

## Relational Model

Schools(school\_code, name, main\_language, vision, mission, fees, school\_type, school\_address, phone\_number, email, general\_info)

Grades\_offeredBy\_Schools(grade\_offered, school\_code)

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*Grades\_offeredBy\_Schools.school\_code references Schools*

Middle\_Schools(school\_code)

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*Middle\_Schools.school\_code references Schools*

MiddleCourses(course\_code, school\_code)

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*MiddleCourses.course\_code references Courses*  
*MiddleCourses.school\_code references Middle\_Schools*

Elementary\_Schools(school\_code)

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*Elementary\_Schools.school\_code references Schools*

Supplies(supply, school\_code)

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*Supplies.school\_code references Elementry\_Schools*

ElementaryCourses(course\_code, school\_code)

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*ElementaryCourses.course\_code references Courses*  
*ElementaryCourses.school\_code references Elementary\_Schools*

High\_Schools(school\_code)

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*High.school\_code references School*

HighCourses(course\_code, school\_code)

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*HighCourses.course\_code references Courses*  
*HighCourses.school\_code references High\_Schools*

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Employees(ssn, username, employee\_password, first\_name, middle\_name, last\_name, gender, birthday, employee\_address, salary, email, school\_code)

*Employees.school\_code references Schools.school\_code*

Teachers(ssn, start\_date\_of\_teaching, years\_of\_experience)

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*Teachers.ssn references Employees.ssn*

*where Teachers.years of experience= Current.date- Teachers.start day of teaching*

Teachers\_supervisedBy\_Teachers(supervisor\_ssn, teacher\_ssn)

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*Supervises.supervisor\_ssn references Teacher.ssn*

*Supervises.teacher\_ssn references Teacher.ssn*

Administrators(administrator\_ssn)

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*Administrators.administrator\_ssn references Employees.ssn*

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Clubs(name, school\_code, purpose)

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*Clubs.school\_code references High\_Schools*

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Children(ssn, name, birthday, gender, age)

*where Children.age= Current.date - Children.birthday*

Students(ssn, username, student\_password, id, grade, school\_code)

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*Students.SSN references Children*

*Students.school\_code references Schools.school\_code*

Schools\_accept\_Students(ssn,school\_code)

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*Schools\_accept\_Students.ssn references Children*

*Schools\_accept\_Students.school\_code references Schools.school\_code*

Clubs\_joinedBy\_Students(ssn,name,school\_code)

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*Clubs\_joinedBy\_Students.ssn references Students.ssn*

*Clubs\_joinedBy\_Students.name references Clubs.name*

*Clubs\_joinedBy\_Students.school\_code references Clubs.school\_code*

Courses\_TakenBy\_Students(course\_code, ssn)

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*Courses\_TakenBy\_Students.ssn references Students.ssn*

*Courses\_TakenBy\_Students.course\_code references Courses.course\_code*

Answers\_And\_Questions\_ReviewedBy\_Students(course\_code2, ssn2, question\_id,  
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ssn, course\_code3, teacher\_ssn, answer\_id)  
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*Answers\_And\_Questions\_ReviewedBy\_Students.ssn references Students.ssn*

*Answers\_And\_Questions\_ReviewedBy\_Students.(course\_code2, ssn2) references  
Questions.(course\_code,  
ssn)*

*Answers\_And\_Questions\_ReviewedBy\_Students.(teacher\_ssn, course\_code3)  
references-Answers.(teacher\_ssn, course\_code, ssn)*

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Parents(username, parent\_password, first\_name, last\_name, email, parents\_address,  
home\_number, review, school\_code)

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*Parents.school\_code references Schools*

Parent\_Mobiles(username, mobile number)

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*Parent\_Mobiles.username references Parents*

Children\_appliedForBy\_Parents\_at\_Schools(school\_code, ssn, username)

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*Children\_appliedForBy\_Parents\_at\_Schools.school\_code references  
Schools.school\_code*

*Children\_appliedForBy\_Parents\_at\_Schools.ssn references Children.ssn*

*Children\_appliedForBy\_Parents\_at\_Schools.username references Parents.username*

Parents\_BrowseFor\_Schools(school\_code, username)

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*Parents\_BrowseFor\_Schools.school\_code references Schools.school\_code*

*Parents\_BrowseFor\_Schools.username references Parents.username*

Parents\_canRate\_Teachers(parent\_username, teacher\_ssn, rating)

