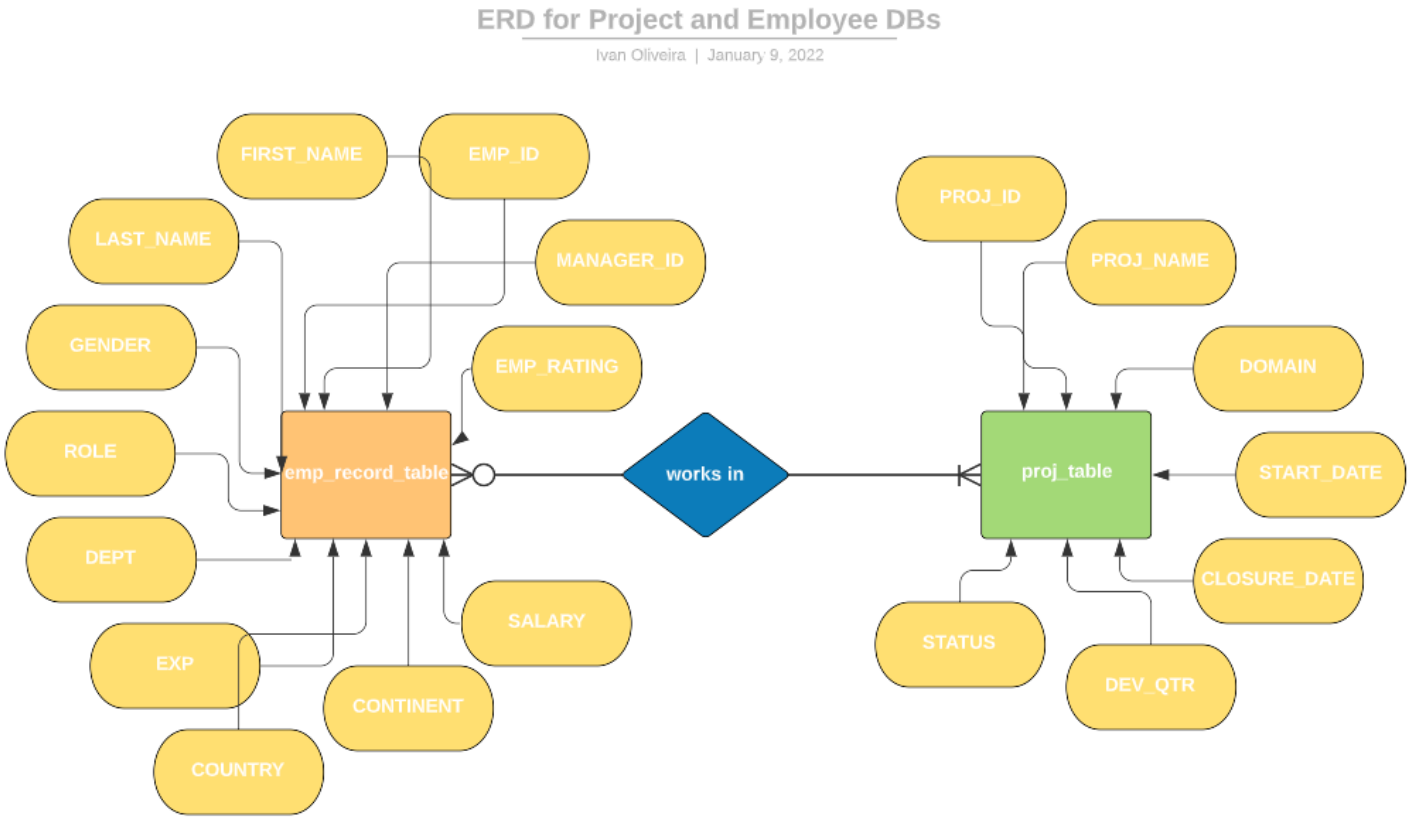
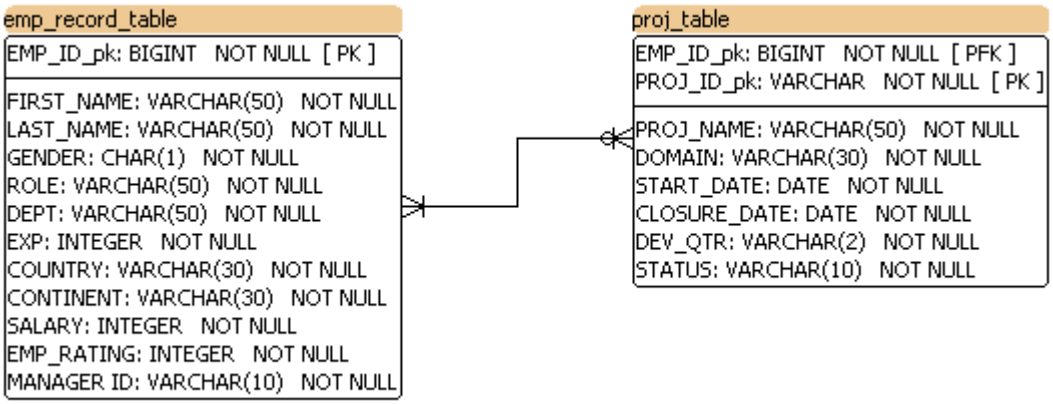
# ERD FOR PROJECT AND EMPLOYEE TABLES



```
# Q3)
select EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT from project_and_employee.emp_record_table;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

| EMP_ID | FIRST_NAME | LAST_NAME | GENDER | DEPT |
|---|---|---|---|---|
| E001 | Arthur | Black | M | ALL |
| E005 | Eric | Hoffman | M | FINANCE |
| E010 | William | Butler | M | AUTOMOTIVE |
| E052 | Dianna | Wilson | F | HEALTHCARE |
| E057 | Dorothy | Wilson | F | HEALTHCARE |
| E083 | Patrick | Voltz | M | HEALTHCARE |
| E103 | Emily | Grove | F | FINANCE |
| E204 | Karene | Nowak | F | AUTOMOTIVE |
| E245 | Nian | Zhen | M | RETAIL |
| E260 | Roy | Collins | M | RETAIL |
| E403 | Steve | Hoffman | M | FINANCE |
| E428 | Pete | Allen | M | AUTOMOTIVE |
| E478 | David | Smith | M | RETAIL |
| E505 | Chad | Wilson | M | HEALTHCARE |
| E532 | Claire | Brennan | F | AUTOMOTIVE |
| E583 | Janet | Hale | F | RETAIL |
| E612 | Tracy | Norris | F | RETAIL |
| E620 | Katrina | Allen | F | RETAIL |
| E640 | Jenifer | Jhones | F | RETAIL |
| NULL | NULL | NULL | NULL | NULL |

