# TESTING TABLEAU REPORTS IN SQL

## Create Table

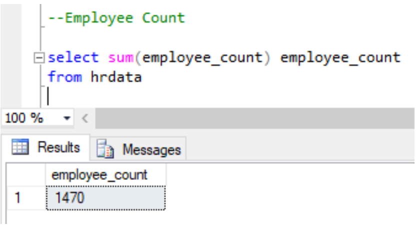
```
create table hrdata
(
            emp_no int8 PRIMARY KEY,
            gender varchar(50) NOT NULL,
            marital_status varchar(50),
            age_band varchar(50),
            age int8,
            department varchar(50),
            education varchar(50),
            education_field varchar(50),
            job_role varchar(50),
            business_travel varchar(50),
            employee_count int8,
            attrition varchar(50),
            attrition_label varchar(50),
            job_satisfaction int8,
            active_employee int8
)
```

## Import Data in Table Using Query

```
COPY hrdata FROM 'D:\hrdata.csv' DELIMITER ',' CSV HEADER;
```

## Employee Count:

```
select sum(employee_count) as Employee_Count from hrdata;
```

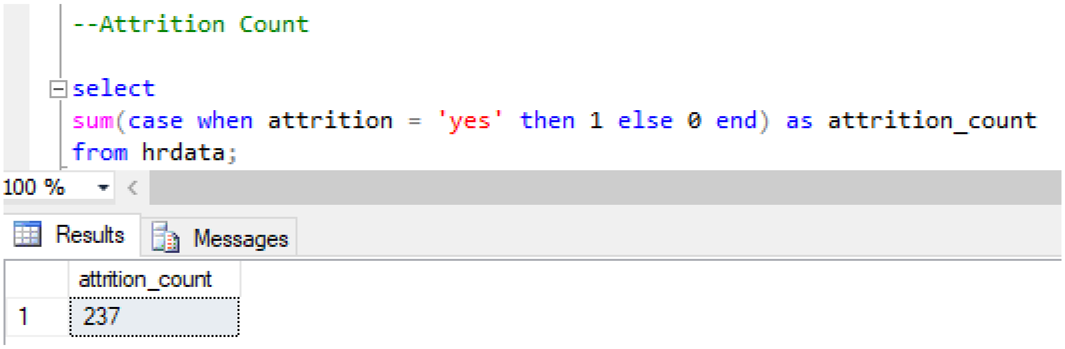


```
--Employee Count

select sum(employee_count) employee_count
from hrdata
```

```
   employee_count
1  1470
```

### Attrition Count:

select count(attrition) from hrdata where attrition='Yes';

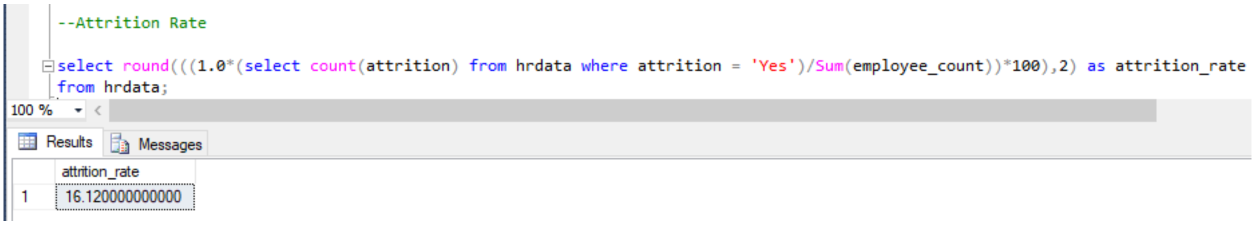


```
--Attrition Count

select
sum(case when attrition = 'yes' then 1 else 0 end) as attrition_count
from hrdata;
```

```
   attrition_count
1  237
```

### Attrition Rate:

select
round (((select count(attrition) from hrdata where attrition='Yes')/
sum(employee_count)) * 100,2)
from hrdata;



```
--Attrition Rate

select round(((1.0*(select count(attrition) from hrdata where attrition = 'Yes')/Sum(employee_count))*100),2) as attrition_rate
from hrdata;
```

```
   attrition_rate
1  16.120000000000
```

