SQL PROJECT

HR ANALYTICS CASE STUDY

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Methodology

Data has been collected by company ABC to examine the state of employees in the company.

The management has contracted an HR analytics firm to understand what factors the company should focus on, in order to curb attrition. In other words, they want to know what changes they should make to their workplace, in order to get most of their employees to stay. Also, they want to know which of the variables is most important and needs to be addressed right away.

With the help of SQL this analysis can move forward ;

After the collection of data that would be insightful in the analysis, the data was reduced to a table with the help of MYSQL.

In MYSQL, the database information can be stored in a table which makes it easier for the information to be interpreted.

ANALYSIS

AIM : Analysis focuses on observing the various factors that could have impacted in employee attrition other than the factors related to the work space

- **Code for creating a database for the data**

```
create database presentation;
use presentation ;
```

- **Code for creating a table 'genral' , depicting the data collected by the HR ANALYTICS**

```
create table generaldata2 (Employee_ID char(5),Employee_name
varchar(60), Gender varchar(20), Business_Travel varchar(60), Department
varchar(60),    Education varchar(20),Education_Field varchar(60), Job_Level
varchar(60),Job_Role  varchar(60), Marital_Statusvarchar(20),
Monthly_Income int unsigned, Percent_Salary_Hike int unsigned
,Total_Working_Yearsint unsigned,Years_With_CurrManager varchar(20));

describe generaldata2;
```

Result Grid | Filter Rows: | Export: | Wra

Field	Type	Null	Key	Default	Extra
Employee_ID	char(5)	YES		NULL	
Employee_name	varchar(60)	YES		NULL	
Gender	varchar(20)	YES		NULL	
Business_Travel	varchar(60)	YES		NULL	
Department	varchar(60)	YES		NULL	
Education	varchar(20)	YES		NULL	
Education_Field	varchar(60)	YES		NULL	
Job_Level	varchar(60)	YES		NULL	
Job_Role	varchar(60)	YES		NULL	
Marital_Status	varchar(20)	YES		NULL	
Monthly_Income	int unsigned	YES		NULL	
Percent_Salary...	int unsigned	YES		NULL	
Total_Working_...	int unsigned	YES		NULL	
Years_With_Cu...	varchar(20)	YES		NULL	

TABLE ‘generaldata1 ‘,depicting the data for the HR ANALYTICS, thus formed :

