1. Write a query to find the addresses (location_id, street_address, city, state_province, country_name) of all the departments.
   Hint : Use NATURAL JOIN.

Sample table: locations

location_id	street_address	postal_code	city	state_province	country_id
1000	1297 Via Cola di Rie	989	Roma		IT
1100	93091 Calle della Te	10934	Venice		IT
1200	2017 Shinjuku-ku	1689	Tokyo	Tokyo Prefectu	JP
1300	9450 Kamiya-cho	6823	Hiroshima		JP
1400	2014 Jabberwocky Rd	26192	Southlake	Texas	US
1500	2011 Interiors Blvd	99236	South San	California	US
1600	2007 Zagora St	50090	South Brun	New Jersey	US
1700	2004 Charade Rd	98199	Seattle	Washington	US
1800	147 Spadina Ave	M5V 2L7	Toronto	Ontario	CA

Sample table: countries

country_id	country_name	region_id
country_id	country_name	region_id
AR	Argentina	2
AU	Australia	3
BE	Belgium	1
BR	Brazil	2
CA	Canada	2
CH	Switzerland	1
CN	China	3
DE	Germany	1

```sql
SELECT location_id, street_address, city, state_province,
country_name
FROM locations NATURAL JOIN countries;
```

2. Write a query to find the name (first_name, last_name) and hire date of the employees who was hired after 'Jones'.

```sql
SELECT e.first_name, e.last_name, e.hire_date
FROM employees e
JOIN employees davies
ON (davies.last_name = 'Jones')
WHERE davies.hire_date < e.hire_date;
```

Sample table: employees

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT
100	Steven	King	SKING	515.123.4567	1987-06-17	AD_PRES	24000.00	0.00
101	Neena	Kochhar	NKOCHHAR	515.123.4568	1987-06-18	AD_VP	17000.00	0.00
102	Lex	De Haan	LDEHAAN	515.123.4569	1987-06-19	AD_VP	17000.00	0.00
103	Alexander	Hunold	AHUNOLD	590.423.4567	1987-06-20	IT_PROG	9000.00	0.00
104	Bruce	Ernst	BERNST	590.423.4568	1987-06-21	IT_PROG	6000.00	0.00
105	David	Austin	DAUSTIN	590.423.4569	1987-06-22	IT_PROG	4800.00	0.00
106	Valli	Pataballa	VPATABAL	590.423.4560	1987-06-23	IT_PROG	4800.00	0.00

3. Write a query to get the department name and number of employees in the department.

Sample table: employees

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	M
100	Steven	King	SKING	515.123.4567	1987-06-17	AD_PRES	24000.00	0.00	
101	Neena	Kochhar	NKOCHHAR	515.123.4568	1987-06-18	AD_VP	17000.00	0.00	
102	Lex	De Haan	LDEHAAN	515.123.4569	1987-06-19	AD_VP	17000.00	0.00	
103	Alexander	Hunold	AHUNOLD	590.423.4567	1987-06-20	IT_PROG	9000.00	0.00	
104	Bruce	Ernst	BERNST	590.423.4568	1987-06-21	IT_PROG	6000.00	0.00	
105	David	Austin	DAUSTIN	590.423.4569	1987-06-22	IT_PROG	4800.00	0.00	
106	Valli	Pataballa	VPATABAL	590.423.4560	1987-06-23	IT_PROG	4800.00	0.00	

Sample table: departments

DEPARTMENT_ID	DEPARTMENT_NAME	MANAGER_ID	LOCATION_ID
10	Administration	200	1700
20	Marketing	201	1800
30	Purchasing	114	1700
40	Human Resources	203	2400
50	Shipping	121	1500
60	IT	103	1400
70	Public Relations	204	2700
80	Sales	145	2500

```sql
SELECT department_name AS 'Department Name',

COUNT(*) AS 'No of Employees'

FROM departments

INNER JOIN employees

ON employees.department_id = departments.department_id

GROUP BY departments.department_id, department_name

ORDER BY department_name;
```

4. Write a query to find the employee ID, job title, number of days between ending date and starting date for all jobs in department 90.

