

Employee

emp_id	first_name	last_name	birth_date	sex	salary	super_id	branch_id
100	David	Wallace	1967-11-17	M	250,000	NULL	1
101	Jan	Levinson	1961-05-11	F	110,000	100	1
102	Michael	Scott	1964-03-15	M	75,000	100	2
103	Angela	Martin	1971-06-25	F	63,000	102	2
104	Kelly	Kapoor	1980-02-05	F	55,000	102	2
105	Stanley	Hudson	1958-02-19	M	69,000	102	2
106	Josh	Porter	1969-09-05	M	78,000	100	3
107	Andy	Bernard	1973-07-22	M	65,000	106	3
108	Jim	Halpert	1978-10-01	M	71,000	106	3

Branch

branch_id	branch_name	mgr_id	mgr_start_date
1	Corporate	100	2006-02-09
2	Scranton	102	1992-04-06
3	Stamford	106	1998-02-13

Works_With

emp_id	client_id	total_sales
105	400	55,000
102	401	267,000
108	402	22,500
107	403	5,000
108	403	12,000
105	404	33,000
107	405	26,000
102	406	15,000
105	406	130,000

Client

client_id	client_name	branch_id
400	Dunmore Highschool	2
401	Lackawana Country	2
402	FedEx	3
403	John Daly Law, LLC	3
404	Scranton Whitepages	2
405	Times Newspaper	3
406	FedEx	2

Branch Supplier

branch_id	supplier_name	supply_type
2	Hammer Mill	Paper
2	Uni-ball	Writing Utensils
3	Patriot Paper	Paper
2	J.T. Forms & Labels	Custom Forms
3	Uni-ball	Writing Utensils
3	Hammer Mill	Paper
3	Stamford Lables	Custom Forms

~~# Agg Fun~~

① $\text{MIN}(\text{col})$, $\text{MAX}(\text{col})$

DATES, INT, ~~VARCHAR~~

② COUNT(?)

* col-name, col1+col2
col1, col2

any expression

③ Sum(col?)

Col1, Col2 X

Col1 + Col2 ✓

* DISTINCT → Unique Values

④ Avg(col)

Select MAX (DISTINCT SALARY) FROM
Employee

V/S

Select MAX(SALARY) FROM
Employee

MAX (DISTINCT NO)
MIN (DISTINCT)

10, 20, 30, 30, 50, 50, 100, 100
1 - 2, 100

MIN

$$\text{AVG}(\text{Salary}) = \frac{\text{SUM}(\text{Salary})}{\text{Count}(\text{Salary})}$$

VS

$$\text{AVG}(\text{DISTINCT } \text{Salary}) = \frac{\text{SUM}(\text{DS})}{\text{COUNT}(\text{DS})}$$

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Q1.

Name of all employees, earning more than Angela Martin.

Q2.

All people who are in same branch as Michael Scott.

Q3.

Print f-name of emp. who earns more than everybody in branch=2.

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Select salary from emp where f-name = Angela.

Select f-name FROM employee
where salary > 63,000 ✓

Select f-name FROM employee
where salary > (Select salary from emp where f-name = 'Angela')

Main Query ↴

```
mysql> SELECT first_name FROM EMPLOYEE where salary >(SELECT salary FROM employee WHERE first_name="Angela");
+-----+
| first_name |
+-----+
| David      |
| Jan        |
| Michael    |
| Stanley    |
| Josh       |
| Andy       |
| Jim        |
+-----+
```

User query ↪

the result ✓

63000

Netted Query result ✓

Diagram illustrating a nested query execution:

- The **Main Query** (top) is `SELECT first_name FROM EMPLOYEE where salary >(SELECT salary FROM employee WHERE first_name="Angela")`.
- The **User query** (middle) is `SELECT salary FROM employee WHERE first_name="Angela"`, which returns the value **63000**.
- The **the result** (bottom left) is the output of the main query, showing the names of employees whose salary is greater than 63000.
- The **Netted Query result** (bottom right) is the final output of the main query, showing the names of employees whose salary is greater than 63000.

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5 mins
 ==

Print first name of all
 employees who are in same
 branch as of Michael
 Scott.

```
mysql> SELECT FIRST_NAME
    -> FROM
    -> EMPLOYEE
    -> WHERE BRANCH_ID =
    -> (SELECT BRANCH_ID FROM EMPLOYEE WHERE FIRST_NAME='mICHAEL');

+-----+
| FIRST_NAME |
+-----+
| Michael   |
| Angela    |
| Kelly     |
| Stanley   |
+-----+
```