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Case Study: Employee Attrition Analysis

a) Return the shape of the table

```
Select (select count(*) from HRData) as Row_ount, (select count(*) from
INFORMATION_SCHEMA.columns where TABLE_NAME='HRData') as
Column_count
```

	Row_count	Column_count
1	1470	39

b) Calculate the cumulative sum of total working years for each department

```
Select Department, sum("Total Working Years") CumulativeSum from HRData group
by Department
```

	Department	CumulativeSum
1	Sales	4953
2	HR	728
3	R&D	10900

c) Which gender have higher strength as workforce in each department

```
Select Department,Gender,COUNT(Gender) AS COUNT FROM HRData Group
Department, Gender
```

	Department	Gender	COUNT
1	R&D	Male	582
2	R&D	Female	379
3	Sales	Female	189
4	Sales	Male	257
5	HR	Male	43
6	HR	Female	20

d) Create a new column AGE_BAND and Show Distribution of Employee's Age band group (Below 25, 25-34, 35-44, 45-55. ABOVE 55).

```
ALTER TABLE EmployeeData ADD AGE_BAND VARCHAR(20)

UPDATE EmployeeData SET AGE_BAND = CASE WHEN Age < 25 THEN 'Below 25' WHEN Age BETWEEN 25 AND 34 THEN '25-34' WHEN Age BETWEEN 35 AND 44 THEN '35-44' WHEN Age BETWEEN 45 AND 55 THEN '45-55' ELSE 'ABOVE 55' END

SELECT AGE_BAND,COUNT(AGE_BAND) FROM EmployeeData GROUP BY AGE_BAND
```

	AGE_BAND	(No column name)
1	Below 25	97
2	ABOVE 55	47
3	35-44	505
4	45-55	267
5	25-34	554

e) Compare all marital status of employee and find the most frequent marital status

```
SELECT TOP 1 "Marital Status",COUNT(*) AS MOST_FREQUENT_COUNT FROM HRData GROUP BY "Marital Status" ORDER BY MOST_FREQUENT_COUNT DESC
```

Marital Status	MOST_FREQUENT_COUNT
Married	673

f) Show the Job Role with Highest Attrition Rate (Percentage)

```
SELECT TOP 1 JobRole,(SUM(CASE WHEN Attrition = 'Yes' THEN 1 ELSE END)*100)/COUNT(Attrition) AS ATTRITION_RATE FROM EmployeeData GROUP BY JobRole ORDER BY ATTRITION_RATE DESC
```

Job Role	ATTRITION_RATE
Sales Representative	39