Sample table: job_history

```
employee_id  start_date  end_date   job_id      department_id
-----------  ----------  ---------  ----------  -------------
employee_id  start_date  end_date`  job_id      department_id
102          1993-01-13  1998-07-24  IT_PROG     60
101          1989-09-21  1993-10-27  AC_ACCOUNT  110
101          1993-10-28  1997-03-15  AC_MGR      110
201          1996-02-17  1999-12-19  MK_REP      20
114          1998-03-24  1999-12-31  ST_CLERK    50
122          1999-01-01  1999-12-31  ST_CLERK    50
200          1987-09-17  1993-06-17  AD_ASST     90
176          1998-03-24  1998-12-31  SA_REP      80
```

Sample table: jobs

JOB_ID	JOB_TITLE	MIN_SALARY	MAX_SALARY
AD_PRES	President	20000	40000
AD_VP	Administration Vice President	15000	30000
AD_ASST	Administration Assistant	3000	6000
FI_MGR	Finance Manager	8200	16000
FI_ACCOUNT	Accountant	4200	9000
AC_MGR	Accounting Manager	8200	16000
AC_ACCOUNT	Public Accountant	4200	9000
SA_MAN	Sales Manager	10000	20000

```sql
SELECT employee_id, job_title, end_date-start_date Days FROM
job_history NATURAL JOIN jobs WHERE department_id=90;
```
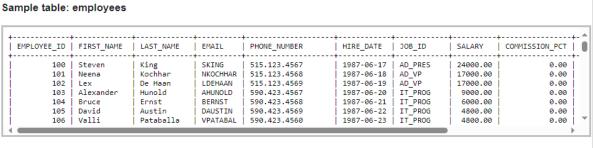
5. Write a query to display the department ID and name and first name of manager.

Sample table: employees

```
+-------------+------------+-----------+----------+--------------+------------+----------+----------+----------------+
| EMPLOYEE_ID | FIRST_NAME | LAST_NAME | EMAIL    | PHONE_NUMBER | HIRE_DATE  | JOB_ID   | SALARY   | COMMISSION_PCT |
+-------------+------------+-----------+----------+--------------+------------+----------+----------+----------------+
|         100 | Steven     | King      | SKING    | 515.123.4567 | 1987-06-17 | AD_PRES  | 24000.00 |           0.00 |
|         101 | Neena      | Kochhar   | NKOCHHAR | 515.123.4568 | 1987-06-18 | AD_VP    | 17000.00 |           0.00 |
|         102 | Lex        | De Haan   | LDEHAAN  | 515.123.4569 | 1987-06-19 | AD_VP    | 17000.00 |           0.00 |
|         103 | Alexander  | Hunold    | AHUNOLD  | 590.423.4567 | 1987-06-20 | IT_PROG  |  9000.00 |           0.00 |
|         104 | Bruce      | Ernst     | BERNST   | 590.423.4568 | 1987-06-21 | IT_PROG  |  6000.00 |           0.00 |
|         105 | David      | Austin    | DAUSTIN  | 590.423.4569 | 1987-06-22 | IT_PROG  |  4800.00 |           0.00 |
|         106 | Valli      | Pataballa | VPATABAL | 590.423.4560 | 1987-06-23 | IT_PROG  |  4800.00 |           0.00 |
```

Sample table: departments

```
+---------------+-----------------+------------+-------------+
| DEPARTMENT_ID | DEPARTMENT_NAME | MANAGER_ID | LOCATION_ID |
+---------------+-----------------+------------+-------------+
|            10 | Administration  |        200 |        1700 |
|            20 | Marketing       |        201 |        1800 |
|            30 | Purchasing      |        114 |        1700 |
|            40 | Human Resources |        203 |        2400 |
|            50 | Shipping        |        121 |        1500 |
|            60 | IT              |        103 |        1400 |
|            70 | Public Relations|        204 |        2700 |
|            80 | Sales           |        145 |        2500 |
```

```sql
SELECT d.department_id, d.department_name, d.manager_id,
e.first_name FROM departments d
INNER JOIN employees e ON (d.manager_id = e.employee_id);
```

