### Silver Oaks Cooperative School Information System

Changnan Jing, Jiading Chen, Kaho Ip, Wanyun Yang, Wenzhe Wu

12/3/2019

SCHOOL OF BUSINESS

#### Background

User:

Silver Oaks Cooperative School administrators

Data/sources:

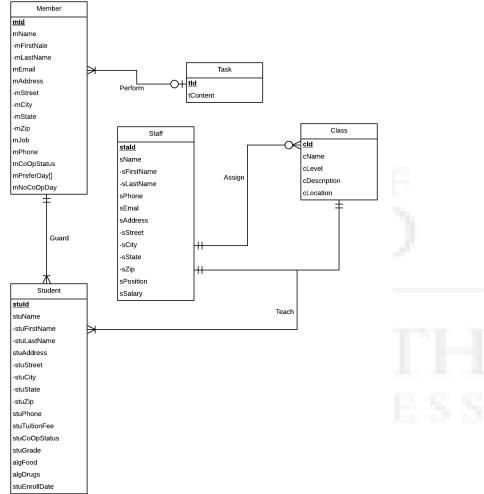
Information of students, staffs, members, tasks and classes

All information is from Silver Oaks Cooperative School Official Site (https://www.silveroakscooperative.org/)

#### Introduction

- 1. Silver Oaks Cooperative School Information System is a system that helps the school to manage all the students' and members' information and allocate those students to different classes and staff (teachers).
- 2. Apart from those, school can also manage the information of the enrolled students and award the top students by sorting the grades.
- 3. Besides, by building relationships among the tables, school can deal with staff resignation, student transfer and etc..
- 4. Finally, we can use different queries to get interesting statistics such as the most popular course, number of students of different statuses and etc..
- 5. School administrators can use the system to inquire about the students' tuition fees information and their cooperation ways.

# Conceptua Database



#### Logical Database Design

Student(<u>stuld</u>, stuFirstName, stuLastName, <u>stuStreet</u>, <u>stuCity</u>, stuState, stuZip, stuPhone, stuTuitionFee, stuCoOpStatus, stuGrade, algFood, algDrugs, stuEnrollDate, *mld*)

Staff(**stald**, sFirstName, sLastName, sPhone, sEmail, sStreet, sCity, sState, sZip, sPosition, sSalary)

Member(<u>mld</u>, mFirstName, mLastName, mEmail, mStreet, mCity, mState, mZip, mJob, mPhone,mCoOpStatus, mPreferDay, mNoCoOpDay)

Class(<u>cld</u>, cName, cLevel, cDescription, cLocation, *stald*)

Task(<u>tld</u>, <u>mld</u>, tContent)

Teach(*cld*, *stald*, *stuld*)

#### Physical Database-Design

```
CREATE TABLE [Student] (
stuld CHAR(9) NOT NULL,
mld CHAR(9),
stuFirstName VARCHAR(20),
stuLastName VARCHAR(20),
stuStreet VARCHAR(40),
stuCity VARCHAR(20),
stuState CHAR(2),
stuZip CHAR(5),
stuPhone CHAR(12),
stuTuitionFee DECIMAL(10,2),
stuCoOpStatus VARCHAR(20),
```

```
stuGrade VARCHAR(20),
algFood VARCHAR(100),
algDrugs VARCHAR(100),
stuEnrollDate DATE,
           CONSTRAINT pk Student stuld PRIMARY
KEY (stuld),
           CONSTRAINT fk Student mld FOREIGN
KEY (mld)
           REFERENCES [Member] (mld)
                      ON UPDATE CASCADE
                      ON DELETE SET NULL
```

#### Use Case & Application 1

Which is the most popular class according to the number of students registered?

SELECT s.cName, MAX(s.nStudent) AS 'Number of Student'

FROM (SELECT c.cName, COUNT(t.stuld) AS 'nStudent'

FROM Class c, Teach t

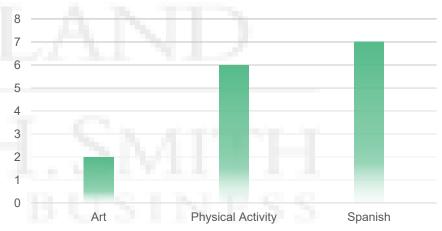
WHERE c.cld = t.cld

GROUP BY c.cName) s

GROUP BY s.cName;

	cName	Number of Student
1	Art	2
2	Physical Activity	6
3	Spanish	7

#### NUMBER OF STUDENT



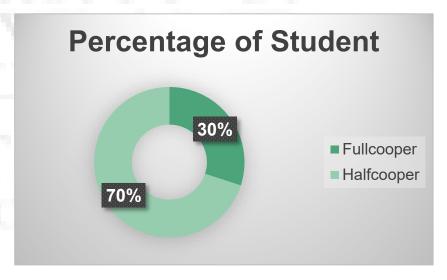
#### Use Case & Application 2

What percent of students are Halfcooper or Fullcooper?

SELECT stuCoOpStatus, COUNT(stuId)\*100/(SELECT COUNT(stuId) FROM Student) AS 'Percentage of Student'

FROM Student
GROUP BY stuCoOpStatus;

stuCoOpStatus Percentage of Student
1 Fullcooper 30
2 Halfcooper 70



#### Frontend



http://128.8.127.120/Front-end/Member.php#

ROBERT H. SMITH



## Thank you

ROBERT H. SMITH