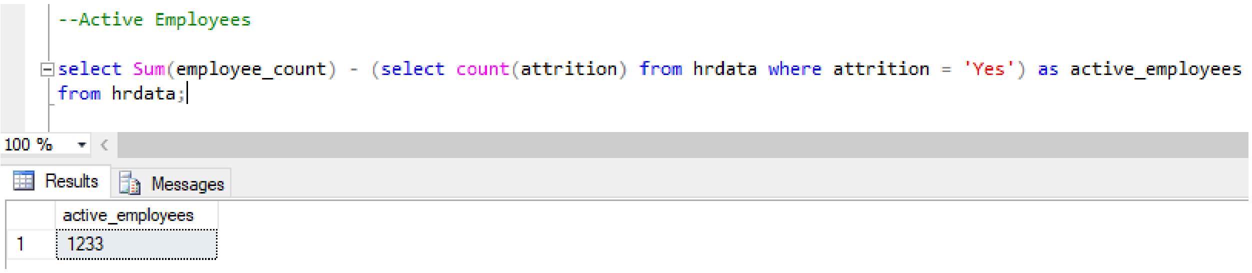
### Active Employee:

select sum(employee_count) - (select count(attrition) from hrdata  where attrition='Yes') from hrdata;

*OR*

select (select sum(employee_count) from hrdata) - count(attrition) as active_employee from hrdata

where attrition='Yes';

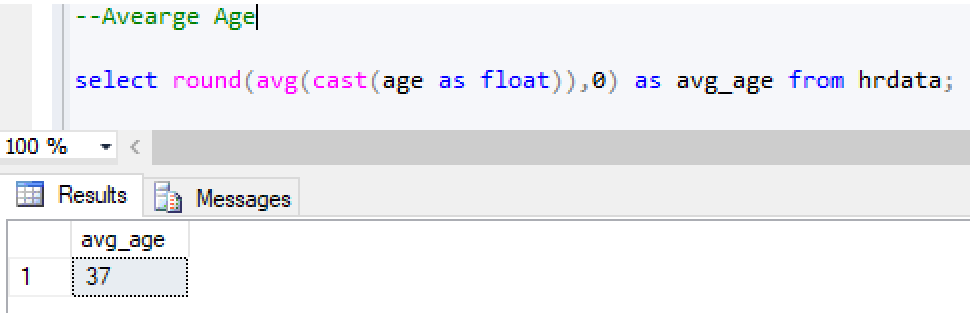


```
--Active Employees

select Sum(employee_count) - (select count(attrition) from hrdata where attrition = 'Yes') as active_employees
from hrdata;
```

```
   active_employees
1  1233
```

### Average Age:

select round(avg(age),0) from hrdata;



```
--Avearge Age

select round(avg(cast(age as float)),0) as avg_age from hrdata;
```

|   | avg_age |
|---|---|
| 1 | 37 |

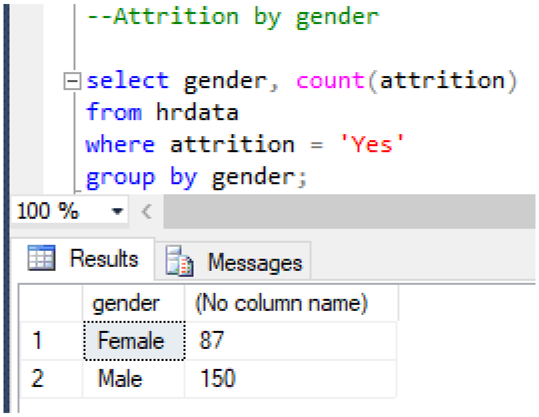
### Attrition by Gender

select gender, count(attrition) as attrition_count from hrdata

where attrition='Yes'

group by gender

order by count(attrition) desc;



```
--Attrition by gender

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

|   | gender | (No column name) |
|---|---|---|
| 1 | Female | 87 |
| 2 | Male | 150 |

### Department wise Attrition:

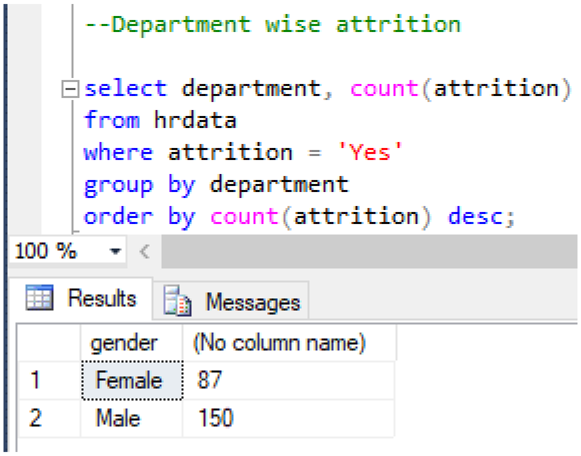
select department, count(attrition), round((cast (count(attrition) as numeric) /

(select count(attrition) from hrdata where attrition= 'Yes')) * 100, 2) as pct from hrdata

where attrition='Yes'

group by department

order by count(attrition) desc;