6. Write a query to display the job title and average salary of employees.

Sample table: employees
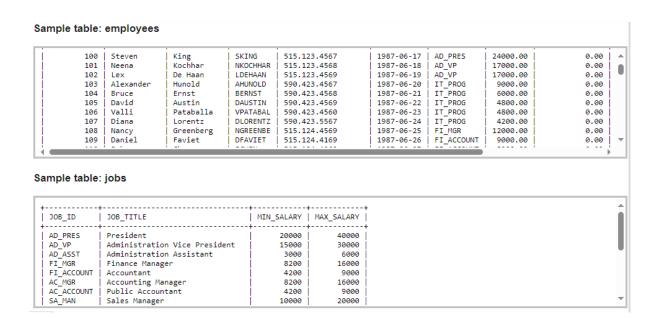
```
+-------------+------------+-----------+----------+--------------+------------+----------+----------+----------------+
| EMPLOYEE_ID | FIRST_NAME | LAST_NAME | EMAIL    | PHONE_NUMBER | HIRE_DATE  | JOB_ID   | SALARY   | COMMISSION_PCT |
+-------------+------------+-----------+----------+--------------+------------+----------+----------+----------------+
|         100 | Steven     | King      | SKING    | 515.123.4567 | 1987-06-17 | AD_PRES  | 24000.00 |           0.00 |
|         101 | Neena      | Kochhar   | NKOCHHAR | 515.123.4568 | 1987-06-18 | AD_VP    | 17000.00 |           0.00 |
|         102 | Lex        | De Haan   | LDEHAAN  | 515.123.4569 | 1987-06-19 | AD_VP    | 17000.00 |           0.00 |
|         103 | Alexander  | Hunold    | AHUNOLD  | 590.423.4567 | 1987-06-20 | IT_PROG  |  9000.00 |           0.00 |
|         104 | Bruce      | Ernst     | BERNST   | 590.423.4568 | 1987-06-21 | IT_PROG  |  6000.00 |           0.00 |
|         105 | David      | Austin    | DAUSTIN  | 590.423.4569 | 1987-06-22 | IT_PROG  |  4800.00 |           0.00 |
|         106 | Valli      | Pataballa | VPATABAL | 590.423.4560 | 1987-06-23 | IT_PROG  |  4800.00 |           0.00 |
```

Sample table: jobs

```
+------------+------------------------------+------------+------------+
| JOB_ID     | JOB_TITLE                    | MIN_SALARY | MAX_SALARY |
+------------+------------------------------+------------+------------+
| AD_PRES    | President                    |      20000 |      40000 |
| AD_VP      | Administration Vice President |     15000 |      30000 |
| AD_ASST    | Administration Assistant     |       3000 |       6000 |
| FI_MGR     | Finance Manager              |       8200 |      16000 |
| FI_ACCOUNT | Accountant                   |       4200 |       9000 |
| AC_MGR     | Accounting Manager           |       8200 |      16000 |
| AC_ACCOUNT | Public Accountant            |       4200 |       9000 |
| SA_MAN     | Sales Manager                |      10000 |      20000 |
```

```sql
SELECT job_title, AVG(salary)
FROM employees
NATURAL JOIN jobs
GROUP BY job_title;
```
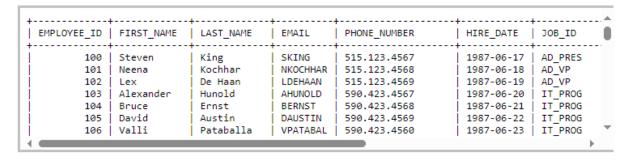
7. Write a query to display job title, employee name, and the difference between salary of the employee and minimum salary for the job.

