

# Project – 1

```
-- This is the Project Analysis for my internship with PSYLIQ
-- By UMANG PARTI
```

```
--.....
--Viewing the data
```

```
select * from data;
select * from employee_survey_data;
select * from manager_survey_data;
select * from in_time;
select * from out_time;
```

EmpName	Age	Attrition	BusinessTravel	Department	DistanceFromHome	Education	EducationField	EmployeeCount	EmployeeID	Gender	JobLevel
ALBERTO PEDRUCO	51	No	Travel_Rarely	Sales	6	2	Life Sciences	1	1	Female	1
LAWRENCE LEE	31	Yes	Travel_Frequently	Research & Development	10	1	Life Sciences	1	2	Female	1
DWAYNE CURRY	32	No	Travel_Frequently	Research & Development	17	4	Other	1	3	Male	4

EmployeeID	EnvironmentSatisfaction	JobSatisfaction	WorkLifeBalance
1	3	4	2
2	3	2	4
3	2	2	1
4	4	4	3

EmployeeID	JobInvolvement	PerformanceRating
1	3	3
2	2	4
3	3	3

EmployeeID	Start Date	Time Interval 1	Time Interval 2	Time Interval 3	Time Interval 4	Time Interval 5	Time Interval 6	Time Interval 7	Time Interval 8	Time Interval 9	Time Interval 10
311	NA	"2015-01-02 10:18:34"	"2015-01-05 10:09:18"	"2015-01-06 09:25:37"	NA	"2015-01-08 09:59:13"	"2015-01-09 09:28:10"	"2015-01-12 10:37:37"	"2015-01-12 10:37:37"	"2015-01-12 10:37:37"	"2015-01-12 10:37:37"
312	NA	"2015-01-02 09:56:16"	"2015-01-05 09:53:19"	"2015-01-06 10:15:33"	"2015-01-06 10:15:33"	"2015-01-08 09:47:47"	"2015-01-09 09:40:16"	"2015-01-12 09:56:33"	"2015-01-12 09:56:33"	"2015-01-12 09:56:33"	"2015-01-12 09:56:33"

EmployeeID	Start Date	Time Interval 1	Time Interval 2	Time Interval 3	Time Interval 4	Time Interval 5	Time Interval 6	Time Interval 7	Time Interval 8	Time Interval 9	Time Interval 10
1857	NA	"2015-01-02 20:11:14"	"2015-01-05 20:20:13"	"2015-01-06 19:13:47"	"2015-01-07 20:49:05"	"2015-01-08 19:58:21"	NA	"2015-01-12 19:49:37"	"2015-01-12 19:49:37"	"2015-01-12 19:49:37"	"2015-01-12 19:49:37"

Query executed successfully. DESKTOP-Q8UOS7H\SQLEXPRESS ... | DESKTOP-Q8UOS7H\umang ... | psyliq | 00:00:02 | 22,050 rows

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

```
select count(distinct EmpName) as total_employees
from data;
```

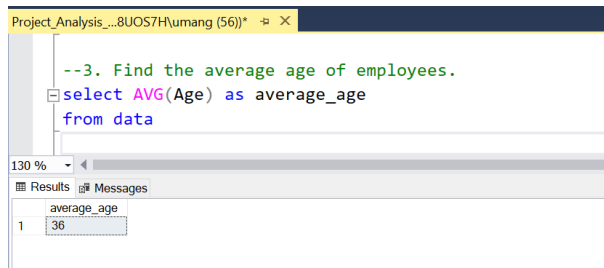
total_employees
4367

```
--2. List all unique job roles in the dataset.
```

```
select distinct JobRole as unique_job_role
from data;
```

