SQL CRASH COURSE Part 3

```
-- ---------------------------------------------------------------------
-- Q1. What is the employee id of the highest paid employee?

SELECT
    emp_id, MAX(salary) AS Higest_Payed
FROM
    salaries
GROUP BY emp_id
ORDER BY Higest_Payed DESC;
```

#	emp_id	Higest_Payed
1	109334	160377
2	80823	159459
3	43624	155720
4	66793	155052
5	47978	153209
6	91935	152469
7	102962	151655
8	78008	149485
9	96957	148950
10	89825	148644

```
-- ---------------------------------------------------------------------
-- Q2. What is the name of the youngest employee ?

SELECT
        concat(first_name, ' ', last_name) as full_name, hire_date AS Oldest_Employee
FROM
        employees
Order by Oldest_Employee DESC;
-- there are a lot of employees hired in the same day.
```

#	full_name	Oldest_Employee
1	Tse Tsunoo	2000-05-29
2	Sastry Quadeer	2000-05-29
3	Oscal Collette	2000-05-29
4	Masako Limongi…	2000-05-29
5	Radhika Rousse…	2000-05-29
6	Bikash Covnot	2000-01-28
7	Yucai Gerlach	2000-01-23
8	Hideyuki Delgra…	2000-01-22
9	Volkmar Perko	2000-01-13
10	Ulf Flexer	2000-01-12

```
-- ---------------------------------------------------------------------
-- Q3. What is the name of the first hired employee ?

SELECT
        concat(first_name, ' ', last_name) as full_name, hire_date AS Oldest_Employee
FROM
        employees
```

```
Order by Oldest_Employee ASC;
-- there are a lot of employees hired in the same day.
```

#	full_name	Oldest_Employee
1	Horward Deville	1990-01-01
2	Toshiko Perly	1990-01-01
3	Teruyuki Sridhar	1990-01-01
4	Sashi Demeyer	1990-01-01
5	Aiman Hainaut	1990-01-01
6	Tomofumi Rattan	1990-01-01
7	Zeljko Solovay	1990-01-01
8	Sadegh Honglei	1990-01-01
9	Chrisa Versino	1990-01-01
10	Lillian Stiles	1990-01-01

```
-- ---------------------------------------------------------------------
-- Q4. What percentage of employees are Female?

-- version with this facny tool over()
select gender, count(*) * 100.0 / sum(count(*)) over()  as 'Gender_in_%'
from employees
group by gender;
```

#	gender	Gender_in_%
1	M	60.18734
2	F	39.81266

```
-- version calculed 'by hand'
SELECT
        (ROUND(((SELECT COUNT(gender) FROM employees WHERE gender = 'F') * 100) /
COUNT(gender),0)) as "%_Female",
   (ROUND(((SELECT COUNT(gender) FROM employees WHERE gender = 'M') * 100) /
COUNT(gender),0)) as "%_Male"
FROM employees;
```

#	%_Female	%_Male
1	40	60

```
-- ---------------------------------------------------------------------
-- Q5 Show the employee count by department name wise, sorted alphabetically on
department name.

-- number employees listed on 'dept_emp'  by dept
SELECT
   inn.dept_name AS "Dept_Name" , COUNT(inn.dept_name) as "Number of employees by dept"
FROM
   (SELECT
      dts.dept_no, dts.dept_name,
      dem.emp_id
```

```
    FROM
        departments AS dts
    INNER JOIN dept_emp AS dem
    ON dts.dept_no = dem.dept_no
    ) AS inn
GROUP BY inn.dept_name
ORDER BY inn.dept_name;
```

#	Dept_Name	Number of employees by dept
1	Customer Service	23598
2	Development	85719
3	Finance	17359
4	Human Resources	17798
5	Marketing	20223
6	Production	73495
7	Quality Management	20132
8	Research	21137
9	Sales	52262

-- ---

-- Q6. Count the number of new employees by each calendar year (take the value of year from from_date)

```
SELECT
        YEAR(from_date) AS 'YEAR', COUNT(*) AS "number of new employees by year"
FROM
        dept_emp
GROUP BY YEAR(from_date)
ORDER BY YEAR(from_date);
```

