_Years IN(2,4);



Result Grid | Filter Rows:

| Emp_Name |
|---|
| MICHAEL AHERN |
| ROBERT SERRANO |
| TIMOTHY SULLIVAN |
| RYAN KENNEDY |
| JOHN GOLDBERG |
| ROBERT STYLES |
| JAY HUISH |
| PATRICIA O'CONNER |
| BONNIE TAYLOR |
| JAMES HARRIGAN |
| CLYDE CHRISTOBAL |
| AMEN CHOW |

hr_tb1 42

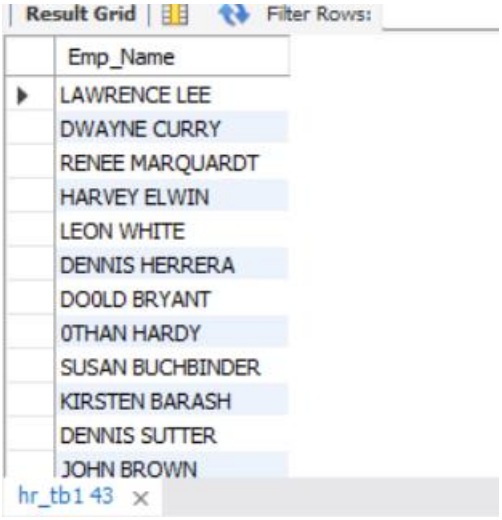
## 11. List employees who have changed their job roles within the company (JobLevel and JobRole differ from their previous job).

```
SELECT Emp_Name

FROM hr_tb1

WHERE Job_Level != Job_Role

LIMIT 0, 50000;
```



Result Grid | Filter Rows:

| Emp_Name |
|---|
| LAWRENCE LEE |
| DWAYNE CURRY |
| RENEE MARQUARDT |
| HARVEY ELWIN |
| LEON WHITE |
| DENNIS HERRERA |
| DO0LD BRYANT |
| 0THAN HARDY |
| SUSAN BUCHBINDER |
| KIRSTEN BARASH |
| DENNIS SUTTER |
| JOHN BROWN |

hr_tb1 43 ×

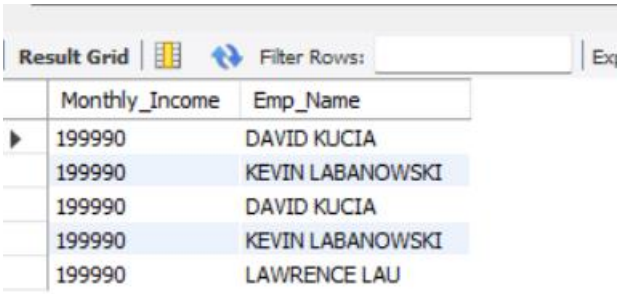
## 12. Retrieve the top 5 employees with the highest MonthlyIncome

```
SELECT Monthly_Income, Emp_Name

FROM hr_tb1

ORDER BY Monthly_Income DESC

LIMIT 5;
```

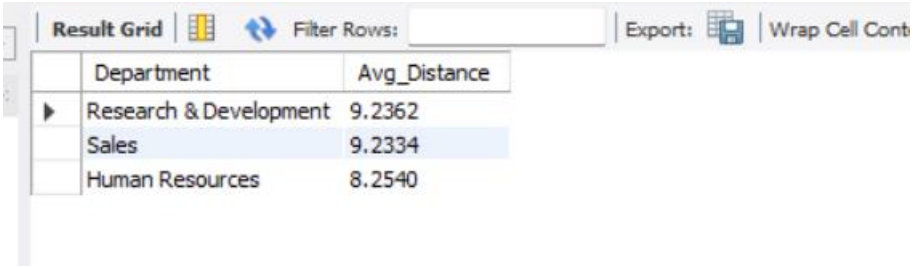


Result Grid | Filter Rows: | Ex

| Monthly_Income | Emp_Name |
|---|---|
| 199990 | DAVID KUCIA |
| 199990 | KEVIN LABANOWSKI |
| 199990 | DAVID KUCIA |
| 199990 | KEVIN LABANOWSKI |
| 199990 | LAWRENCE LAU |

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

```
SELECT Department,AVG(Distance_From_HOME)AS Avg_Distance FROM
hr_tb1 GROUP BY Department;
```

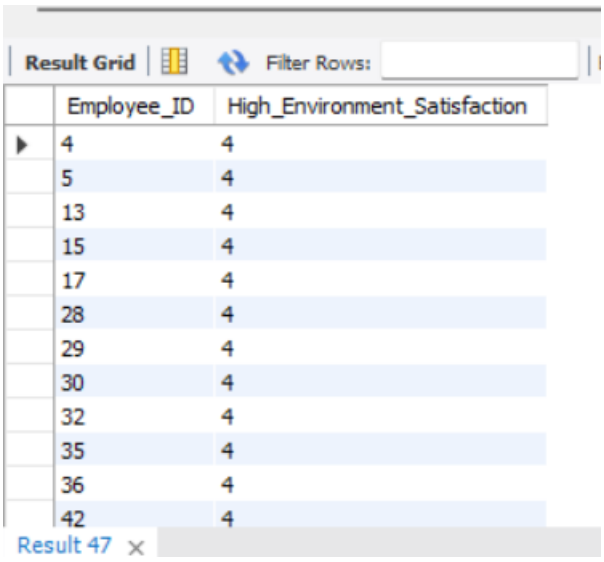


Result Grid | Filter Rows: | Export: | Wrap Cell Cont

| Department | Avg_Distance |
|---|---|
| Research & Development | 9.2362 |
| Sales | 9.2334 |
| Human Resources | 8.2540 |