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

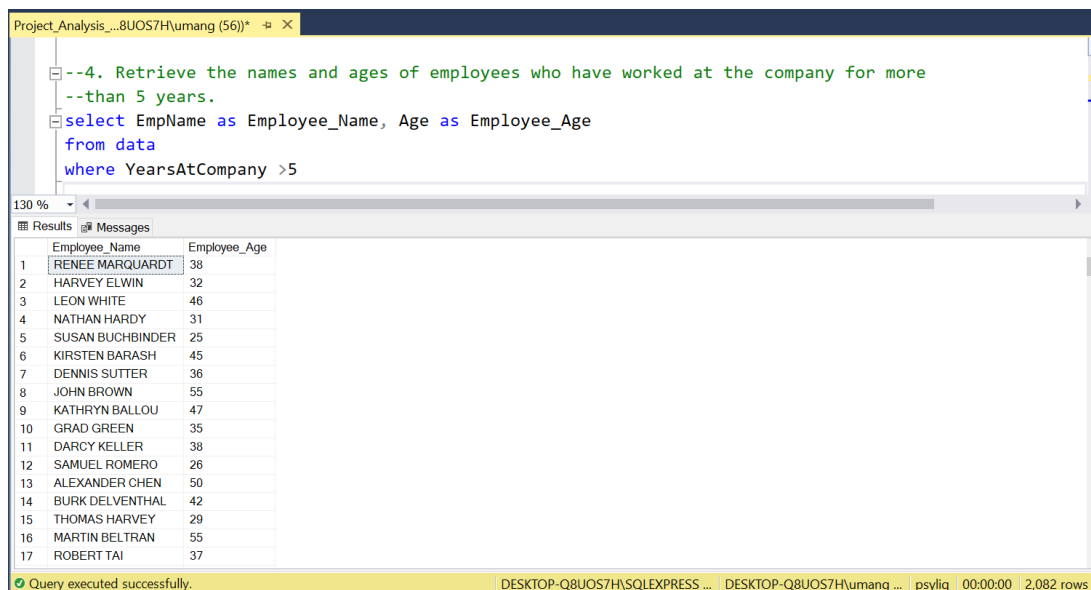
--3. Find the average age of employees.  
`select AVG(Age) as average_age  
from data`



The screenshot shows a SQL Server Enterprise Manager window titled 'Project\_Analysis\_...8UOS7H\umang (56)'. The query window contains the SQL code: `--3. Find the average age of employees.  
select AVG(Age) as average_age  
from data`. The 'Results' tab is active, displaying a single row with the column 'average\_age' and the value '36'.

average_age
36

--4. Retrieve the names and ages of employees who have worked at the company for more than 5 years.  
`select EmpName as Employee_Name, Age as Employee_Age  
from data  
where YearsAtCompany >5`

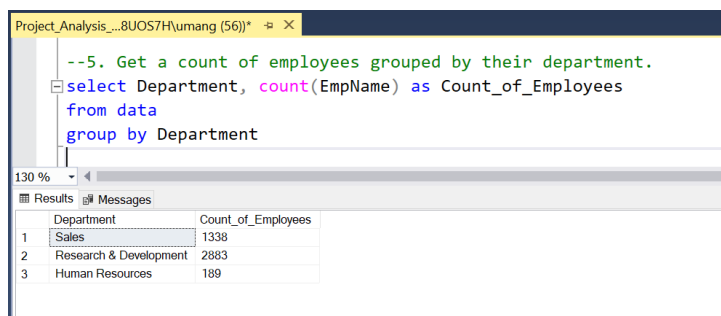


The screenshot shows a SQL Server Enterprise Manager window titled 'Project\_Analysis\_...8UOS7H\umang (56)'. The query window contains the SQL code: `--4. Retrieve the names and ages of employees who have worked at the company for more than 5 years.  
select EmpName as Employee_Name, Age as Employee_Age  
from data  
where YearsAtCompany >5`. The 'Results' tab is active, displaying a list of 17 employees with their names and ages.

	Employee_Name	Employee_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

Query executed successfully. | DESKTOP-Q8UOS7H\SQLEXPRESS ... | DESKTOP-Q8UOS7H\umang ... | psylliq | 00:00:00 | 2,082 rows

--5. Get a count of employees grouped by their department.  
`select Department, count(EmpName) as Count_of_Employees  
from data  
group by Department`



The screenshot shows a SQL Server Enterprise Manager window titled 'Project\_Analysis\_...8UOS7H\umang (56)'. The query window contains the SQL code: `--5. Get a count of employees grouped by their department.  
select Department, count(EmpName) as Count_of_Employees  
from data  
group by Department`. The 'Results' tab is active, displaying a table with three rows representing different departments and their employee counts.