```
# Q4)
#LESS THAN 2
select EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT, EMP_RATING
from  project_and_employee.emp_record_table
where EMP_RATING < 2;
```

Result Grid | Filter Rows: | Edit: | Export/Import:

| EMP_ID | FIRST_NAME | LAST_NAME | GENDER | DEPT | EMP_RATING |
|---|---|---|---|---|---|
| E057 | Dorothy | Wilson | F | HEALTHCARE | 1 |
| E532 | Claire | Brennan | F | AUTOMOTIVE | 1 |
| E620 | Katrina | Allen | F | RETAIL | 1 |
| NULL | NULL | NULL | NULL | NULL | NULL |

```
#GREATER THAN 4
select EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT, EMP_RATING
from  project_and_employee.emp_record_table
WHERE EMP_RATING > 4;
```

Result Grid | Filter Rows: | Edit: | Export/Import:

| EMP_ID | FIRST_NAME | LAST_NAME | GENDER | DEPT | EMP_RATING |
|---|---|---|---|---|---|
| E001 | Arthur | Black | M | ALL | 5 |
| E052 | Dianna | Wilson | F | HEALTHCARE | 5 |
| E083 | Patrick | Voltz | M | HEALTHCARE | 5 |
| E204 | Karene | Nowak | F | AUTOMOTIVE | 5 |
| NULL | NULL | NULL | NULL | NULL | NULL |

