# PSYLIQ

**TASK-01**

**HR DATA ANALYSIS**

**NAME: Lingamaneni Devansh**

**E-MAIL:** devansh.lingamaneni@gmail.com

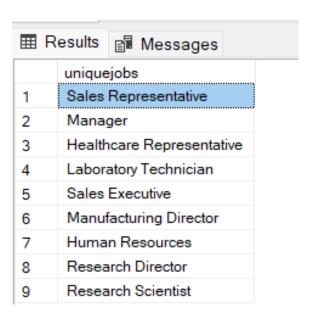**Linked-in:** kedin.com/in/devansh-lingamaneni-26272324a/

- Retrieve the total number of employees in the dataset.

  SELECT COUNT(*) as total_employees FROM [General_Data]

  |   | total_employees |
  |---|-----------------|
  | 1 | 4410            |

- List all unique job roles in the dataset.

SELECT DISTINCT(JobRole) as uniquejobs from [General_Data]

| | uniquejobs |
|---|---|
| 1 | Sales Representative |
| 2 | Manager |
| 3 | Healthcare Representative |
| 4 | Laboratory Technician |
| 5 | Sales Executive |
| 6 | Manufacturing Director |
| 7 | Human Resources |
| 8 | Research Director |
| 9 | Research Scientist |

- Find the average age of employees.

SELECT AVG(Age) as avg_age from [General_Data]

| | avg_age |
|---|---|
| 1 | 36 |

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

SELECT "Emp_Name" AS Name ,Age from [General_Data]

WHERE YearsAtCompany>5

⊞ Results    ▤ Messages

| | Name | Age |
|---|---|---|
| 1 | RENEE MARQUARDT | 38 |
| 2 | HARVEY ELWIN | 32 |
| 3 | LEON WHITE | 46 |
| 4 | NATHAN HARDY | 31 |
| 5 | SUSAN BUCHBINDER | 25 |
| 6 | KIRSTEN BARASH | 45 |
| 7 | DENNIS SUTTER | 36 |
| 8 | JOHN BROWN | 55 |
| 9 | KATHRYN BALLOU | 47 |
| 10 | GRAD GREEN | 35 |
| 11 | DARCY KELLER | 38 |
| 12 | SAMUEL ROMERO | 26 |
| 13 | ALEXANDER CHEN | 50 |
| 14 | BURK DELVENTHAL | 42 |
| 15 | THOMAS HARVEY | 29 |
| 16 | MARTIN BELTRAN | 55 |
| 17 | ROBERT TAI | 37 |
| 18 | EUGENE GALEANO | 36 |

- Get a count of employees grouped by their department.

SELECT DISTINCT(Department) FROM [General_Data]

SELECT Department,COUNT(EmployeeID) AS total_employees

FROM [General_Data]

GROUP BY Department

| | Department |
|---|---|
| 1 | Sales |
| 2 | Research & Development |
| 3 | Human Resources |

| | Department | total_employees |
|---|---|---|
| 1 | Sales | 1338 |
| 2 | Research & Development | 2883 |
| 3 | Human Resources | 189 |

- List employees who have 'High' Job Satisfaction.

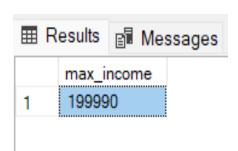SELECT EmployeeID,"Emp_Name" FROM [General_Data]

WHERE JobSatisfaction = (SELECT MAX(JobSatisfaction) FROM [General_Data])

| | EmployeeID | Emp_Name |
|---|---|---|
| 416 | 1357 | KEVIN BYRNE |
| 417 | 1359 | BYRON RHETT |
| 418 | 1367 | KATHERINE HATHA... |
| 419 | 1371 | CARL BARNES |
| 420 | 1373 | TERRIE WILLIAMS |
| 421 | 1375 | JEFFREY COVITZ |
| 422 | 1376 | RICHARD WENDLA... |
| 423 | 1380 | MEGHAN WHITE |
| 424 | 1381 | RUTH ARMSTRONG |
| 425 | 1389 | COLLEEN FATOOH |
| 426 | 1390 | NANCY LEWIS |
| 427 | 1392 | JONATHAN LOW |
| 428 | 1393 | ROBERT BOHANAN |
| 429 | 1406 | WINONA MINDOLOV.. |
| 430 | 1407 | DAVID LESTER |
| 431 | 1412 | GEORGE PEREZ |
| 432 | 1414 | ERIC CARACCIOLO |
| 433 | 1416 | PIERA WONG |

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- Find the highest Monthly Income in the dataset.