	Department	Count_of_Employees
1	Sales	1338
2	Research & Development	2883
3	Human Resources	189

```
--6. List employees who have 'High' Job Satisfaction.
select EmpName, JobSatisfaction
from data d
inner join employee_survey_data e on d.EmployeeID = e.EmployeeID
where JobSatisfaction = 4
```

Project\_Analysis\_...8UOS7H\umang (56)\*

```
--6. List employees who have 'High' Job Satisfaction.
select EmpName, JobSatisfaction
from data d
inner join employee_survey_data e on d.EmployeeID = e.EmployeeID
where JobSatisfaction = 4
```

130 %

Results Messages

	EmpName	JobSatisfaction
1	ALBERTO PEDRUCCO	4
2	RENEE MARQUARDT	4
3	NATHAN HARDY	4
4	KIRSTEN BARASH	4
5	DENNIS SUTTER	4
6	DONALD FIELDS	4
7	LUIS HERRERA	4
8	MARTIN LALOR JR	4
9	THOMAS HARVEY	4
10	MARTIN BELTRAN	4
11	ROBERT TAI	4
12	PIERRE FRANCOIS	4
13	TROY JOLLIFF	4
14	BRIAN DELAHUNTY	4
15	ROBERT SERRANO	4
16	GERALD MANSUR JR	4
17	ROI AND PICKENS	4

Query executed successfully. DESKTOP-Q8UOS7H\SQLEXPRESS ... DESKTOP-Q8UOS7H\umang ... psylliq 00:00:00 1,367 rows

```
--7. Find the highest Monthly Income in the dataset.
select max(MonthlyIncome) as max_monthly_income
from data
```

Project\_Analysis\_...8UOS7H\umang (56)\*

```
--7. Find the highest Monthly Income in the dataset.
select max(MonthlyIncome) as max_monthly_income
from data
```

130 %

Results Messages

	max_monthly_income
1	199990

```
--8. List employees who have 'Travel_Rarely' as their BusinessTravel type.
select EmpName
from data
where BusinessTravel = 'Travel_Rarely'
```

Project\_Analysis\_...8UOS7H\umang (56)\*

```
--8. List employees who have 'Travel_Rarely' as their BusinessTravel type.
select EmpName
from data
where BusinessTravel = 'Travel_Rarely'
```

130 %

Results Messages

	EmpName
1	ALBERTO PEDRUCCO
2	HARVEY ELWIN
3	LEON WHITE
4	DENNIS HERRERA
5	DONALD BRYANT
6	NATHAN HARDY
7	KIRSTEN BARASH
8	DENNIS SUTTER
9	JOHN BROWN
10	DONALD FIELDS
11	LUIS HERRERA
12	GEORGE FOURAS
13	GRAD GREEN
14	DARCY KELLER
15	ALEXANDER CHEN
16	OLLIE BANKS
17	BURK DELVENTHAL
18	MARTIN BELTRAN

Query executed successfully. DESKTOP-Q8UOS7H\SQLEXPRESS ... DESKTOP-Q8UOS7H\umang ... psylliq 00:00:00 3,129 rows

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

```
select distinct MaritalStatus as unique_marital_status
from data;
```

Project\_Analysis\_...8UOS7H\umang (56)\*

```
--9. Retrieve the distinct MaritalStatus categories in the dataset.
select distinct MaritalStatus as unique_marital_status
from data;
```

130 %

Results Messages

	unique_marital_status
1	Single
2	Divorced
3	Married

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

```
select EmpName, TotalWorkingYears, YearsSinceLastPromotion
from data
where TotalWorkingYears >2 and YearsSinceLastPromotion <4
```

Project\_Analysis\_...8UOS7H\umang (56)\*

```
--10. Get a list of employees with more than 2 years of work experience
--but less than 4 years in their current role.
select EmpName, TotalWorkingYears, YearsSinceLastPromotion
from data
where TotalWorkingYears >2 and YearsSinceLastPromotion <4
```