```
#BETWEEN 2 AND 4
select EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT, EMP_RATING FROM project_and_employee.emp_record_table
where EMP_RATING between 2 and 4;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

| EMP_ID | FIRST_NAME | LAST_NAME | GENDER | DEPT | EMP_RATING |
|---|---|---|---|---|---|
| E001 | Arthur | Black | M | ALL | 5 |
| E052 | Dianna | Wilson | F | HEALTHCARE | 5 |
| E083 | Patrick | Voltz | M | HEALTHCARE | 5 |
| E204 | Karene | Nowak | F | AUTOMOTIVE | 5 |
| NULL | NULL | NULL | NULL | NULL | NULL |

```
# Q5)
select concat(FIRST_NAME,' ',LAST_NAME) AS NAME FROM project_and_employee.emp_record_table
where DEPT = 'FINANCE';
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| NAME |
|---|
| Eric Hoffman |
| Emily Grove |
| Steve Hoffman |

```
# Q6)
select * from project_and_employee.emp_record_table
where EMP_ID in (
    select MANAGER_ID from project_and_employee.emp_record_table
);
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

| EMP_ID | FIRST_NAME | LAST_NAME | GENDER | ROLE | DEPT | EXP | COUNTRY | CONTINENT | SALARY | EMP_RATING | MANAGER_ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E001 | Arthur | Black | M | PRESIDENT | ALL | 20 | USA | NORTH AMERICA | 16500 | 5 | E001 |
| E103 | Emily | Grove | F | MANAGER | FINANCE | 14 | CANADA | NORTH AMERICA | 10500 | 4 | E001 |
| E428 | Pete | Allen | M | MANAGER | AUTOMOTIVE | 14 | GERMANY | EUROPE | 11000 | 4 | E001 |
| E083 | Patrick | Voltz | M | MANAGER | HEALTHCARE | 15 | USA | NORTH AMERICA | 9500 | 5 | E001 |
| E583 | Janet | Hale | F | MANAGER | RETAIL | 14 | COLOMBIA | SOUTH AMERICA | 10000 | 2 | E001 |
| E612 | Tracy | Norris | F | MANAGER | RETAIL | 13 | INDIA | ASIA | 8500 | 4 | E001 |
| NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL |

```
select count(*) as Reporters from project_and_employee.emp_record_table
where EMP_ID <> MANAGER_ID in(
    select MANAGER_ID from project_and_employee.emp_record_table
);
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| Reporters |
|---|
| 19 |

