EMPLOYEE ATTIRTION

INTRODUCTION

This data set contains employees details in a company and includes information of employees such as EmployeeID, Age, Attrition, BusinessTravel, DailyRate, Department, DistanceFromHome, Education, EducationField, EmployeeCount, EnvironmentSatisfaction, Gender, HourlyRate, JobInvolvement, JobLevel, JobRole, JobSatisfaction, MaritalStatus, MonthlyIncome, MonthlyRate.

To easily find and classify details of an employee.

AIM

The main goal is to find, classify and easily access data of employees which can help the user. This database contain important data about '1676' employees.

OBJECTIVE

1.Data collection

By analysing this database, this database includes all important details about Employees. The data was stored in relational database.

2.Data cleaning

The database contains many missing values and duplicate rows, by the cleaning process we can ensure the database integrity.

3.SQL Queries

This database includes SQL queries to execute relevant information by using SELECT, WHERE, DISTINCT, LIMIT, GROUP BY, ORDER BY, and aggregation functions.

DATA OVERVIEW

Field	Type	Null	Key	Default	Extra
EmployeeID	int	YES		NULL	
Age	int	YES		NULL	
age_category	varchar(100)	YES		NULL	
Attrition	text	YES		NULL	
BusinessTravel	text	YES		NULL	
DailyRate	int	YES		NULL	
Department	text	YES		NULL	
DistanceFromHome	int	YES		NULL	
Education	int	YES		NULL	
EducationField	text	YES		NULL	
EmployeeCount	int	YES		NULL	
EnvironmentSatisf...	int	YES		NULL	
Gender	text	YES		NULL	
HourlyRate	int	YES		NULL	
JobInvolvement	int	YES		NULL	
JobLevel	int	YES		NULL	
JobRole	text	YES		NULL	
JobSatisfaction	int	YES		NULL	
MaritalStatus	text	YES		NULL	
MonthlyIncome	int	YES		NULL	
MonthlyRate	int	YES		NULL	

QUESTIONS

1. What is the total number of employees?

   SELECT COUNT(*) FROM emp_table;

2. How many new employees are there?

   SELECT COUNT(*) FROM emp_table WHERE age = 18;

3. What is the maximum daily payment to an employee?

   SELECT MAX(dailyrate) FROM emp_table;

4. What is the minimum daily payment to an employee?

   SELECT MIN(dailyrate) FROM emp_table;

5. What are the details of the employee with the minimum daily payment?

   SELECT * FROM emp_table WHERE dailyrate = 102;

6. What are the details of the employee with the maximum daily payment?

   SELECT * FROM emp_table WHERE dailyrate = 1499;

7. How many employees have the maximum distance from home?

   SELECT MAX(distancefromhome) FROM emp_table;

8. How is the number of employees categorized by business travel?

   SELECT businesstravel, COUNT(*) AS counts FROM emp_table GROUP BY businesstravel ORDER BY counts;

9. How are employees categorized by age and gender?

    SELECT age, gender, COUNT(*) AS counts FROM emp_table GROUP BY age, gender ORDER BY counts;

10. How are employees categorized by marital status and gender?

    SELECT maritalstatus, gender, COUNT(*) AS counts FROM emp_table GROUP BY maritalstatus, gender ORDER BY counts;

11. How are employees categorized by department and gender?

    SELECT department, gender, COUNT(*) AS counts FROM emp_table GROUP BY department, gender ORDER BY counts;

12. How are employees categorized by age category and gender?

    SELECT age_category, gender, COUNT(*) AS count FROM emp_table GROUP BY age_category, gender ORDER BY count;

13. How are employees categorized by education field and job role?

    SELECT educationfield, jobrole, COUNT(*) AS count FROM emp_table GROUP BY educationfield, jobrole ORDER BY count;

14. How are employees categorized by age category and job role?

    SELECT age_category, jobrole, COUNT(*) AS count FROM emp_table GROUP BY age_category, jobrole ORDER BY count;

15. How are employees categorized by department and gender?

    SELECT department, gender, COUNT(*) AS count FROM emp_table GROUP BY department, gender ORDER BY count;