130 %

Results Messages

	EmpName	TotalWorkingYears	YearsSinceLastPromotion
1	LAWRENCE LEE	6	1
2	DWAYNE CURRY	5	0
3	HARVEY ELWIN	9	0
4	DENNIS HERRERA	5	0
5	DONALD BRYANT	10	0
6	SUSAN BUCHBINDER	6	1
7	DONALD FIELDS	5	0
8	LUIS HERRERA	7	0
9	GEORGE FOURAS	3	1
10	MARTIN LALOR JR	15	0
11	SAMUEL ROMERO	6	1
12	ALEXANDER CHEN	28	1
13	OLLIE BANKS	21	1
14	THOMAS HARVEY	10	0
15	MARTIN BELTRAN	12	0
16	LORI BORCHI	5	3
17	CHRISTOPHER HAZEN	19	0

Query executed successfully. DESKTOP-Q8UOS7H\SQLEXPRESS ... DESKTOP-Q8UOS7H\umang ... psyliq 00:00:00 3,071 rows

--11. List employees who have changed their job roles within the company  
--(JobLevel and JobRole differ from their previous job).  
-- (there is no data to tell us about the information on their  
--previous joblabel and previous job roles)

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

```
Select Department, Avg(DistanceFromHome) as Avg_distance_from_home
from data
group by Department
```

Project\_Analysis\_...8UOS7H\umang (56)\*

```
--12. Find the average distance from home for employees in each department.
Select Department, Avg(DistanceFromHome) as Avg_distance_from_home
from data
group by Department
```

130 %

Results Messages

	Department	Avg_distance_from_home
1	Sales	9.230941
2	Research & Development	9.236212
3	Human Resources	8.253968

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

```
Select top 5 EmpName, MonthlyIncome
from data
order by MonthlyIncome desc
```

Project\_Analysis\_...8UOS7H\umang (56)\*

```
--13. Retrieve the top 5 employees with the highest MonthlyIncome.
Select top 5 EmpName, MonthlyIncome
from data
order by MonthlyIncome desc
```

130 %

Results Messages

	EmpName	MonthlyIncome
1	KEVIN LABANOWSKI	199990
2	DAVID KUCIA	199990
3	LAWRENCE LAU	199990
4	KEVIN MCNAUGHTON	199730
5	NATHAN SZUTU	199730

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

```
select
(select count(EmpName)
from data
where YearsSinceLastPromotion <=1)*100 /count (*) as percentage
from data
```

Project\_Analysis\_...8UOS7H\umang (56)\*

```
--14. Calculate the percentage of employees who have had a promotion in the last year.
select
(select count(EmpName)
from data
where YearsSinceLastPromotion <=1)*100 /count (*) as percentage
from data
```

130 %

Results Messages

	percentage
1	63

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

```
select EmpName, EnvironmentSatisfaction
from data d
inner join employee_survey_data e on d.EmployeeID = e.EmployeeID
where EnvironmentSatisfaction = 1 or EnvironmentSatisfaction = 4
```

Project\_Analysis\_...8UOS7H\umang (56)\*

```
--15. List the employees with the highest and lowest EnvironmentSatisfaction.
select EmpName, EnvironmentSatisfaction
from data d
inner join employee_survey_data e on d.EmployeeID = e.EmployeeID
where EnvironmentSatisfaction = 1 or EnvironmentSatisfaction = 4
```