```
# Q7)
select * from project_and_employee.emp_record_table
where DEPT = 'HEALTHCARE'
union
select * from project_and_employee.emp_record_table
where DEPT = 'FINANCE';
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| EMP_ID | FIRST_NAME | LAST_NAME | GENDER | ROLE | DEPT | EXP | COUNTRY | CONTINENT | SALARY | EMP_RATING | MANAGER_ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E052 | Dianna | Wilson | F | SENIOR DATA SCIENTIST | HEALTHCARE | 6 | CANADA | NORTH AMERICA | 5500 | 5 | E083 |
| E057 | Dorothy | Wilson | F | SENIOR DATA SCIENTIST | HEALTHCARE | 9 | USA | NORTH AMERICA | 7700 | 1 | E083 |
| E083 | Patrick | Voltz | M | MANAGER | HEALTHCARE | 15 | USA | NORTH AMERICA | 9500 | 5 | E001 |
| E505 | Chad | Wilson | M | ASSOCIATE DATA SCIENTIST | HEALTHCARE | 5 | CANADA | NORTH AMERICA | 5000 | 2 | E083 |
| E005 | Eric | Hoffman | M | LEAD DATA SCIENTIST | FINANCE | 11 | USA | NORTH AMERICA | 8500 | 3 | E103 |
| E103 | Emily | Grove | F | MANAGER | FINANCE | 14 | CANADA | NORTH AMERICA | 10500 | 4 | E001 |
| E403 | Steve | Hoffman | M | ASSOCIATE DATA SCIENTIST | FINANCE | 4 | USA | NORTH AMERICA | 5000 | 3 | E103 |

```
# Q8)
select EMP_ID, FIRST_NAME, LAST_NAME, DEPT, EMP_RATING,
(select MAX(EMP_RATING) from project_and_employee.emp_record_table)
as max_ratings
from project_and_employee.emp_record_table
order by DEPT;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| EMP_ID | FIRST_NAME | LAST_NAME | DEPT | EMP_RATING | max_ratings |
|---|---|---|---|---|---|
| E001 | Arthur | Black | ALL | 5 | 5 |
| E010 | William | Butler | AUTOMOTIVE | 2 | 5 |
| E204 | Karene | Nowak | AUTOMOTIVE | 5 | 5 |
| E428 | Pete | Allen | AUTOMOTIVE | 4 | 5 |
| E532 | Claire | Brennan | AUTOMOTIVE | 1 | 5 |
| E005 | Eric | Hoffman | FINANCE | 3 | 5 |
| E103 | Emily | Grove | FINANCE | 4 | 5 |
| E403 | Steve | Hoffman | FINANCE | 3 | 5 |
| E052 | Dianna | Wilson | HEALTHCARE | 5 | 5 |
| E057 | Dorothy | Wilson | HEALTHCARE | 1 | 5 |
| E083 | Patrick | Voltz | HEALTHCARE | 5 | 5 |
| E505 | Chad | Wilson | HEALTHCARE | 2 | 5 |
| E245 | Nian | Zhen | RETAIL | 2 | 5 |
| E260 | Roy | Collins | RETAIL | 3 | 5 |
| E478 | David | Smith | RETAIL | 4 | 5 |
| E583 | Janet | Hale | RETAIL | 2 | 5 |
| E612 | Tracy | Norris | RETAIL | 4 | 5 |
| E620 | Katrina | Allen | RETAIL | 1 | 5 |
| E640 | Jenifer | Jhones | RETAIL | 4 | 5 |

```
# Q9)
Select FIRST_NAME, LAST_NAME, `ROLE`, SALARY AS MAX_Salary
from project_and_employee.emp_record_table
WHERE (ROLE, SALARY)IN (
    SELECT `ROLE`, MAX(Salary) FROM project_and_employee.emp_record_table GROUP BY ROLE
    );
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| FIRST_NAME | LAST_NAME | ROLE | MAX_Salary |
|---|---|---|---|
| Arthur | Black | PRESIDENT | 16500 |
| William | Butler | LEAD DATA SCIENTIST | 9000 |
| Dorothy | Wilson | SENIOR DATA SCIENTIST | 7700 |
| Steve | Hoffman | ASSOCIATE DATA SCIENTIST | 5000 |
| Pete | Allen | MANAGER | 11000 |
| Chad | Wilson | ASSOCIATE DATA SCIENTIST | 5000 |
| Katrina | Allen | JUNIOR DATA SCIENTIST | 3000 |

```
Select FIRST_NAME, LAST_NAME, `ROLE`, SALARY AS MIN_Salary
from project_and_employee.emp_record_table
WHERE (ROLE, SALARY)IN (
    SELECT `ROLE`, MIN(Salary) FROM project_and_employee.emp_record_table GROUP BY ROLE
    );
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| FIRST_NAME | LAST_NAME | ROLE | MIN_Salary |
|---|---|---|---|
| Arthur | Black | PRESIDENT | 16500 |
| Eric | Hoffman | LEAD DATA SCIENTIST | 8500 |
| Dianna | Wilson | SENIOR DATA SCIENTIST | 5500 |
| David | Smith | ASSOCIATE DATA SCIENTIST | 4000 |
| Tracy | Norris | MANAGER | 8500 |
| Jenifer | Jhones | JUNIOR DATA SCIENTIST | 2800 |