Employee_ID	Employee_name	Gender	Business_Travel	Department	Education	Education_Field	Job_Level	Job_Role	Marital_Status	Monthly_I	Percent_S	Total_Wo	Years_With_CurrManag
EMP01	Emery Hunter	Female	Travel_Rarely	Sales	Bachelors	Life Sciences	1	Healthcare Representat	Married	131160	11	1	0
EMP02	Sofia Parker	Female	Travel_Frequently	Research & Developme	PhD	Life Sciences	1	Research Scientist	Single	41890	23	6	4
EMP03	Lucy Fong	Male	Travel_Frequently	Finance	Bachelors	Other	4	Sales Executive	Married	193280	15	5	3
EMP04	Vivian Barnes	Male	Non-Travel	Research & Developme	Masters	Life Sciences	3	Human Resources	Married	83210	11	13	5
EMP05	Kai Chow	Male	Travel_Rarely	Finance	Masters	Medical	1	Sales Executive	Single	23420	12	9	4
EMP06	Melody Cooper	Female	Travel_Rarely	Research & Developme	Bachelors	Other	4	Research Director	Married	40710	13	28	7
EMP07	James Bui	Female	Travel_Rarely	Research & Developme	PhD	Medical	2	Sales Executive	Single	58130	20	5	0
EMP08	Liam Grant	Male	Travel_Rarely	Research & Developme	Bachelors	Life Sciences	2	Sales Executive	Married	31430	22	10	0
EMP09	Owen Han	Male	Travel_Rarely	Finance	Bachelors	Other	3	Laboratory Technician	Married	20440	21	10	8
EMP10	Kinsley Vega	Female	Non-Travel	Research & Developme	Masters	Medical	4	Laboratory Technician	Divorced	134640	13	6	5
EMP11	Leonardo Martin	Male	Travel_Rarely	Research & Developme	Masters	Medical	2	Laboratory Technician	Married	79910	13	21	10
EMP12	Greyson Lam	Male	Travel_Rarely	Finance	PhD	Life Sciences	1	Laboratory Technician	Married	33770	12	16	11
EMP13	Emilia Rivera	Female	Travel_Rarely	Research & Developme	Bachelors	Other	1	Sales Executive	Single	55380	17	37	13
EMP14	Penelope Johnson	Female	Non-Travel	Research & Developme	Bachelors	Medical	1	Research Scientist	Married	57620	11	10	9
EMP15	Eva Figueroa	Male	Travel_Rarely	Finance	Bachelors	Life Sciences	1	Manufacturing Director	Married	25920	14	5	4
EMP16	Ezekiel Jordan	Male	Travel_Rarely	Research & Developme	PhD	Life Sciences	2	Healthcare Representat	Married	53460	11	7	1
EMP17	Luke Mai	Male	Travel_Rarely	Finance	Bachelors	Life Sciences	1	Laboratory Technician	Single	42130	12	3	0
EMP18	Charles Diaz	Male	Non-Travel	Research & Developme	PhD	Medical	2	Sales Executive	Divorced	41270	13	15	2
EMP19	Adam Espinoza	Male	Travel_Rarely	Sales	Bachelors	Other	1	Sales Representative	Divorced	24380	16	10	2
EMP20	Cora Jiang	Male	Travel_Frequently	Research & Developme	PhD	Other	2	Laboratory Technician	Divorced	104470	18	6	4
EMP21	Lia Honag	Male	Travel_Frequently	Research & Developme	Bachelors	Other	3	Life Sciences	Single	10440	15	5	3
EMP22	Cooper Mitchell	Male	Travel_Rarely	Sales	Masters	Life Sciences	1	Research Scientist	Divorced	96670	23	28	6
EMP23	Layla Torres	Female	Travel_Rarely	Finance	Bachelors	Other	2	Research Scientist	Married	21480	11	21	3
EMP24	Jack Edwards	Male	Travel_Rarely	Research & Developme	Bachelors	Life Sciences	1	Manufacturing Director	Married	89260	14	12	6
EMP25	Eleanor Chan	Male	Travel_Frequently	Finance	PhD	Medical	1	Laboratory Technician	Single	65130	11	10	9
EMP26	Aria Xi	Female	Travel_Rarely	Research & Developme	PhD	Other	1	Research Scientist	Married	67990	11	12	8
EMP27	John Vega	Female	Travel_Frequently	Research & Developme	Bachelors	Life Sciences	1	Manager	Married	162910	12	5	3
EMP28	Luke Munoz	Male	Travel_Rarely	Sales	Bachelors	Marketing	1	Research Scientist	Single	27050	11	17	7
EMP29	Sarah Daniels	Female	Travel_Frequently	Research & Developme	PhD	Other	2	Research Scientist	Divorced	103330	14	19	0
EMP30	Aria Castro	Female	Travel_Rarely	Sales	Masters	Marketing	1	Manager	Divorced	44480	12	10	2
EMP31	Autumn Joseph	Female	Travel_Rarely	Research & Developme	PHD	Medical	3	Research Scientist	Divorced	68540	11	5	2
EMP32	Evelyn Liang	Male	Travel_Rarely	Research & Developme	Bachelors	Other	1	Human Resources	Single	96370	13	5	2
EMP33	Henry Alvarez	Female	Travel_Frequently	Research & Developme	PhD	Medical	2	Research Scientist	Single	35910	13	22	2
EMP34	Benjamin Delgado	Male	Travel_Rarely	Sales	Bachelors	Technical Degree	3	Sales Executive	Single	54050	14	10	7
EMP35	Zoe Rodriguez	Male	Travel_Frequently	Research & Developme	PhD	Medical	1	Sales Executive	Divorced	46840	16	2	2
EMP36	Axel Chu	Male	Travel_Rarely	Research & Developme	Bachelors	Medical	2	Manager	Single	157870	12	8	4
EMP37	Cameron Evans	Male	Travel_Frequently	Sales	Bachelors	Marketing	1	Laboratory Technician	Married	15140	14	4	2
EMP38	Isabella Soto	Male	Travel_Frequently	Sales	PhD	Marketing	3	Research Director	Married	29560	13	23	8
EMP39	Eva Jenkins	Female	Travel_Rarely	Research & Developme	Bachelors	Life Sciences	1	Sales Executive	Single	23350	14	0	0
EMP40	Cameron Powell	Male	Travel_Rarely	Sales	Bachelors	Life Sciences	1	Laboratory Technician	Married	51540	19	12	9
EMP41	Samantha Foster	Female	Travel_Frequently	Finance	Bachelors	Other	3	Sales Executive	Married	69620	12	4	0
EMP42	Jade Li	Male	Travel_Rarely	Research & Developme	Masters	Life Sciences	2	Laboratory Technician	Divorced	56750	13	13	2
EMP43	Kinsley Acosta	Male	Travel_Rarely	Finance	Bachelors	Life Sciences	1	Laboratory Technician	Single	23790	12	22	4
EMP44	Harper Alexander	Male	Travel_Rarely	Research & Developme	Bachelors	Medical	1	Sales Representative	Single	46480	23	9	7
EMP45	Clara Kang	Male	Travel_Rarely	Sales	Bachelors	Life Sciences	1	Research Scientist	Single	38120	15	0	0
EMP46	Carter Reed	Male	Travel_Rarely	Research & Developme	Bachelors	Technical Degree	1	Manufacturing Director	Married	29360	12	10	7
EMP47	Charlotte Ruiz	Female	Travel_Rarely	Sales	PHD	Marketing	2	Human Resources	Divorced	21050	20	19	7
EMP48	Everleigh Jiang	Male	Non-Travel	Finance	Masters	Other	1	Sales Executive	Married	85780	21	11	8
EMP49	Audrey Smith	Male	Travel_Rarely	Sales	Masters	Marketing	2	Laboratory Technician	Married	27060	21	13	8
EMP50	Emery Acosta	Female	Travel_Rarely	Research & Developme	PhD	Life Sciences	3	Research Scientist	Married	63840	19	19	1