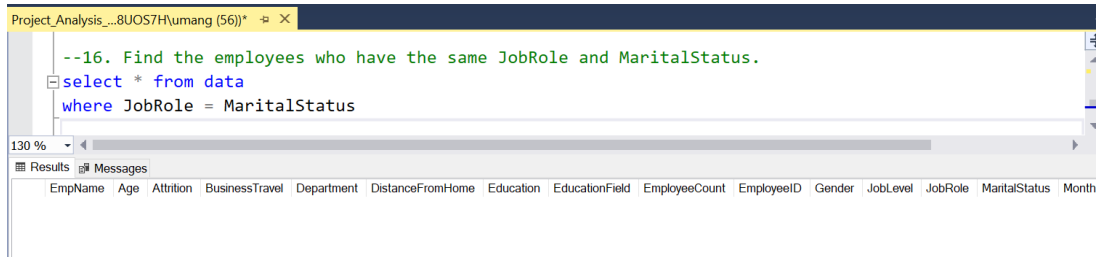
130 %

Results Messages

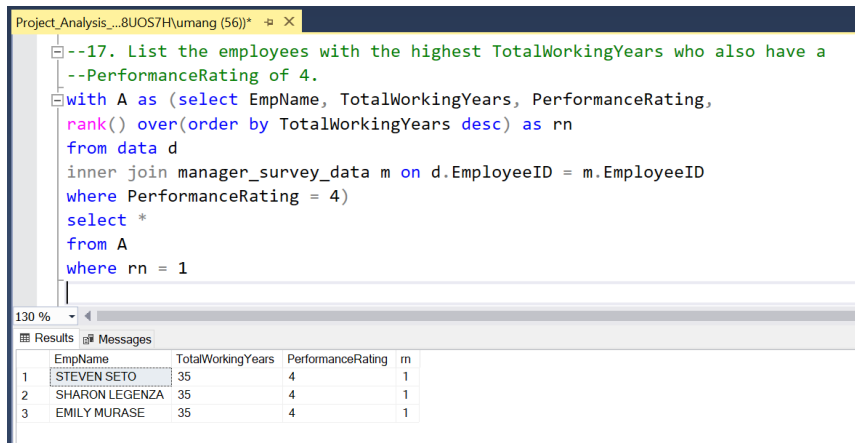
	EmpName	EnvironmentSatisfaction
1	RENEE MARQUARDT	4
2	HARVEY ELWIN	4
3	DENNIS HERRERA	1
4	DONALD BRYANT	1
5	JOHN BROWN	4
6	KATHRYN BALLOU	1
7	DONALD FIELDS	4
8	GEORGE FOURAS	4
9	MARTIN LALOR JR	1
10	DARCY KELLER	1
11	ALEXANDER CHEN	1
12	LORI BORCHI	1
13	ROBERT TAI	4
14	CHRISTOPHER HAZEN	4
15	PIERRE FRANCOIS	4
16	ROSELYN JEQUINTO	1
17	TROY JOLLIFF	4

Query executed successfully. DESKTOP-Q8UOS7H\SQL EXPRESS ... DESKTOP-Q8UOS7H\umang ... psylliq 00:00:00 2,179 rows

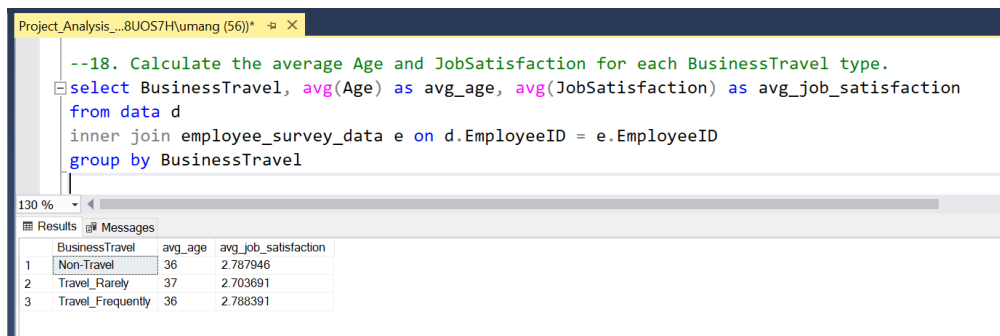
```
--16. Find the employees who have the same JobRole and MaritalStatus.
select * from data
where JobRole = MaritalStatus
```



```
--17. List the employees with the highest TotalWorkingYears who also have a
--PerformanceRating of 4.
with A as (select EmpName, TotalWorkingYears, PerformanceRating,
rank() over(order by TotalWorkingYears desc) as rn
from data d
inner join manager_survey_data m on d.EmployeeID = m.EmployeeID
where PerformanceRating = 4)
select *
from A
where rn = 1
```



```
--18. Calculate the average Age and JobSatisfaction for each BusinessTravel type.
select BusinessTravel, avg(Age) as avg_age, avg(JobSatisfaction) as avg_job_satisfaction
from data d
inner join employee_survey_data e on d.EmployeeID = e.EmployeeID
group by BusinessTravel
```



--.....