16. How are employees categorized by attrition and gender?

    SELECT attrition, gender, COUNT(*) AS counts FROM emp_table GROUP BY attrition, gender ORDER BY counts;

17. How are employees categorized by attrition and age category?

    SELECT attrition, age_category, COUNT(*) AS counts FROM emp_table GROUP BY attrition, age_category ORDER BY counts;

18. How are employees categorized by attrition and business travel?

    SELECT attrition, businesstravel, COUNT(*) AS counts FROM emp_table GROUP BY attrition, businesstravel ORDER BY counts;

19. How many employees have left based on their education field?

    SELECT attrition, educationfield, COUNT(*) AS counts FROM emp_table GROUP BY attrition, educationfield ORDER BY counts;

CONCLUSION

1. NUMBER OF MALE AND FEMALE WORKERS

select gender,count(*) from emp_table group by gender;

gender	count(*)
Female	678
Male	998

2. AVERAGE AGE OF FEMALE AND MALE WORKERS

select gender,avg(age) from emp_table group by gender;

gender	avg(age)
Female	37.3274
Male	36.5531

3. AVERAGE DAILYRATE FOR THE PEOPLE WHO LEFT AND STAYED

select attrition,avg(dailyrate) from emp_table group by attrition;

attrition	avg(dailyrate)
No	808.4997
Yes	741.6131

4. NUMBER OF PEOLE WITH HIGH,LOW,AVERAGE SALARY

update emp_table set salary_category=case when monthlyincome<5000 then 'Low salary' when monthlyincome>=5000 and monthlyincome<=10000 then 'Average salary' else 'High salary' end ; select salary_category,count(*) from emp_table group by salary_category;

salary_category	count(*)
Average salary	492
Low salary	859
High salary	325

5. NUMBER OF PEOPLE LEFT FROM EACH DEPARTMENT

select department,count(attrition) as num_left from emp_table where attrition='Yes' group by department;

department	num_left
Maternity	98
Cardiology	74
Neurology	27

6.NUMBER OF PEOPLE LEFT IN EACH AGE CATEGORY

select age_category,count(attrition) as num_left from emp_table where attrition='Yes' group by age_category;

Middle aged adults	80
Young adults	109
Older adults	10

7. NUMBER OF MALE AND FEMALE LEFT

select gender,count(attrition) from emp_table where attrition='Yes' group by gender;

Female	86
Male	113

8.COUNT OF MALE AND FEMALE LEFT FROM EACH BUSINESSTRAVELCATEGORY

select businesstravel,count(*) as F_count from emp_table where gender='Female' and attrition='Yes' group by businesstravel;

select businesstravel,count(*) as M_count from emp_table where gender='Male' and attrition='Yes' group by businesstravel;

businesstravel	f_count	m_count
Travel_Frequently	31	22
Travel_Rarely	49	77

Non-Travel	6	10

9. AGE CATEGORISED AND NUMBER OF PEOPLE IN EACH CATEGORY

alter table emp_table add column age_category varchar(50);

update emp_table set age_category=case when age between 18 and 30 then 'Young adults'

when age between 30 and 50 then 'Middle aged adults' else 'Older

adults' end ; select age_category,count(*) from emp_table group by

age_category;

Middle aged adults	1066
Young adults	448
Older adults	162

10.TOTAL PEOPLE IN EACH CATEGORY

select businesstravel,count(*) as count from emp_table group by businesstravel;

Travel_Rarely	1184
Travel_Frequently	320
Non-Travel	172

11. NUMBER OF ATTRITED EMPLOYEES BASED ON EDUCATION FIELD

select attrition,educationfield,count(*) as counts from emp_table where attrition="yes" group by attrition,educationfield order by counts;

Human Resources	6
Other	8
Technical Degree	22
Marketing	28
Medical	51
Life Sciences	84

12. NUMBER EMPLOYEES ARE LESS SATISFIED IN THIS JOB BASED ON MARITAL STATUS

select jobsatisfaction,maritalstatus,count(*) as counts from emp_table where jobsatisfaction=1 group by jobsatisfaction,maritalstatus order by counts;

151 Married Employees are not satisfied in this job