- **Creating new table to depict the data for employee experience and satisfaction as an employee in company ABC :**

  - create table employees (Employee_ID char(5),Environment_Satisfaction char(1),Job_Satisfaction char(1),Work_Life_Balance char(1), Attrition varchar(4));

    describe employees;

Field	Type	Null	Key	Default	Extra
Employee_ID	char(5)	YES		NULL	
Environment_Satisfaction	char(1)	YES		NULL	
Job_Satisfaction	char(1)	YES		NULL	
Work_Life_Balance	char(1)	YES		NULL	
Attrition	varchar(4)	YES		NULL	

TABLE 'employee'

Employee_ID	Environment_Satisfaction	Job_Satisfaction	Work_Life_Balance	Attrition
EMP01	3	4	2	No
EMP02	3	2	4	Yes
EMP03	2	2	1	No
EMP04	4	4	3	No
EMP05	4	1	3	No
EMP06	3	2	2	No
EMP07	1	3	1	Yes
EMP09	2	4	4	No
EMP08	4	1	3	No
EMP10	2	1	3	No
EMP11	3	4	3	No
EMP12	4	4	3	No
EMP13	4	1	3	No
EMP14	1	2	2	Yes
EMP15	4	4	2	No
EMP16	3	4	4	No
EMP17	4	3	4	No
EMP18	1	4	3	No
EMP19	2	2	2	No
EMP20	1	1	3	No
EMP21	3	2	1	No
EMP22	1	2	2	No
EMP23	3	3	2	No
EMP24	2	3	3	No
EMP25	2	4	2	No
EMP26	2	4	3	No
EMP27	1	1	3	No
EMP28	4	4	3	No
EMP29	4	3	1	Yes
EMP30	4	4	3	No
EMP31	1	2	3	Yes
EMP32	4	4	3	No
EMP33	3	1	3	No
EMP34	3	2	3	No
EMP35	4	2	2	No
EMP36	4	4	3	Yes
EMP37	2	4	2	No
EMP38	3	2	4	No
EMP39	3	3	3	Yes
EMP40	3	2	2	No
EMP41	3	2	3	No
EMP42	4	2	3	No
EMP43	4	2	3	No
EMP44	4	3	3	No
EMP45	2	1	3	No
EMP46	2	4	2	No
EMP47	3	4	2	No
EMP48	2	2	3	No
EMP49	4	3	2	No
EMP50	1	2	3	No