```
--Department wise attrition

select department, count(attrition)
from hrdata
where attrition = 'Yes'
group by department
order by count(attrition) desc;
```

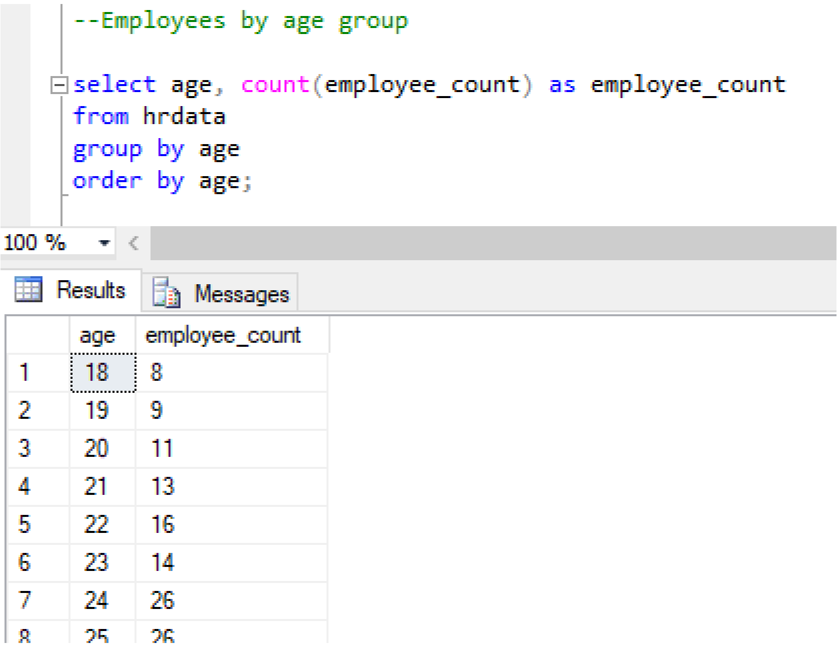
|  | gender | (No column name) |
|---|---|---|
| 1 | Female | 87 |
| 2 | Male | 150 |

### No of Employee by Age Group

SELECT age,  sum(employee_count) AS employee_count FROM hrdata

GROUP BY age

order by age;