## 14. List the employees with the highest and lowest Environment Satisfaction.

```
SELECT Employee_ID,Environment_Satisfaction AS High_Environment_Satisfaction
FROM hr_tb2 Where Environment_Satisfaction = 4
UNION ALL
SELECT Employee_ID,Environment_Satisfaction AS Low_Environment_Satisfaction
FROM hr_tb2 Where Environment_Satisfaction = 1 ;
```



Result Grid | Filter Rows:

| Employee_ID | High_Environment_Satisfaction |
|---|---|
| 4 | 4 |
| 5 | 4 |
| 13 | 4 |
| 15 | 4 |
| 17 | 4 |
| 28 | 4 |
| 29 | 4 |
| 30 | 4 |
| 32 | 4 |
| 35 | 4 |
| 36 | 4 |
| 42 | 4 |

Result 47

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

```
SELECT COUNT(*)*100/(SELECT COUNT(*) FROM hr_tb1) AS
Promotion_percentage FROM hr_tb1 WHERE Years_Since_Last_Promotion=1;
```

Result Grid | Filter Rows:

| Promotion_percentage |
|---|
| 24.2912 |

## 16. Find the employees who have the same Job Role and Marital Status

SELECT a.empoyee_id, a.job_role, b.job_role, a.marital_status, b.marital_status from

hr_tb1 a join hr_tb1 b on a.Empoyee_ID=b.Empoyee_ID

where a.Job_Role=b.job_role and a. Marital_Status=b.Marital_Status;

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

| empoyee_id | job_role | job_role | marital_status | marital_status |
|---|---|---|---|---|
| 2 | Research Scientist | Research Scientist | Single | Single |
| 3 | Sales Executive | Sales Executive | Married | Married |
| 4 | Human Resources | Human Resources | Married | Married |
| 5 | Sales Executive | Sales Executive | Single | Single |
| 6 | Research Director | Research Director | Married | Married |
| 7 | Sales Executive | Sales Executive | Single | Single |
| 8 | Sales Executive | Sales Executive | Married | Married |
| 9 | Laboratory Technician | Laboratory Technician | Married | Married |
| 10 | Laboratory Technician | Laboratory Technician | Divorced | Divorced |
| 11 | Laboratory Technician | Laboratory Technician | Married | Married |
| 12 | Laboratory Technician | Laboratory Technician | Married | Married |
| 13 | Sales Executive | Sales Executive | Single | Single |

Result 48

## 17. List the employees with the highest Total Working Years who also have a Performance Rating of 4.

SELECT hr_tb1.Empoyee_ID,hr_tb1.Total_Working_Years,

Performance_Rating FROM hr_tb1 JOIN hr_tb2 ON

hr_tb1.Empoyee_ID =hr_tb2.Employee_ID WHERE

hr_tb2.Performance_Rating=4

ORDER BY hr_tb1.Total_Working_Years DESC ;

Result Grid | Filter Rows: | Export:

| Empoyee_ID | Total_Working_Years | Performance_Rating |
|---|---|---|
| 786 | 35 | 4 |
| 786 | 35 | 4 |
| 786 | 35 | 4 |
| 2256 | 35 | 4 |
| 2256 | 35 | 4 |
| 2256 | 35 | 4 |
| 3726 | 35 | 4 |
| 3726 | 35 | 4 |
| 3726 | 35 | 4 |
| 786 | 35 | 4 |
| 786 | 35 | 4 |
| 786 | 35 | 4 |

Result 49

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

select distinct Business_travel,avg(age)over(partition by Business_travel)as avgage from hr_tb1;

Result Grid | Filter Rows: | Export: | Wrap Cell

| Business_travel | avgage |
|---|---|
| Non-Travel | 36.6200 |
| Travel_Frequently | 36.4549 |
| Travel_Rarely | 37.0876 |

## 19. Retrieve the most common Education Field among employees.

SELECT Education_Field FROM hr_tb1 GROUP BY Education_Field ORDER

BY Education_Field DESC;

| Education_Field |
|---|
| Technical Degree |
| Other |
| Medical |
| Marketing |
| Life Sciences |
| Human Resources |

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

SELECT Empoyee_ID,MAX(Years_At_Company)AS Max_no_of_years FROM

hr_tb1 WHERE Years_Since_Last_Promotion =0 GROUP BY Employee_ID

ORDER BY Max_no_of_years DESC ;