GROUP BY

1. Contare quanti iscritti ci sono stati ogni anno.

```
SELECT COUNT(id)
AS Year_enrolment, year(enrolment_date)
AS year
FROM `students`
GROUP BY year(enrolment_date);
```

2. Contare gli insegnanti che hanno l'ufficio nello stesso edificio.

```
SELECT office_address, COUNT(id)
FROM `teachers`
GROUP BY `office_address`;
```

3. Calcolare la media dei voti di ogni appello d'esame.

```
SELECT exam_id, AVG(vote)
FROM `exam_student`
GROUP BY `exam_id`;
```

4. Contare quanti corsi di laurea ci sono per ogni dipartimento.

```
SELECT department_id, COUNT(id)
FROM `degrees`
GROUP BY `department_id`;
```

JOIN

1. Selezionare tutti gli studenti iscritti al Corso di Laurea in Economia.

```
SELECT students.degree_id, students.name, students.surname, degrees.name
FROM `students`
INNER JOIN `degrees` ON students.degree_id = degrees.id
WHERE degrees.name = "Corso di Laurea in Economia";
```

2. Selezionare tutti i Corsi di Laurea del Dipartimento di Neuroscienze.

```
SELECT degrees.department_id, degrees.name, departments.name
FROM `degrees`
INNER JOIN `departments` ON degrees.department_id = departments.id
WHERE departments.name = "Dipartimento di Neuroscienze";
```

3. Selezionare tutti i corsi in cui insegna Fulvio Amato. (id=44).

```
SELECT course_id AS "Fulvio Amato's Course"
FROM `teachers`
INNER JOIN `course_teacher` ON teachers.id = course_teacher.teacher_id
WHERE id = 44;
```

4. Selezionare tutti gli studenti con relativo corso di laurea e relativo dipartimento,

in ordine alfabetico per cognome e nome.

```
SELECT *
FROM `students`
INNER JOIN `degrees` ON students.degree_id = degrees.id
```

```
INNER JOIN `departments` ON departments.id = degrees.department_id
ORDER BY (students.surname) ASC, (students.name) ASC;
```

5. Selezionare tutti i corsi di laurea con i relativi corsi e insegnanti.

```
SELECT degrees.name, courses.name, teachers.name
FROM `degrees`
INNER JOIN `courses` ON degrees.id = courses.degree_id
INNER JOIN `course_teacher` ON courses.id = course_teacher.teacher_id
INNER JOIN `teachers` ON course_teacher.teacher_id = teachers.id;
```

6. Selezionare tutti i docenti che insegnano nel Dipartimento di Matematica (54).

```
SELECT DISTINCT teachers.name, teachers.surname, departments.name
FROM `teachers`
INNER JOIN `course_teacher` ON course_teacher.teacher_id = teachers.id
INNER JOIN `courses` ON course_teacher.course_id = courses.id
INNER JOIN `degrees` ON courses.degree_id = degrees.id
INNER JOIN `departments` ON degrees.department_id = departments.id
WHERE departments.name = "Dipartimento di Matematica";
```