```
--Employees by age group

select age, count(employee_count) as employee_count
from hrdata
group by age
order by age;
```

|  | age | employee_count |
|---|---|---|
| 1 | 18 | 8 |
| 2 | 19 | 9 |
| 3 | 20 | 11 |
| 4 | 21 | 13 |
| 5 | 22 | 16 |
| 6 | 23 | 14 |
| 7 | 24 | 26 |
| 8 | 25 | 26 |

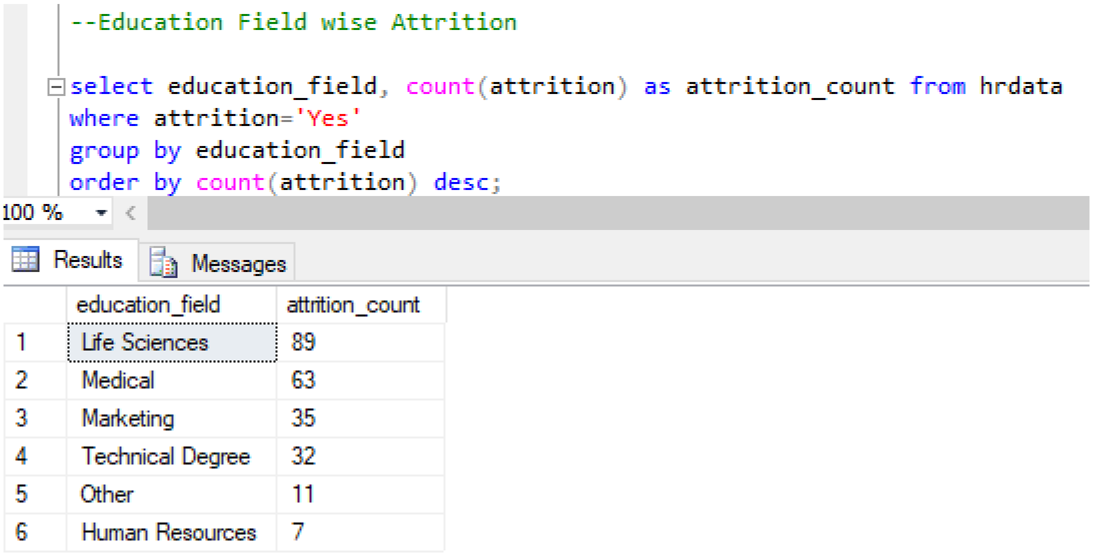
### Education Field wise Attrition:

select education_field, count(attrition) as attrition_count from hrdata

where attrition='Yes'

group by education_field

order by count(attrition) desc;

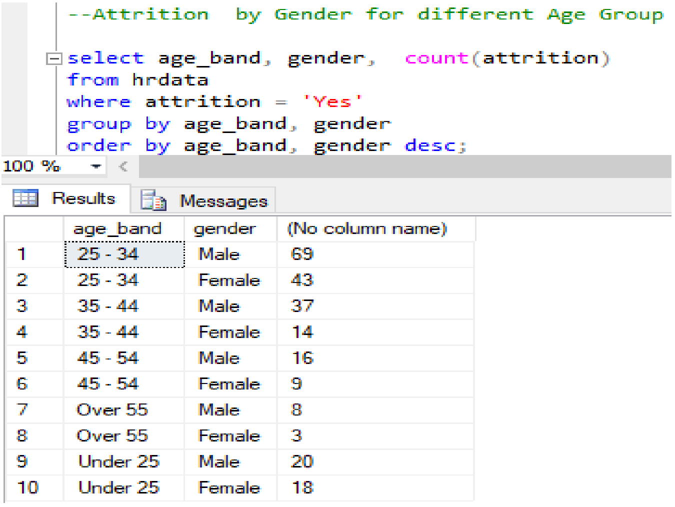