❖ ANALYSIS OF TABLE ‘employee’

We start our analysis by considering the rating that the employees have given to the company’s professional environment with the help of table ‘employee’.
These ratings were on a scale of 1 to 5

1 – very dissatisfied
2- dissatified
3- average/neutral
4- satisfied
5 – very satisfied

With the help of the table we can see how many employees opted for attrition

1. **7 people have opted for attrition**

   - SELECT Attrition, COUNT(*) AS employee_count FROM employees GROUP BY Attrition;

2. **Those seven people are :**

   - select generaldata2.Employee_ID,Employee_name,attrition from employees

     inner join generaldata2

     on employees.Employee_ID=generaldata2.Employee_ID
     where attrition = "Yes";

3. **<u>We will see if the factors mentioned in the table 'employees' have an impact on the decision made by these 7 employees</u>**

   a. <u>Environment_Satisfaction</u>

The employees have rated the company's envirionment experience on a scale of 1 to 5.

- SELECT Environment_Satisfaction, COUNT(*) AS employee_count FROM employees GROUP BY Environment_Satisfaction;

Environment_Satisfaction	employee_count
3	14
2	11
4	17
1	8

More employees have rated the company's environment experience satisfying,
But we see,

- Out of the people who have decided to leave the company, majority of the them rated the environment satisfaction above average (4 out 7 people rated 3 or 4)

- select Employee_ID,Attrition,Environment_Satisfaction from employees where Environment_Satisfaction >= 3 and Attrition ="Yes";

Employee_ID	Attrition	Environment_Satisfaction
EMP02	Yes	3
EMP29	Yes	4
EMP36	Yes	4
EMP39	Yes	3

Implying, there must be some other factors that are sabotaging the environment satisfaction for the employees in the company ABC

b. Job_Satisfaction

There are two extremes to the rating of job satisfaction for the employees in company ABC.

- 17 people have rated the job satisfaction below average(2),and 17 people have rated the satisfaction above average(4).

- SELECT Job_Satisfaction, COUNT(*) AS employee_count FROM employees GROUP BY Job_Satisfaction;

Job_Satisfaction	employee_count
4	17
2	17
1	8
3	8

We can imply that there are other factors affecting the saisfaction level of the employees in the companythat are leading them to leave the company.
We would be discussing the other factors later with the help of table 'generaldata2'

- 4 of 7 employees that have decided to leave the company have rated the job satisfaction above average (between 3 to 4), implying there are other factors affecting the decision

- select Employee_ID,Attrition,Job_Satisfaction from employees where Job_Satisfaction >= 3 and Attrition ="Yes";

Employee_ID	Attrition	Job_Satisfaction
EMP07	Yes	3
EMP29	Yes	3
EMP36	Yes	4
EMP39	Yes	3

c. Work_Life_Balance

- Majority of the employees (28 of 50) have rated the work life balance in the company average (3)

  - SELECT Work_Life_Balance, COUNT(*) AS employee_count FROM employees GROUP BY Work_Life_Balance;

Work_Life_Balance	employee_count
2	14
4	4
1	4
3	28

- Again, for most people(4/7) who left the company, work life balance was not one of main reasons

  - select Employee_ID,Attrition,Work_Life_Balance from employees where Work_Life_Balance >= 3 and Attrition ="Yes";