Sample table: employees

```
|  100 | Steven    | King      | SKING    | 515.123.4567 | 1987-06-17 | AD_PRES    | 24000.00 |  0.00 |
|  101 | Neena     | Kochhar   | NKOCHHAR | 515.123.4568 | 1987-06-18 | AD_VP      | 17000.00 |  0.00 |
|  102 | Lex       | De Haan   | LDEHAAN  | 515.123.4569 | 1987-06-19 | AD_VP      | 17000.00 |  0.00 |
|  103 | Alexander | Hunold    | AHUNOLD  | 590.423.4567 | 1987-06-20 | IT_PROG    |  9000.00 |  0.00 |
|  104 | Bruce     | Ernst     | BERNST   | 590.423.4568 | 1987-06-21 | IT_PROG    |  6000.00 |  0.00 |
|  105 | David     | Austin    | DAUSTIN  | 590.423.4569 | 1987-06-22 | IT_PROG    |  4800.00 |  0.00 |
|  106 | Valli     | Pataballa | VPATABAL | 590.423.4560 | 1987-06-23 | IT_PROG    |  4800.00 |  0.00 |
|  107 | Diana     | Lorentz   | DLORENTZ | 590.423.5567 | 1987-06-24 | IT_PROG    |  4200.00 |  0.00 |
|  108 | Nancy     | Greenberg | NGREENBE | 515.124.4569 | 1987-06-25 | FI_MGR     | 12000.00 |  0.00 |
|  109 | Daniel    | Faviet    | DFAVIET  | 515.124.4169 | 1987-06-26 | FI_ACCOUNT |  9000.00 |  0.00 |
```

Sample table: jobs

JOB_ID	JOB_TITLE	MIN_SALARY	MAX_SALARY
AD_PRES	President	20000	40000
AD_VP	Administration Vice President	15000	30000
AD_ASST	Administration Assistant	3000	6000
FI_MGR	Finance Manager	8200	16000
FI_ACCOUNT	Accountant	4200	9000
AC_MGR	Accounting Manager	8200	16000
AC_ACCOUNT	Public Accountant	4200	9000
SA_MAN	Sales Manager	10000	20000

```sql
SELECT job_title, first_name, salary-min_salary 'Salary -
Min_Salary'FROM employees NATURAL JOIN jobs;
```

8. Write a query to display the job history that was done by any employee who is currently drawing more than 10000 of salary.

Sample table: employees

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID
100	Steven	King	SKING	515.123.4567	1987-06-17	AD_PRES
101	Neena	Kochhar	NKOCHHAR	515.123.4568	1987-06-18	AD_VP
102	Lex	De Haan	LDEHAAN	515.123.4569	1987-06-19	AD_VP
103	Alexander	Hunold	AHUNOLD	590.423.4567	1987-06-20	IT_PROG
104	Bruce	Ernst	BERNST	590.423.4568	1987-06-21	IT_PROG
105	David	Austin	DAUSTIN	590.423.4569	1987-06-22	IT_PROG
106	Valli	Pataballa	VPATABAL	590.423.4560	1987-06-23	IT_PROG

Sample table: Job_history

```
employee_id  start_date  end_date    job_id      department_id
-----------  ----------  ----------  ----------  -------------
employee_id  start_date  end_date`   job_id      department_id
102          1993-01-13  1998-07-24  IT_PROG     60
101          1989-09-21  1993-10-27  AC_ACCOUNT  110
101          1993-10-28  1997-03-15  AC_MGR      110
201          1996-02-17  1999-12-19  MK_REP      20
114          1998-03-24  1999-12-31  ST_CLERK    50
122          1999-01-01  1999-12-31  ST_CLERK    50
200          1987-09-17  1993-06-17  AD_ASST     90
176          1998-03-24  1998-12-31  SA_REP      80
```

```sql
SELECT jh.* FROM job_history jh
JOIN employees e
ON (jh.employee_id = e.employee_id)
  WHERE salary > 10000;
```