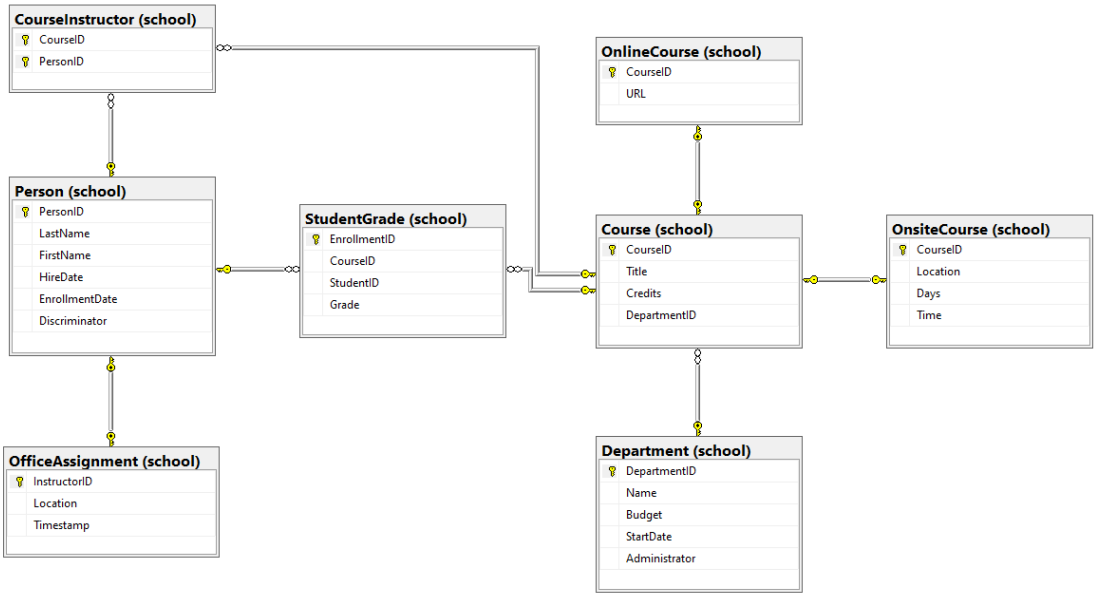
Esercizio SQL
https://www.sqlservertutorial.net/
Prendere in considerazione il database School rappresentato dal seguente diagramma



e scrivere le istruzioni SQL necessarie per estrarre le seguenti informazioni:

1. il budget medio dei dipartimenti

```
select avg(budget) from Department
```

Risultati Messaggi

	(Nessun nome di colonna)
1	230000,00

2. i dipartimenti che hanno un budget superiore alla media

```
select name from Department
where budget > (select avg(budget) from Department)
```

Risultati Messaggi

	name
1	Engineering
2	Mathematics

3. il dipartimento con il budget più alto

```
select name from Department
where budget = (select max(budget) from Department)
```

Risultati | Messaggi

	name
1	Engineering

4. l'elenco dei dipendenti

```
select LastName,FirstName from Person
where discriminator = 'Instructor'
```

Risultati | Messaggi

	LastName	FirstName
1	Abercrombie	Kim
2	Fakhouri	Fadi
3	Harui	Roger
4	Zheng	Roger
5	Kapoor	Candace
6	Serrano	Stacy
7	Stewart	Jasmine
8	Xu	Kristen
9	Van Houten	Roger

5. il numero di studenti

```
select count(discriminator) as n_studenti from Person
where discriminator = 'student'
```

Risultati | Messaggi

	n_studenti
1	25

6. le persone che si chiamano Roger

```
select FirstName,LastName from Person
where FirstName = 'Roger'
```

Risultati | Messaggi

	FirstName	LastName
1	Roger	Harui
2	Roger	Zheng
3	Roger	Holt
4	Roger	Van Houten

7. gli studenti che si chiamano Roger

```
select FirstName,LastName from Person
where FirstName = 'Roger' and  Discriminator = 'student'
```

Risultati | Messaggi

	FirstName	LastName
1	Roger	Holt

8. l'elenco degli studenti in ordine alfabetico

```
select LastName,FirstName from Person
where Discriminator = 'student'  order by LastName asc
```

Risultati | Messaggi

	LastName	FirstName
1	Alexander	Carson
2	Alonso	Meredith
3	Anand	Arturo
4	Barzdukas	Gytis
5	Browning	Meredith
6	Bryant	Carson
7	Carlson	Robyn
8	Gao	Erica
9	Griffin	Rachel
10	Holt	Roger
11	Jai	Damien
12	Justice	Peggy
13	Li	Yan
14	Lopez	Sophia
15	Martin	Randall
16	Morgan	Isaiah
17	Norman	Laura
18	Olivotto	Nino

9. gli studenti che si sono iscritti nel 2000

```
select LastName,FirstName from Person
where Discriminator = 'student'  and YEAR(EnrollmentDate) = 2000
```

Risultati | Messaggi

	LastName	FirstName
1	Browning	Meredith
2	Walker	Alexandra

10. il dipendente che ha l'anzianità più alta

```
Select FirstName,LastName from Person
where Discriminator = 'Instructor' and HireDate = (select min(HireDate)
from Person)
```

Results | Messages

	FirstName	LastName
1	Kim	Abercrombie

11. i nomi dei corsi onsite

```
select Title from Course
INNER JOIN OnsiteCourse on
Course.CourseID = OnsiteCourse.ID
```

12. i nomi dei corsi online

```
select Title from Course
INNER JOIN OnlineCourse  on
Course.CourseID = OnlineCourse.ID
```

13. il nomi dei corsi e i nomi dei dipartimenti di appartenenza

```
select Course.Title,Department.Name from school.Course
inner join school.Department on
Course.DepartmentID = Department.DepartmentID
```

Risultati | Messaggi

	Title	Name
1	Calculus	Mathematics
2	Chemistry	Engineering
3	Physics	Engineering
4	Composition	English
5	Poetry	English
6	Literature	English
7	Trigonometry	Mathematics
8	Microeconomics	Economics
9	Macroeconomics	Economics
10	Quantitative	Economics

14.il numero di corsi per ogni dipartimento

```
Select Name, count(*)  as totale
from department
inner join  Course on
department.departmentID = Course.departmentID
group by department.Name
```

Results | Messages

	Name	totale
1	Economics	3
2	Engineering	2
3	English	3
4	Mathematics	2

15.i dipartimenti con più di 3 corsi

```
Select Name, count(*) from school.department
inner join school.Course on
school.department.departmentID = school.Course.deartmentID
```

```
group by school.department.Name
having count(*) > 3
```

16.il dipartimento con più corsi

```
Select Name, count(*) from department
inner join Course on
department.departmentID = Course.DepartmentID
group by department.Name
having count(*) = (

Select max(totale) from
(Select count(*)  as totale
from department
inner join  Course on
department.departmentID = Course.departmentID
group by department.Name) as t)
```

or

https://www.sqlservertutorial.net/sql-server-views/

```
create view department_courses
as
select Name, count(*) as totale
from department
inner join Course on
department.departmentID = Course.DepartmentID
group by department.Name
```

```
select * from department_courses
where totale =
(select max(totale)from department_courses)
```