SELECT MAX(MonthlyIncome) AS max_income FROM [General_Data]

| | max_income |
|---|---|
| 1 | 199990 |

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

SELECT EmployeeID,"Emp_Name" as Name FROM [General_data]
WHERE BusinessTravel = 'Travel_Rarely'

| | EmployeeID | Name |
|---|---|---|
| 1 | 1 | ALBERTO PEDRUCO |
| 2 | 5 | HARVEY ELWIN |
| 3 | 6 | LEON WHITE |
| 4 | 7 | DENNIS HERRERA |
| 5 | 8 | DONALD BRYANT |
| 6 | 9 | NATHAN HARDY |
| 7 | 11 | KIRSTEN BARASH |
| 8 | 12 | DENNIS SUTTER |
| 9 | 13 | JOHN BROWN |
| 10 | 15 | DONALD FIELDS |
| 11 | 16 | LUIS HERRERA |
| 12 | 17 | GEORGE FOURAS |
| 13 | 19 | GRAD GREEN |
| 14 | 20 | DARCY KELLER |
| 15 | 22 | ALEXANDER CHEN |
| 16 | 23 | OLLIE BANKS |
| 17 | 24 | BURK DELVENTHAL |
| 18 | 26 | MARTIN BELTRAN |

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- Retrieve the distinct MaritalStatus categories in the dataset.

SELECT DISTINCT(MaritalStatus) FROM [General_data]

| | MaritalStatus |
|---|---|
| 1 | Single |
| 2 | Divorced |
| 3 | Married |

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

SELECT EmployeeID,"Emp_Name" as Name FROM [General_data]

WHERE YearsAtCompany<4 AND NumCompaniesWorked>2

| | EmployeeID | Name |
|---|---|---|
| 1 | 29 | CHRISTOPHER HAZEN |
| 2 | 30 | PIERRE FRANCOIS |
| 3 | 33 | COLLEEN RILEY |
| 4 | 41 | TIMOTHY SULLIVAN |
| 5 | 53 | STEPHEN TACCHINI |
| 6 | 66 | ANDREW LOGAN |
| 7 | 70 | ARTHUR STELLINI |
| 8 | 72 | MICHAEL SIMMONS |
| 9 | 76 | DANIEL MAHONEY |
| 10 | 90 | CHRIS VEIN |
| 11 | 95 | EDMUND VAIL |
| 12 | 97 | BONNIE TAYLOR |
| 13 | 99 | DENNIS MARTINEZ |
| 14 | 101 | FERDINAND CADELINA |
| 15 | 114 | PAUL LEE |
| 16 | 115 | TANGERINE BRIGHAM |
| 17 | 120 | ALBERT YU |
| 18 | 128 | MORGAN PETITI |

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

SELECT * FROM [General_data] e1

JOIN [General_data] e2 ON e1.EmployeeID = e2.EmployeeID

WHERE e1.JobLevel != e2.JobLevel OR e1.JobRole != e2.jobRole

| EnvironmentSatisfaction | JobSatisfaction | WorkLifeBalance | EmployeeID2 | JobInvolvement | PerformanceRating | Emp_Name | Age | Attrition | BusinessTravel | Department |
|---|---|---|---|---|---|---|---|---|---|---|

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

SELECT Department,AVG(DistanceFromHome) as avg_Distance
FROM [General_data]
GROUP BY Department

### Results   Messages

| | Department | avg_Distance |
|---|---|---|
| 1 | Sales | 9 |
| 2 | Research & Development | 9 |
| 3 | Human Resources | 8 |

- Retrieve the top 5 employees with the highest MonthlyIncome.

SELECT TOP 5 EmployeeID,"Emp_Name",MonthlyIncome as Name FROM

| | EmployeeID | Emp_Name | Name |
|---|---|---|---|
| 1 | 386 | KEVIN LABANOWSKI | 199990 |
| 2 | 1856 | DAVID KUCIA | 199990 |
| 3 | 3326 | LAWRENCE LAU | 199990 |
| 4 | 942 | KEVIN MCNAUGHTON | 199730 |
| 5 | 2412 | NATHAN SZUTU | 199730 |

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

```
SELECT  COUNT(*) AS total_employees,

SUM(CASE WHEN YearsSinceLastPromotion <= 1 AND YearsSinceLastPromotion IS NOT NULL

THEN 1 ELSE 0 END) AS promoted_last_yr,

(SUM(CASE WHEN YearsSinceLastPromotion <= 1 AND YearsSinceLastPromotion IS NOT NULL

THEN 1 ELSE 0 END) * 100.0) / COUNT(*) AS percentage_promoted_last_yr

FROM [General_data];
```

| | total_employees | promoted_last_yr | percentage_promoted_last_yr |
|---|---|---|---|
| 1 | 4410 | 2814 | 63.809523809523 |

- List the employees with the highest and lowest EnvironmentSatisfaction

SELECT EmployeeID, Emp_Name as Name, EnvironmentSatisfaction

FROM [General_data]

WHERE EnvironmentSatisfaction = (SELECT MAX(EnvironmentSatisfaction) FROM [General_data])