```
# Q10)
Select EMP_ID, FIRST_NAME, LAST_NAME, ROLE, EXP, ROW_NUMBER() over (ORDER BY EXP desc) EMP_RANK
from project_and_employee.emp_record_table;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| EMP_ID | FIRST_NAME | LAST_NAME | ROLE | EXP | EMP_RANK |
|---|---|---|---|---|---|
| E001 | Arthur | Black | PRESIDENT | 20 | 1 |
| E083 | Patrick | Voltz | MANAGER | 15 | 2 |
| E103 | Emily | Grove | MANAGER | 14 | 3 |
| E428 | Pete | Allen | MANAGER | 14 | 4 |
| E583 | Janet | Hale | MANAGER | 14 | 5 |
| E612 | Tracy | Norris | MANAGER | 13 | 6 |
| E010 | William | Butler | LEAD DATA SCIENTIST | 12 | 7 |
| E005 | Eric | Hoffman | LEAD DATA SCIENTIST | 11 | 8 |
| E057 | Dorothy | Wilson | SENIOR DATA SCIENTIST | 9 | 9 |
| E204 | Karene | Nowak | SENIOR DATA SCIENTIST | 8 | 10 |
| E260 | Roy | Collins | SENIOR DATA SCIENTIST | 7 | 11 |
| E052 | Dianna | Wilson | SENIOR DATA SCIENTIST | 6 | 12 |
| E245 | Nian | Zhen | SENIOR DATA SCIENTIST | 6 | 13 |
| E505 | Chad | Wilson | ASSOCIATE DATA SCIEN... | 5 | 14 |
| E403 | Steve | Hoffman | ASSOCIATE DATA SCIEN... | 4 | 15 |
| E478 | David | Smith | ASSOCIATE DATA SCIEN... | 3 | 16 |
| E532 | Claire | Brennan | ASSOCIATE DATA SCIEN... | 3 | 17 |
| E620 | Katrina | Allen | JUNIOR DATA SCIENTIST | 2 | 18 |
| E640 | Jenifer | Jhones | JUNIOR DATA SCIENTIST | 1 | 19 |

```
# Q11)
use project_and_employee;
Create View VW_above_6000_salary as
select * from project_and_employee.emp_record_table
where SALARY >= '6000';

select * from VW_above_6000_salary
limit 100;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| EMP_ID | FIRST_NAME | LAST_NAME | GENDER | ROLE | DEPT | EXP | COUNTRY | CONTINENT | SALARY | EMP_RATING | MANAGER_ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E001 | Arthur | Black | M | PRESIDENT | ALL | 20 | USA | NORTH AMERICA | 16500 | 5 | E001 |
| E005 | Eric | Hoffman | M | LEAD DATA SCIENTIST | FINANCE | 11 | USA | NORTH AMERICA | 8500 | 3 | E103 |
| E010 | William | Butler | M | LEAD DATA SCIENTIST | AUTOMOTIVE | 12 | FRANCE | EUROPE | 9000 | 2 | E428 |
| E057 | Dorothy | Wilson | F | SENIOR DATA SCIENTIST | HEALTHCARE | 9 | USA | NORTH AMERICA | 7700 | 1 | E083 |
| E083 | Patrick | Voltz | M | MANAGER | HEALTHCARE | 15 | USA | NORTH AMERICA | 9500 | 5 | E001 |
| E103 | Emily | Grove | F | MANAGER | FINANCE | 14 | CANADA | NORTH AMERICA | 10500 | 4 | E001 |
| E204 | Karene | Nowak | F | SENIOR DATA SCIENTIST | AUTOMOTIVE | 8 | GERMANY | EUROPE | 7500 | 5 | E428 |
| E245 | Nian | Zhen | M | SENIOR DATA SCIENTIST | RETAIL | 6 | CHINA | ASIA | 6500 | 2 | E583 |
| E260 | Roy | Collins | M | SENIOR DATA SCIENTIST | RETAIL | 7 | INDIA | ASIA | 7000 | 3 | E583 |
| E428 | Pete | Allen | M | MANAGER | AUTOMOTIVE | 14 | GERMANY | EUROPE | 11000 | 4 | E001 |
| E583 | Janet | Hale | F | MANAGER | RETAIL | 14 | COLOMBIA | SOUTH AMERICA | 10000 | 2 | E001 |
| E612 | Tracy | Norris | F | MANAGER | RETAIL | 13 | INDIA | ASIA | 8500 | 4 | E001 |