```
--Education Field wise Attrition

select education_field, count(attrition) as attrition_count from hrdata
where attrition='Yes'
group by education_field
order by count(attrition) desc;
```

| | education_field | attrition_count |
|---|---|---|
| 1 | Life Sciences | 89 |
| 2 | Medical | 63 |
| 3 | Marketing | 35 |
| 4 | Technical Degree | 32 |
| 5 | Other | 11 |
| 6 | Human Resources | 7 |

## Attrition Rate by Gender for different Age Group

select age_band, gender, count(attrition) as attrition,
round((cast(count(attrition) as numeric) / (select count(attrition) from hrdata where attrition = 'Yes')) * 100,2) as pct
from hrdata
where attrition = 'Yes'
group by age_band, gender
order by age_band, gender desc;



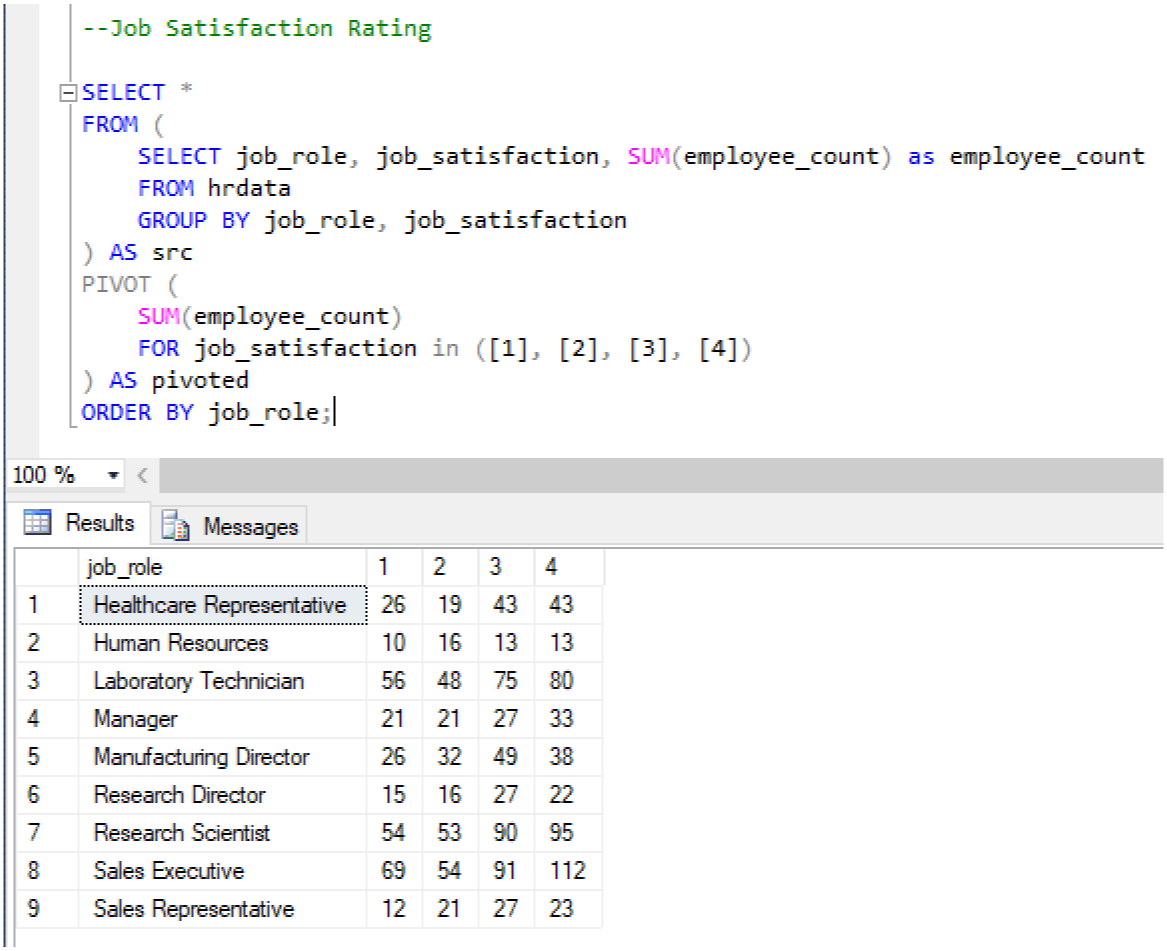
```
--Attrition  by Gender for different Age Group

select age_band, gender,  count(attrition)
from hrdata
where attrition = 'Yes'
group by age_band, gender
order by age_band, gender desc;
```

| | age_band | gender | (No column name) |
|---|---|---|---|
| 1 | 25 - 34 | Male | 69 |
| 2 | 25 - 34 | Female | 43 |
| 3 | 35 - 44 | Male | 37 |
| 4 | 35 - 44 | Female | 14 |
| 5 | 45 - 54 | Male | 16 |
| 6 | 45 - 54 | Female | 9 |
| 7 | Over 55 | Male | 8 |
| 8 | Over 55 | Female | 3 |
| 9 | Under 25 | Male | 20 |
| 10 | Under 25 | Female | 18 |

## Job Satisfaction Rating

SELECT *
FROM (

```
   SELECT job_role, job_satisfaction, SUM(employee_count) as employee_count
   FROM hrdata
   GROUP BY job_role, job_satisfaction
) AS src
PIVOT (
   SUM(employee_count)
   FOR job_satisfaction IN ([1], [2], [3], [4])
) AS pivoted
ORDER BY job_role;
```



```
--Job Satisfaction Rating

SELECT *
FROM (
    SELECT job_role, job_satisfaction, SUM(employee_count) as employee_count
    FROM hrdata
    GROUP BY job_role, job_satisfaction
) AS src
PIVOT (
    SUM(employee_count)
    FOR job_satisfaction in ([1], [2], [3], [4])
) AS pivoted
ORDER BY job_role;
```

|  | job_role | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| 1 | Healthcare Representative | 26 | 19 | 43 | 43 |
| 2 | Human Resources | 10 | 16 | 13 | 13 |
| 3 | Laboratory Technician | 56 | 48 | 75 | 80 |
| 4 | Manager | 21 | 21 | 27 | 33 |
| 5 | Manufacturing Director | 26 | 32 | 49 | 38 |
| 6 | Research Director | 15 | 16 | 27 | 22 |
| 7 | Research Scientist | 54 | 53 | 90 | 95 |
| 8 | Sales Executive | 69 | 54 | 91 | 112 |
| 9 | Sales Representative | 12 | 21 | 27 | 23 |