

EX - Query con JOIN

-- 1. Selezionare tutti gli studenti (students) iscritti al (degrees) Corso di Laurea in Economia

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

-- 2. Selezionare tutti i (degrees) Corsi di Laurea Magistrale del (departments) Dipartimento di Neuroscienze

```
SELECT `degrees`.`*`
FROM `degrees`
JOIN `departments` ON `departments`.`id` = `degrees`.`department_id`
WHERE `departments`.`name` = "Dipartimento di Neuroscienze"
AND `degrees`.`level` = "magistrale";
```

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

```
SELECT `courses`.`name` AS "course_name", `teachers`.`name` AS "teacher_name",
`teachers`.`surname` AS "teacher_surname"
FROM `courses`
JOIN `course_teacher` ON `courses`.`id` = `course_teacher`.`course_id`
JOIN `teachers` ON `course_teacher`.`teacher_id` = `teachers`.`id`

WHERE `course_teacher`.`teacher_id` = 44;
```

-- 4. Selezionare tutti gli studenti (students) con i dati relativi al corso di laurea (degrees) a cui sono iscritti e il relativo (departments) dipartimento, in ordine alfabetico per cognome e nome

```
SELECT `students`.`name` AS "student_name", `students`.`surname` AS "student_surname",
`degrees`.`name` AS "degree_name", `departments`.`name` AS "department_name"
FROM `degrees`
JOIN `students` ON `degrees`.`id` = `students`.`degree_id`
JOIN `departments` ON `degrees`.`department_id` = `departments`.`id`;
ORDER BY `students`.`surname`, `students`.`name`
```

-- 5. Selezionare tutti i corsi di laurea(courses) con i relativi corsi(degrees) e insegnanti (teachers)

```
SELECT `courses`.`name` AS "courses_name", `degrees`.`name` AS "degree_name",
`teachers`.`name` AS "teacher_name", `teachers`.`surname` AS "teachers_surname"
FROM `degrees`
JOIN `courses` ON `degrees`.`id` = `courses`.`degree_id`
JOIN `course_teacher` ON `courses`.`id` = `course_teacher`.`course_id`
JOIN `teachers` ON `teachers`.`id` = `course_teacher`.`teacher_id`;
```

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

```
SELECT
    `teachers`.`id` AS "teacher_id", `teachers`.`name` AS "teacher_name", `teachers`.`surname`
    AS "teacher_surname", `departments`.`name` AS "department_name"
FROM `degrees`
JOIN `courses` ON `degrees`.`id` = `courses`.`degree_id`
JOIN `course_teacher` ON `courses`.`id` = `course_teacher`.`course_id`
JOIN `teachers` ON `course_teacher`.`teacher_id` = `teachers`.`id`
JOIN `departments` ON `departments`.`id` = `degrees`.`department_id`

WHERE `departments`.`name` = "Dipartimento di Matematica ";
```

EX - Query con GROUP BY

-- 1. Contare quanti iscritti ci sono stati ogni anno

```
SELECT COUNT(*) AS "numero_iscritti", YEAR(enrolment_date) AS "year"
FROM `students`
GROUP BY YEAR(enrolment_date);
```

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

```
SELECT COUNT(*) AS "teachers_number", `office_address`
FROM `teachers`
GROUP BY `office_address`;
```

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

```
SELECT `exam_id`, ROUND(AVG(`vote`)) AS "avarage_vote"
FROM `exam_student`
GROUP BY `exam_id`;
```

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

```
SELECT COUNT(*) AS "degree_numbers", `department_id`
FROM `degrees`
GROUP BY `department_id`;
```