OR EnvironmentSatisfaction = (SELECT MIN(EnvironmentSatisfaction) FROM [General_data])

| | EmployeeID | Name | EnvironmentSatisfaction |
|---|---|---|---|
| 1 | 4 | RENEE MARQUARDT | 4 |
| 2 | 5 | HARVEY ELWIN | 4 |
| 3 | 7 | DENNIS HERRERA | 1 |
| 4 | 8 | DONALD BRYANT | 1 |
| 5 | 13 | JOHN BROWN | 4 |
| 6 | 14 | KATHRYN BALLOU | 1 |
| 7 | 15 | DONALD FIELDS | 4 |
| 8 | 17 | GEORGE FOURAS | 4 |
| 9 | 18 | MARTIN LALOR JR | 1 |
| 10 | 20 | DARCY KELLER | 1 |
| 11 | 22 | ALEXANDER CHEN | 1 |
| 12 | 27 | LORI BORGHI | 1 |
| 13 | 28 | ROBERT TAI | 4 |
| 14 | 29 | CHRISTOPHER HAZEN | 4 |
| 15 | 30 | PIERRE FRANCOIS | 4 |
| 16 | 31 | ROSELYN JEQUINTO | 1 |
| 17 | 32 | TROY JOLLIFF | 4 |
| 18 | 35 | MICHAEL AHERN | 4 |

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

SELECT a.EmployeeID, a.Emp_Name as Name, a.JobRole, a.MaritalStatus

FROM [General_data] a

WHERE EXISTS (

   SELECT 1

   FROM [General_data] b

   WHERE a.EmployeeID != b.EmployeeID

   AND a.MaritalStatus = b.MaritalStatus

   AND a.JobRole = b.JobRole

)

ORDER BY a.JobRole, a.MaritalStatus, a.EmployeeID;

| | EmployeeID | Name | JobRole | MaritalStatus |
|---|---|---|---|---|
| 1 | 64 | REGINA GOMEZ | Healthcare Representative | Divorced |
| 2 | 83 | CRISTINA REYES | Healthcare Representative | Divorced |
| 3 | 147 | ANN MANNIX | Healthcare Representative | Divorced |
| 4 | 152 | RYAN CREAN | Healthcare Representative | Divorced |
| 5 | 161 | LINDA ROSS | Healthcare Representative | Divorced |
| 6 | 203 | DANIEL ARMENTA | Healthcare Representative | Divorced |
| 7 | 234 | MICHAEL DALY | Healthcare Representative | Divorced |
| 8 | 262 | FUAD SWEISS | Healthcare Representative | Divorced |
| 9 | 300 | MANUEL PEGUEROS | Healthcare Representative | Divorced |
| 10 | 368 | ANDRE ANDREWS SR | Healthcare Representative | Divorced |
| 11 | 372 | EDWARD CHEUNG | Healthcare Representative | Divorced |
| 12 | 400 | FRANK KOSTA | Healthcare Representative | Divorced |
| 13 | 447 | HUNG-MING CHU | Healthcare Representative | Divorced |
| 14 | 456 | PETER ACTON | Healthcare Representative | Divorced |
| 15 | 467 | PATRICK KWAN | Healthcare Representative | Divorced |
| 16 | 468 | THOMAS FOGLE | Healthcare Representative | Divorced |
| 17 | 521 | JAMES HUDSON | Healthcare Representative | Divorced |
| 18 | 556 | RAYMOND QUESADA | Healthcare Representative | Divorced |

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

```
SELECT TOP 3 EmployeeID,"Emp_Name" as Name
,TotalWorkingYears,PerformanceRating
FROM [General_data]
WHERE PerformanceRating = 4
ORDER BY TotalWorkingYears DESC
```

| | EmployeeID | Name | TotalWorkingYears | PerformanceRating |
|---|---|---|---|---|
| 1 | 786 | STEVEN SETO | 35 | 4 |
| 2 | 2256 | SHARON LEGENZA | 35 | 4 |
| 3 | 3726 | EMILY MURASE | 35 | 4 |

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

```
SELECT AVG(Age) as Average_Age,AVG(JobSatisfaction) as
Average_Jobsatisfaction
FROM [General_data] GROUP BY BusinessTravel
```

| | Average_Age | Average_Jobsatisfaction |
|---|---|---|
| 1 | 36 | 2.78794642857143 |
| 2 | 37 | 2.70369181380417 |
| 3 | 36 | 2.78839177750907 |

- Retrieve the most common EducationField among employees.

```
SELECT TOP 1 EducationField,COUNT(EducationField) as total_count from
[General_data] GROUP BY EducationField
ORDER BY total_count DESC
```

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

SELECT EmployeeID,"Emp_Name" as

Name,YearsAtCompany,YearsSinceLastPromotion

FROM [General_data] WHERE

YearsAtCompany = (SELECT MAX(YearsAtCompany) FROM [General_data]) AND

YearsSinceLastPromotion = 0