#	YEAR	number of new employees by year
1	1985	18380
2	1986	20154
3	1987	20434
4	1988	20736
5	1989	21043
6	1990	21046
7	1991	20994
8	1992	21560
9	1993	21521
10	1994	21635

-- ---

-- Q7. Count the number of employees by each calendar year (take the value of year from from_date)

```
/*
didn't know how to solve this...
 */
```

-- ---

-- Q8. What is the number of managers hired each calendar year.

```
SELECT YEAR(from_date) AS 'YEAR', COUNT(*) AS "number of new Managers by year"
FROM dept_manager
GROUP BY YEAR(from_date)
ORDER BY YEAR(from_date);
```

-- ----------

-- Q9 # What will be the department wise break up of managers ?

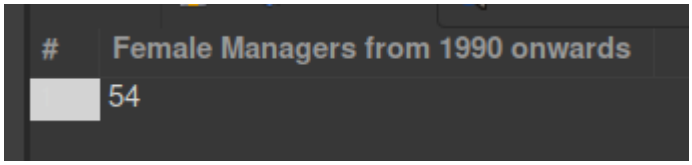
```
SELECT
   inn.dept_name AS "Dept_Name" , COUNT(inn.dept_name) as "Managers by dept"
FROM
   (SELECT
      dts.dept_no, dts.dept_name,
      dma.emp_id
   FROM
      departments AS dts
   INNER JOIN dept_manager AS dma
   ON dts.dept_no = dma.dept_no
   ) AS inn
GROUP BY inn.dept_name
ORDER BY inn.dept_name;
```

#	Dept_Name	Managers by dep
1	Customer Service	22
2	Development	14
3	Finance	15
4	Human Resources	14
5	Marketing	14
6	Production	14
7	Quality Management	19
8	Research	13
9	Sales	19

-- ----------

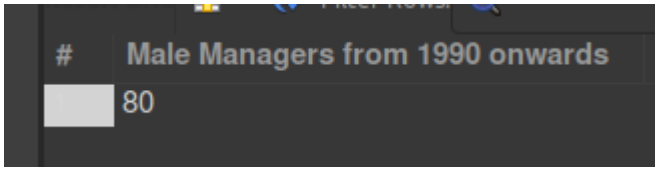
-- Q10. What is the number of male and female managers hired each calendar year from 1990 onward?

```
SELECT
         COUNT(inn.gender) as "Female Managers from 1990 onwards"
FROM(
         SELECT
      emp.gender, dma.from_date,
      dma.emp_id
   FROM
      employees AS emp
   INNER JOIN dept_manager AS dma
   ON emp.emp_id = dma.emp_id
   ) AS inn
WHERE inn.gender = 'F' AND YEAR(inn.from_date) > 1990;
```



#	Female Managers from 1990 onwards
	54

```
SELECT
        COUNT(inn.gender) as "Male Managers from 1990 onwards"
FROM(
        SELECT
      emp.gender, dma.from_date,
      dma.emp_id
   FROM
      employees AS emp
   INNER JOIN dept_manager AS dma
   ON emp.emp_id = dma.emp_id
   ) AS inn
WHERE inn.gender = 'M' AND YEAR(inn.from_date) > 1990;
```



#	Male Managers from 1990 onwards
	80

```
 /* Tried this, but didn't work.  The idea was to get both numbers in the same table, as in the Q4.
 The problem is in the "FROM inn" from the subquery. says that the table "inn" doesn't exist.
 Didn't know how to solve this.

SELECT
        (SELECT COUNT(inn.gender) FROM inn WHERE (gender = 'F' AND
YEAR(inn.from_date) >= 1990)) as "Female Managers",
        (SELECT COUNT(inn.gender) FROM inn WHERE (gender = 'F' AND
YEAR(inn.from_date) >= 1990)) as "Female Managers"
FROM(
        SELECT
      emp.gender, dma.from_date,
      dma.emp_id
   FROM
      employees AS emp
   INNER JOIN dept_manager AS dma
   ON emp.emp_id = dma.emp_id
   ) inn;
*/
```