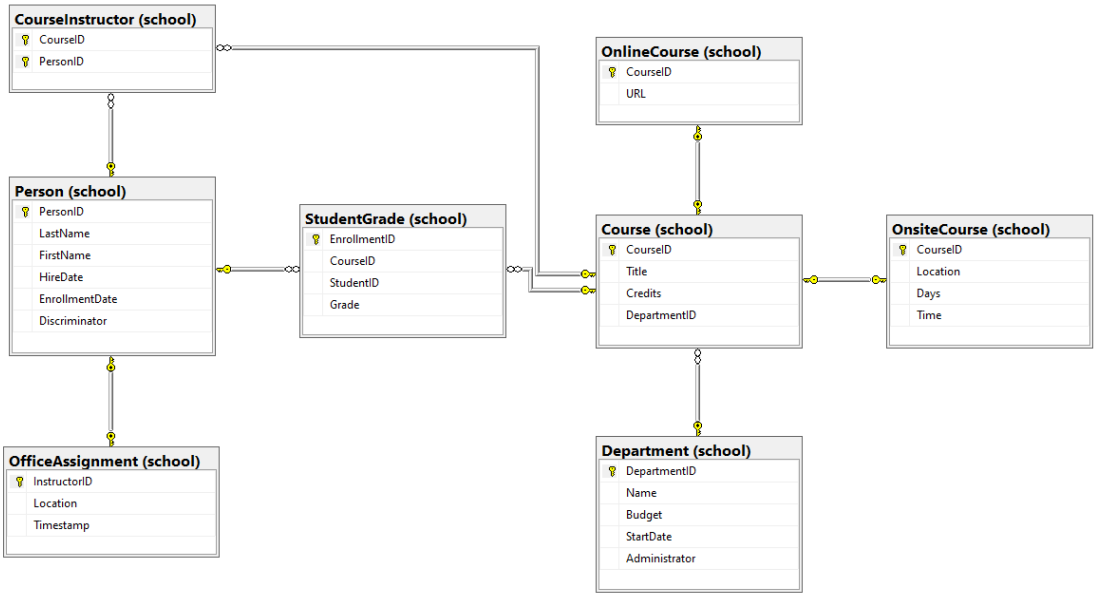
Esercizio SQL

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 school.Department
```

	mediaBudget
1	230000,00

2. i dipartimenti che hanno un budget superiore alla media

```
select budget from school.Department where Budget > (select
avg(Budget) from school.Department)
```

	budget
1	350000,00

3. il dipartimento con il budget più alto

```
select max(Budget) as maxBudget from school.Department
```

	maxBudget
1	350000,00

4. l'elenco dei dipendenti

```
select * from school.Person where Discriminator =
'Instructor'
```

	PersonID	LastName	FirstName	HireDate	EnrollmentDate	Discriminator
1	1	Abercrombie	Kim	1995-03-11 00:00:00.000	NULL	Instructor
2	4	Fakhouri	Fadi	2002-08-06 00:00:00.000	NULL	Instructor

5. il numero di studenti

```
select discriminator, count(*) as totpersone
from school.Person
group by discriminator
having count(*) = (select max(totpersone) as massimo
from (select discriminator, count(*) as totpersone
from school.Person
group by discriminator) as tot)

oppure

select count(*)
from school.Person
where discriminator = 'Student'
```

6. le persone che si chiamano Roger

```
select * from school.Person where FirstName ='Roger'
```

	PersonID	LastName	FirstName	HireDate	EnrollmentDate	Discriminator
1	5	Harui	Roger	1998-07-01 00:00:00.000	NULL	Instructor
2	18	Zheng	Roger	2004-02-12 00:00:00.000	NULL	Instructor

7. gli studenti che si chiamano Roger

```
select * from school.Person where FirstName ='Roger' and
Discriminator='Student'
```

	PersonID	LastName	FirstName	HireDate	EnrollmentDate	Discriminator
1	21	Holt	Roger	NULL	2004-09-01 00:00:00.000	Student

8. l'elenco degli studenti in ordine alfabetico

```
select * from school.Person
where Discriminator='Student'
order by FirstName
```

	PersonID	LastName	FirstName	HireDate	EnrollmentDate	Discriminator
1	14	Walker	Alexandra	NULL	2000-09-01 00:00:00.000	Student
2	30	Shan	Alicia	NULL	2003-09-01 00:00:00.000	Student

9. gli studenti che si sono iscritti nel 2000

```
select * from school.person
where year(enorollmentdate)= 2000
```

10. il dipendente che ha l'anzianità più alta

```
select lastName, FirstName, from school.pearson
where discriminator = 'instructor' and hiredate =
min(hiredate)

oppure
```

```
select lastname, firstname, min(hiredate) as earliest
from school.person
group by lastname, firstname
having min(hiredate) = (select min(earliest)
from (select lastname, firstname, min(hiredate) as earliest
from school.person group by lastname, firstname)
min)
```

11. i nomi dei corsi onsite

```
select title from school.OnsiteCourse inner join
school.Course on
school.OnsiteCourse.CourseID=school.Course.CourseID
```

	CourseID	Location	Days	Time	CourseID	Title	Credits	DepartmentID
1	1045	121 Smith	MWHF	1900-01-01 15:30:00	1045	Calculus	4	7
2	1050	123 Smith	MTWH	1900-01-01 11:30:00	1050	Chemistry	4	1

12. i nomi dei corsi online

```
select title from school.OnlineCourse inner join
school.Course on
school.OnlineCourse.CourseID=school.Course.CourseID
```

	CourseID	URL	CourseID	Title	Credits	DepartmentID
1	2021	http://www.fineartschool.net/Composition	2021	Composition	3	2
2	2030	http://www.fineartschool.net/Poetry	2030	Poetry	2	2

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

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

	Title	Name
1	Calculus	Mathematics
2	Chemistry	Engineering

14. il numero di corsi per ogni dipartimento

```
select school.Department.Name, count(*) as numero from
school.Department
inner join school.Course on school.Course.DepartmentID=
school.Department.DepartmentID
group by school.Department.Name
```

	Name	(Nessun nome di colonna)
1	Economics	3
2	Engineering	2

15. i dipartimenti con più di 3 corsi

```
select school.Department.Name, count(*) as numero from
school.Department
inner join school.Course on school.Course.DepartmentID=
school.Department.DepartmentID
group by school.Department.Name
having count(*) > 3
```

16. il dipartimento con più corsi

```
select name, count(*) as totcorsi from school.Course inner join
school.Department
on school.Course.DepartmentID = school.Department.DepartmentID
group by name
having count(*) =
(select max(totcorsi) from
(select count(*) as totcorsi
from school.Course
inner join school.Department
on school.Course.DepartmentID = school.Department.DepartmentID
group by name)as t)
```

	name	totcorsi
1	Economics	3
2	English	3

16.2

```
CREATE VIEW school.departament_course
AS
select Name, count(*) as totcorsi
from school.Department
inner join school.Course
on school.Department.DepartmentID = school.Course.DepartmentID
group by Department.Name

select * from school.departament_course
where totcorsi =(select max(totcorsi) from
school.departament_course)
```