Employee_ID	Attrition	Work_Life_Balance
EMP02	Yes	4
EMP31	Yes	3
EMP36	Yes	3
EMP39	Yes	3

- In general, we can see that there are two employees who have opted for attrtion but were quite satisfied with the job profile on the basis of the factors considered in the table 'employees'

  - select * from employees where Job_Satisfaction>=3 and Environment_Satisfaction>=3 and Work_Life_Balance>=3 and Attrition ="Yes";

Employee_ID	Environment_Satisfaction	Job_Satisfaction	Work_Life_Balance	Attrition
EMP36	4	4	3	Yes
EMP39	3	3	3	Yes

- Therefore, to be able to detect the real reason for rising attrition rate for the company, we analyse other factors that might have impacted the employees decision making process using the table 'generaldata2'

❖ ANALYSIS OF TABLE 'generaldata2'

The table considers 6 factors that are related to the employees personal choices and preferences

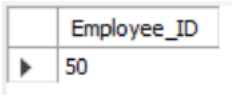
#1)Job roles
#2)Gender
#3)Education background
#4)Department they worked in
#5)Martial status
#6)Business travel

We begin by analysing some general data provided by the table ‘generaldata’

- **Some general analytics from table 'generaldata2'**

  - Around 50 employee data is taken into consideration as the sample, representing the population related to the whole company ABC:

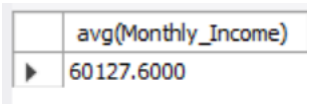
    - SELECT COUNT(*) AS Employee_ID FROM generaldata2;



	Employee_ID
▶	50

  - To get an idea of the average salary offered by the company ABC

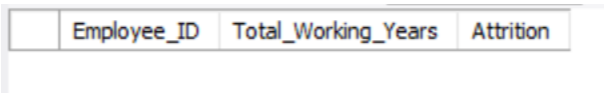
    - select avg(Monthly_Income) from generaldata2;



	avg(Monthly_Income)
▶	60127.6000

Therefore the average salry is around 60,000

  - We see employees that have been employed in the company for more than 2 decades, have not contributed to the attrition rate of the company
    - select employees.Employee_ID,Total_Working_Years,Attrition from generaldata2
      inner join employees
      on generaldata2.Employee_ID=employees.Employee_ID
      where Attrition = "Yes" and Total_Working_Years > 20;



	Employee_ID	Total_Working_Years	Attrition

- Employee with the maximum salary - Lucy Fong (sales executive) with job level 4

  - select Employee_name,Job_Role,Job_Level, Monthly_Income from generaldata2 order by Monthly_Income desc;

Employee_name	Job_Role	Job_Level	Monthly_Income
Lucy Fong	Sales Executive	4	193280
John Vega	Manager	1	162910
Axel Chu	Manager	2	157870
Kinsley Vega	Laboratory Technician	4	134640
Emery Hunter	Healthcare Representative	1	131160
Cora Jiang	Laboratory Technician	2	104470

- There were employee who left the company even though their salaries were above average (average being around 60,000 as calculated above)

  - select employees.Employee_ID,Monthly_Income,Attrition from generaldata2
    inner join employees
    on generaldata2.Employee_ID=employees.Employee_ID
    where Attrition = "Yes" and Monthly_Income >= 60000 ;

Employee_ID	Monthly_Income	Attrition
EMP29	103330	Yes
EMP31	68540	Yes
EMP36	157870	Yes

Factors in the table 'generaldata2' other than the ones related to work environment of the company that were considered by the HR Analytics:

I. The department employee belong to

People can base their decision on staying in the company depending on the department they belong ;

- SELECT DISTINCT Department FROM generaldata2;

Department
Sales
Research & Development
Finance

- The job roles mainly focuses on the research and development department
  - SELECT Department, COUNT(*) AS employee_count FROM generaldata2 GROUP BY Department;

	Department	employee_count
▶	Sales	12
	Research & Development	27
	Finance	11

- All 7 Employees that left were from research and development

  - select employees.Employee_ID,Department,Attrition from generaldata2
    inner join employees
    on generaldata2.Employee_ID=employees.Employee_ID
    where Attrition = "Yes" ;