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*Parents\_canRate\_Teachers.parent\_username references Parents.username*

*Parents\_canRate\_Teachers.teacher\_ssn references Teachers.ssn*

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Announcements(announcement\_date, title, announcement\_description, announcement\_type, ssn)

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*Announcements.ssn references Administrators.administrator\_ssn*

Announcements\_inform\_Parents\_and\_Students(announcement\_date, title, ssn ,

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username)

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*Announcements\_inform\_Parents\_and\_Students.title references Announcements*  
*Announcements\_inform\_Parents\_and\_Students.ssn references Students.ssn*  
*Announcements\_inform\_Parents\_and\_Students.username references Parents.username*

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Assignments(course\_code2, assignment\_number, ssn , content, due\_date, posting\_date,

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mark, solution, teacher\_that\_grades\_ssn, teacher\_that\_posts\_ssn)

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*Assignments.teacher\_that\_posts\_ssn references Teachers.teacher\_that\_posts\_ssn*  
*Assignments.teacher\_that\_grades\_ssn references Teachers.ssn*  
*Assignments.ssn references Students.ssn*  
*Assignments.course\_code2 references Courses.course\_code*

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Reports(report\_id, teacher\_ssn, ssn, teachers\_comment, issue\_date, parent\_username, parent\_reply)

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*Reports.parent\_username references Parents.username*  
*Reports.teacher\_ssn references Teachers.ssn*  
*Reports.ssn references Students.ssn*

Reports\_about\_Students\_issuedBy\_Teachers(report\_id, ssn, username)

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*Reports\_about\_Students\_issuedBy\_Teachers.report\_id references Reports.report\_id*

*Reports\_about\_Students\_issuedBy\_Teachers.teacher\_ssn references Teachers.ssn*  
*Reports\_about\_Students\_issuedBy\_Teachers.ssn references Students.ssn*

Activities(name, school\_code, activity\_description, activity\_date, activity\_location,  
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activity\_type, administrator\_ssn)  
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*Activities.administrator\_ssn references Administrator.administrator\_ssn*  
*Activities.school\_code references Schools.school\_code*

Activity\_assignedBy\_Administrator\_to\_Teacher(name, school\_code, administrator\_ssn ,  
teacher\_ssn)

*Activity\_assignedBy\_Administrator\_to\_Teachers.administrator\_ssn references*  
*Administrators.administrator\_ssn*  
*Activity\_assignedBy\_Administrator\_to\_Teachers.teacher\_ssn references Teachers.ssn*  
*Activity\_assignedBy\_Administrator\_to\_Teacher.( name, school\_code) references*  
*Activites.( name, school\_code)*

Equipment(name, school\_code, equipment)

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Equipment.(name, school\_code) references Activities.(name, school\_code)

Activity\_appliedToBy\_Student(ssn, name, school\_code)

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*Activity\_appliedToBy\_Student.ssn references Students.ssn*  
*Activity\_appliedToBy\_Student.(name, school\_code) references Activities*

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Courses (course\_code, course\_description, grade, clevel, course\_name, teacher\_ssn)

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*Courses.teacher\_ssn references Teachers.ssn*

Courses\_havePrerequisite\_Courses(course\_code1, course\_code2)

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*Courses\_havePrerequisite\_Courses.course\_code1 references Course.course\_code*  
*Courses\_havePrerequisite\_Courses.course\_code2 references Course.course\_code*

Questions (course\_code, question\_id, question\_text, ssn)

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*Questions.course\_code references Course*  
*Questions.ssn references Students*

Answers (answer\_id, question\_id, ssn, course\_code, answer\_text, teacher\_ssn)

*Answers.(course\_code,ssn,question\_id) references*

*Questions.(course\_code,ssn,question\_id)*

*Answers.teacher\_ssn references Teachers.ssn*

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Parents\_writeReviewsAbout\_Schools(parent\_username, school\_code, review)

*Parents\_writeReviewsAbout\_Schools.parent\_username references Parents.username*

*Parents\_writeReviewsAbout\_Schools.school\_code references Schools.school\_code*

Courses\_taughtBy\_Teachers(teacher\_ssn, course\_code)

*Courses\_taughtBy\_Teachers.teacher\_ssn references Teachers.ssn*

*Courses\_taughtBy\_Teachers.course\_code references Courses.course\_code*