```
# Q12)
select EMP_ID, FIRST_NAME, LAST_NAME, DEPT
from project_and_employee.emp_record_table
where EXP >= 10;

# Q13)
```

Result Grid | Filter Rows: | Edit:

| EMP_ID | FIRST_NAME | LAST_NAME | DEPT |
|---|---|---|---|
| E001 | Arthur | Black | ALL |
| E005 | Eric | Hoffman | FINANCE |
| E010 | William | Butler | AUTOMOTIVE |
| E083 | Patrick | Voltz | HEALTHCARE |
| E103 | Emily | Grove | FINANCE |
| E428 | Pete | Allen | AUTOMOTIVE |
| E583 | Janet | Hale | RETAIL |
| E612 | Tracy | Norris | RETAIL |
| NULL | NULL | NULL | NULL |

```
# Q13)

create procedure EXP_ABOVE_3_YRS()
select FIRST_NAME, LAST_NAME, EXP, ROLE, SALARY
from project_and_employee.emp_record_table
where EXP>3;

call EXP_ABOVE_3_YRS;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| FIRST_NAME | LAST_NAME | EXP | ROLE | SALARY |
|---|---|---|---|---|
| Arthur | Black | 20 | PRESIDENT | 16500 |
| Eric | Hoffman | 11 | LEAD DATA SCIENTIST | 8500 |
| William | Butler | 12 | LEAD DATA SCIENTIST | 9000 |
| Dianna | Wilson | 6 | SENIOR DATA SCIENTIST | 5500 |
| Dorothy | Wilson | 9 | SENIOR DATA SCIENTIST | 7700 |
| Patrick | Voltz | 15 | MANAGER | 9500 |
| Emily | Grove | 14 | MANAGER | 10500 |
| Karene | Nowak | 8 | SENIOR DATA SCIENTIST | 7500 |
| Nian | Zhen | 6 | SENIOR DATA SCIENTIST | 6500 |
| Roy | Collins | 7 | SENIOR DATA SCIENTIST | 7000 |
| Steve | Hoffman | 4 | ASSOCIATE DATA SCIEN... | 5000 |
| Pete | Allen | 14 | MANAGER | 11000 |
| Chad | Wilson | 5 | ASSOCIATE DATA SCIEN... | 5000 |
| Janet | Hale | 14 | MANAGER | 10000 |
| Tracy | Norris | 13 | MANAGER | 8500 |

```
# Q15)
create index EMP_ERIC on project_and_employee.emp_record_table(FIRST_NAME);
explain select EMP_ID, FIRST_NAME, LAST_NAME from project_and_employee.emp_record_table
where FIRST_NAME = 'Eric';
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| id | select_type | table | partitions | type | possible_keys | key | key_len | ref | rows | filtered | Extra |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SIMPLE | emp_record_table | NULL | ref | EMP_ID,EMP_ERIC | EMP_ID | 82 | const | 1 | 100.00 | NULL |