	Employee_ID	Department	Attrition
▶	EMP02	Research & Development	Yes
	EMP07	Research & Development	Yes
	EMP14	Research & Development	Yes
	EMP29	Research & Development	Yes
	EMP31	Research & Development	Yes
	EMP36	Research & Development	Yes
	EMP39	Research & Development	Yes

II. The job roles assigned by the company

- People can base their decision on staying in the company depending on their job roles
  - SELECT DISTINCT Job_Role FROM generaldata2;

	Job_Role
▶	Healthcare Representative
	Research Scientist
	Sales Executive
	Human Resources
	Research Director
	Laboratory Technician
	Manufacturing Director
	Sales Representative
	Life Sciences
	Manager

- The count for the job role of employees in the ABC company

  - SELECT Job_Role, COUNT(*) AS employee_count FROM generaldata2 GROUP BY Job_Role;

	Job_Role	employee_count
▶	Healthcare Representative	2
	Research Scientist	11
	Sales Executive	11
	Human Resources	3
	Research Director	2
	Laboratory Technician	12
	Manufacturing Director	3
	Sales Representative	2
	Life Sciences	1
	Manager	3

- Of 7 attritted employees, 4 were research scientist even though research and development department has the most employment (as we saw earlier)

  - select employees.Employee_ID,Job_Role,Attrition from generaldata2
  inner join employees
  on generaldata2.Employee_ID=employees.Employee_ID
  where Attrition = "Yes" and Job_Role="Research Scientist";

Employee_ID	Job_Role	Attrition
EMP02	Research Scientist	Yes
EMP14	Research Scientist	Yes
EMP29	Research Scientist	Yes
EMP31	Research Scientist	Yes

#3) Gender can play an important role in decion making in the society

- SELECT DISTINCT Gender FROM generaldata2;

Gender
Female
Male

- There are more males working in the company than females (32/50 compared to 18/50)
  - SELECT Gender, COUNT(*) AS employee_count FROM generaldata2 GROUP BY Gender;

Gender	employee_count
Female	18
Male	32

- There is only one male that has opted for attrition in the company, rest all are female
  - select employees.Employee_ID,Employee_name,Gender,Attrition from generaldata2
  inner join employees
  on generaldata2.Employee_ID=employees.Employee_ID
  where Attrition = "Yes" and Gender="Male";

Employee_ID	Employee_name	Gender	Attrition
EMP36	Axel Chu	Male	Yes

Therefore we can infer that females have more difficulties keeping up with the job of the company compared to males

- As we saw earlier, the average income offered by the company was around 60000. To see if women are recieving the average income,

  - select Employee_name,Monthly_Income,Gender from generaldata2 where Monthly_Income >= 60000 and Gender = "Female" ;

	Employee_name	Monthly_Income	Gender
▶	Emery Hunter	131160	Female
	Kinsley Vega	134640	Female
	Aria Xi	67990	Female
	John Vega	162910	Female
	Sarah Daniels	103330	Female
	Autumn Joseph	68540	Female
	Samantha Foster	69620	Female
	Emery Acosta	63840	Female

Only around seven females of the company recieve above average income in the company. This could be one of the reasons why females have a higher rate of attrition in he company

- Majority of females in the company dont have their salary hike more than 15% (only 5 of 18 females)
  - select Employee_ID,Employee_name,Gender,Percent_Salary_Hike from generaldata2 where Percent_Salary_Hike > 15 and gender = "Female" ;

	Employee_ID	Employee_name	Gender	Percent_Salary_Hike
▶	EMP02	Sofia Parker	Female	23
	EMP07	James Bui	Female	20
	EMP13	Emilia Rivera	Female	17
	EMP47	Charlotte Ruiz	Female	20
	EMP50	Emery Acosta	Female	19

- But we see the hike goes as high as 23 %
  - select max(Percent_Salary_Hike) from generaldata2;

	max(Percent_Salary_Hike)
▶	23

#4)Marital status

Marital status can impact the time employees get to invest in a job regardless of the company

