LAB 2 – MATEUSZ NOWOTNIK

1. For each employee with name starting with F or M letter display the number of all subjects for which she/he has classes.

```
select emp_name, count(distinct s.subject_id) as number
from employees e join schedules s on e.EMPLOYEE_ID=s.EMPLOYEE_ID
where emp_name like 'F%' or emp_name like 'M%'
group by e.employee_id, emp_name
```

2. Display the name and the average grade of students who have grades in ALGEBRA subjects. We are interested in the average of all grades not just the grades from ALGEBRA!

```
select s.student_id, s.student_name, avg(g.grade)
from students s join grades g on g.STUDENT_ID=s.STUDENT_ID
where s.student_id in (
select s.student_id
from students s join grades g on g.STUDENT_ID=s.STUDENT_ID
join subjects su on g.SUBJECT_ID=su.SUBJECT_ID
where su.subject_name='ALGEBRA' )
group by s.student_id, s.student_name
```

3. Display names of subjects for which super_sub_id = 1, realized by the biggest number of employees.

```
select su.subject_id, su.subject_name, count(distinct sc.employee_id) as
number
from subjects su join schedules sc on su.SUBJECT_ID=sc.SUBJECT_ID
where su.SUPER_SUB_ID = 1
group by su.subject_id, su.subject_name
having count(distinct sc.employee_id) in (
select max(max_number)
from (
select count(distinct employee_id) as max_number
from subjects su join schedules sc on su.SUBJECT_ID=sc.SUBJECT_ID
where su.SUPER_SUB_ID = 1
group by sc.subject_id, su.subject_name ) as t1 )
```

4. Display names of employees who have a single payment lower than any payment of VOYTECKA employee.

```
select e.employee_id, e.emp_name
from employees e join salaries s on s.EMPLOYEE_ID=e.EMPLOYEE_ID
group by e.employee_id, e.emp_name
having min(s.amount) < (
select MIN(s.amount)
from employees e join salaries s on s.EMPLOYEE_ID=e.EMPLOYEE_ID
where emp_name = 'VOYTECKA' )
```

5. Display names of teams for which the oldest employee is younger than employee FRESH.

```
select t.team_name
from teams t join employees e on e.TEAM_ID=t.TEAM_ID
group by t.team_id, t.team_name
having MIN (date_of_birth) > (
select DATE_OF_BIRTH
from employees
where emp_name='FRESH' )
```

6. Display teams which don't employ any woman.

```
select t.team_name
from teams t
where t.team_id not in (
select t.team_id
from teams t join employees e on e.TEAM_ID=t.TEAM_ID
where e.gender='F'
GROUP BY t.team_id, t.team_name )
```

7. Display the number of women in teams. We are interested in all teams!

```
select t.team_id, team_name, count(employee_id) as number
from teams t left join employees e on t.TEAM_ID=e.TEAM_ID and GENDER='F'
group by t.team_id, team_name
```

8. Display the average number of women in teams.

```
select avg(number)
from (
select t.team_id, team_name, count(employee_id) as number
from teams t left join employees e on t.TEAM_ID=e.TEAM_ID and GENDER='F'
group by t.team_id, team_name ) as table1
```

9. Display the names of the oldest employees in each team.

```
select t.team_id, team_name, emp_name, date_of_birth
from teams t join employees e on t.TEAM_ID=e.TEAM_ID
and date_of_birth = (
select min(date_of_birth)
from employees )
group by t.team_id, team_name, emp_name, date_of_birth
```

10. Display names of employees with names starting with W letter who don't have any salary in any project that employee WOLF has.

```
select e.emp_name
from employees e join salaries s on e.EMPLOYEE_ID=s.EMPLOYEE_ID
join projects p on p.PROJECT_ID=s.PROJECT_ID
where e.emp_name like 'W%' and amount not in (
select amount
from salaries s join employees e on s.EMPLOYEE_ID=e.EMPLOYEE_ID
join projects p on s.PROJECT_ID=p.PROJECT_ID
where emp_name='WOLF' )
group by e.EMPLOYEE_ID, emp_name
```

11. Display names of employees who have salaries in all projects in which employee WOLF has a salary.

```
select e.emp_name
from employees e join salaries s on e.EMPLOYEE_ID=s.EMPLOYEE_ID
join projects p on p.PROJECT_ID=s.PROJECT_ID
where p.project_id in (
select project_id
from employees e join salaries s on e.EMPLOYEE_ID=s.EMPLOYEE_ID
where e.emp_name = 'WOLF' )
group by e.emp_name
having count(distinct p.project_id) in (
select count(distinct project_id)
from employees e join salaries s on e.EMPLOYEE_ID=s.EMPLOYEE_ID
where e.emp_name = 'WOLF' )
```