```
# Q16)
select *, (SALARY*0.05*EMP_RATING) as EMP_BONUS
from project_and_employee.emp_record_table;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| EMP_ID | FIRST_NAME | LAST_NAME | GENDER | ROLE | DEPT | EXP | COUNTRY | CONTINENT | SALARY | EMP_RATING | MANAGER_ID | EMP_BONUS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E001 | Arthur | Black | M | PRESIDENT | ALL | 20 | USA | NORTH AMERICA | 16500 | 5 | E001 | 4125 |
| E005 | Eric | Hoffman | M | LEAD DATA SCIENTIST | FINANCE | 11 | USA | NORTH AMERICA | 8500 | 3 | E103 | 1275 |
| E010 | William | Butler | M | LEAD DATA SCIENTIST | AUTOMOTIVE | 12 | FRANCE | EUROPE | 9000 | 2 | E428 | 900 |
| E052 | Dianna | Wilson | F | SENIOR DATA SCIENTIST | HEALTHCARE | 6 | CANADA | NORTH AMERICA | 5500 | 5 | E083 | 1375 |
| E057 | Dorothy | Wilson | F | SENIOR DATA SCIENTIST | HEALTHCARE | 9 | USA | NORTH AMERICA | 7700 | 1 | E083 | 385 |
| E083 | Patrick | Voltz | M | MANAGER | HEALTHCARE | 15 | USA | NORTH AMERICA | 9500 | 5 | E001 | 2375 |
| E103 | Emily | Grove | F | MANAGER | FINANCE | 14 | CANADA | NORTH AMERICA | 10500 | 4 | E001 | 2100 |
| E204 | Karene | Nowak | F | SENIOR DATA SCIENTIST | AUTOMOTIVE | 8 | GERMANY | EUROPE | 7500 | 5 | E428 | 1875 |
| E245 | Nian | Zhen | M | SENIOR DATA SCIENTIST | RETAIL | 6 | CHINA | ASIA | 6500 | 2 | E583 | 650 |
| E260 | Roy | Collins | M | SENIOR DATA SCIENTIST | RETAIL | 7 | INDIA | ASIA | 7000 | 3 | E583 | 1050 |
| E403 | Steve | Hoffman | M | ASSOCIATE DATA SCIEN... | FINANCE | 4 | USA | NORTH AMERICA | 5000 | 3 | E103 | 750 |
| E428 | Pete | Allen | M | MANAGER | AUTOMOTIVE | 14 | GERMANY | EUROPE | 11000 | 4 | E001 | 2200 |
| E478 | David | Smith | M | ASSOCIATE DATA SCIEN... | RETAIL | 3 | COLOMBIA | SOUTH AMERICA | 4000 | 4 | E583 | 800 |
| E505 | Chad | Wilson | M | ASSOCIATE DATA SCIEN... | HEALTHCARE | 5 | CANADA | NORTH AMERICA | 5000 | 2 | E083 | 500 |
| E532 | Claire | Brennan | F | ASSOCIATE DATA SCIEN... | AUTOMOTIVE | 3 | GERMANY | EUROPE | 4300 | 1 | E428 | 215 |
| E583 | Janet | Hale | F | MANAGER | RETAIL | 14 | COLOMBIA | SOUTH AMERICA | 10000 | 2 | E001 | 1000 |
| E612 | Tracy | Norris | F | MANAGER | RETAIL | 13 | INDIA | ASIA | 8500 | 4 | E001 | 1700 |
| E620 | Katrina | Allen | F | JUNIOR DATA SCIENTIST | RETAIL | 2 | INDIA | ASIA | 3000 | 1 | E612 | 150 |
| E640 | Jenifer | Jhones | F | JUNIOR DATA SCIENTIST | RETAIL | 1 | COLOMBIA | SOUTH AMERICA | 2800 | 4 | E612 | 560 |

```
# Q17)

select COUNTRY, avg(SALARY) AVG_SALARY_BY_COUNTRY from project_and_employee.emp_record_table
group by COUNTRY
limit 100
;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| COUNTRY | AVG_SALARY_BY_COUNTRY |
|---|---|
| USA | 9440 |
| FRANCE | 9000 |
| CANADA | 7000 |
| GERMANY | 7600 |
| CHINA | 6500 |
| INDIA | 6166.666666666667 |
| COLOMBIA | 5600 |

```
select CONTINENT, avg(SALARY) AVG_SALARY_BY_CONTINENT from project_and_employee.emp_record_table
group by CONTINENT
limit 100
;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| CONTINENT | AVG_SALARY_BY_CONTINENT |
|---|---|
| NORTH AMERICA | 8525 |
| EUROPE | 7950 |
| ASIA | 6250 |
| SOUTH AMERICA | 5600 |