  - SELECT DISTINCT Marital_Status FROM generaldata2;

	Marital_Status
▶	Married
	Single
	Divorced

- 23 of 50 employees are married
  - SELECT Marital_Status, COUNT(*) AS employee_count FROM generaldata2 GROUP BY Marital_Status;

	Marital_Status	employee_count
▶	Married	23
	Single	16
	Divorced	11

- We see there are more single people who will to leave the company, which coluld imply that they have lesser financial burden and restrictions, and can explore more job opportunities. People with families (not single) might not be able to be that flexible in their choices of job profiles, as they have different responsibilities

```
select employees.Employee_ID,Marital_Status,Attrition from generaldata2
inner join employees
on generaldata2.Employee_ID=employees.Employee_ID
where Attrition = "Yes";
```

Employee_ID	Marital_Status	Attrition
EMP02	Single	Yes
EMP07	Single	Yes
EMP14	Married	Yes
EMP29	Divorced	Yes
EMP31	Divorced	Yes
EMP36	Single	Yes
EMP39	Single	Yes

#5)Education background

The job profile offered by ABC company may be percieved differently by employees pursuing bachelors and those who are going for further studies.

```
SELECT DISTINCT Education FROM generaldata2;
```

Education
Bachelors
PhD
Masters

- There are more employees with a bachelors degree (26/50)

```
SELECT Education, COUNT(*) AS employee_count FROM generaldata2 GROUP
BY Education;
```

Education	employee_count
Bachelors	26
PhD	15
Masters	9

- We see majority of the employees (4/7) who have opted for attrition have completed bachelors and are pursuing further studies (either PhD or Masters), implying, as people pursue further education, there might be a tendecny to switch to other job profiles.

```
select employees.Employee_ID,Education,Attrition from generaldata2
inner join employees
on generaldata2.Employee_ID=employees.Employee_ID
where Attrition = "Yes" and Education="Bachelors";
```

Employee_ID	Education	Attrition
EMP14	Bachelors	Yes
EMP36	Bachelors	Yes
EMP39	Bachelors	Yes

#6) Bussiness Travel requirement

People can base their decision on staying in the company depending on how frequently it is required for them to travel

- SELECT DISTINCT Business_Travel FROM generaldata2;

Business_Travel
Travel_Rarely
Travel_Frequently
Non-Travel

- For the majority (33/50) of the employees, the job profile includes travelling rarely

- select employees.Employee_ID,Employee_name,Business_Travel,Attrition from employees
inner join generaldata2
on employees.Employee_ID=generaldata2.Employee_ID
where Attrition = "Yes";

Employee_ID	Employee_name	Business_Travel	Attrition
EMP02	Sofia Parker	Travel_Frequently	Yes
EMP07	James Bui	Travel_Rarely	Yes
EMP14	Penelope Johnson	Non-Travel	Yes
EMP29	Sarah Daniels	Travel_Frequently	Yes
EMP31	Autumn Joseph	Travel_Rarely	Yes
EMP36	Axel Chu	Travel_Rarely	Yes
EMP39	Eva Jenkins	Travel_Rarely	Yes

- Most employees that left used to travel rarely

- SELECT Business_Travel, COUNT(*) AS employee_count FROM generaldata2
GROUP BY Business_Travel;

Business_Travel	employee_count
Travel_Rarely	33
Travel_Frequently	12
Non-Travel	5

CONCLUSION

- Company ABC hired a HR analytics firm to figure out factors that were leading to an increasing rate of attrition in the company.

With the help of SQL, we were able to figure out various different factors apart from factors that the company had already analysed (under table 'employee'), and came across the conclusion, that the employees do have other personal reasons and preferences that have impacted their decision like;

#1)Job roles
#2)Gender
#3)Education background
#4)Department they worked in
#5)Martial status
#6)Business travel

The company can now keep these factors in mind while operating in the future, for betterment

REFERENCE

- For tables ‘generaldata2’ and table ‘employee’

HR Analytics Case Study