Group 15

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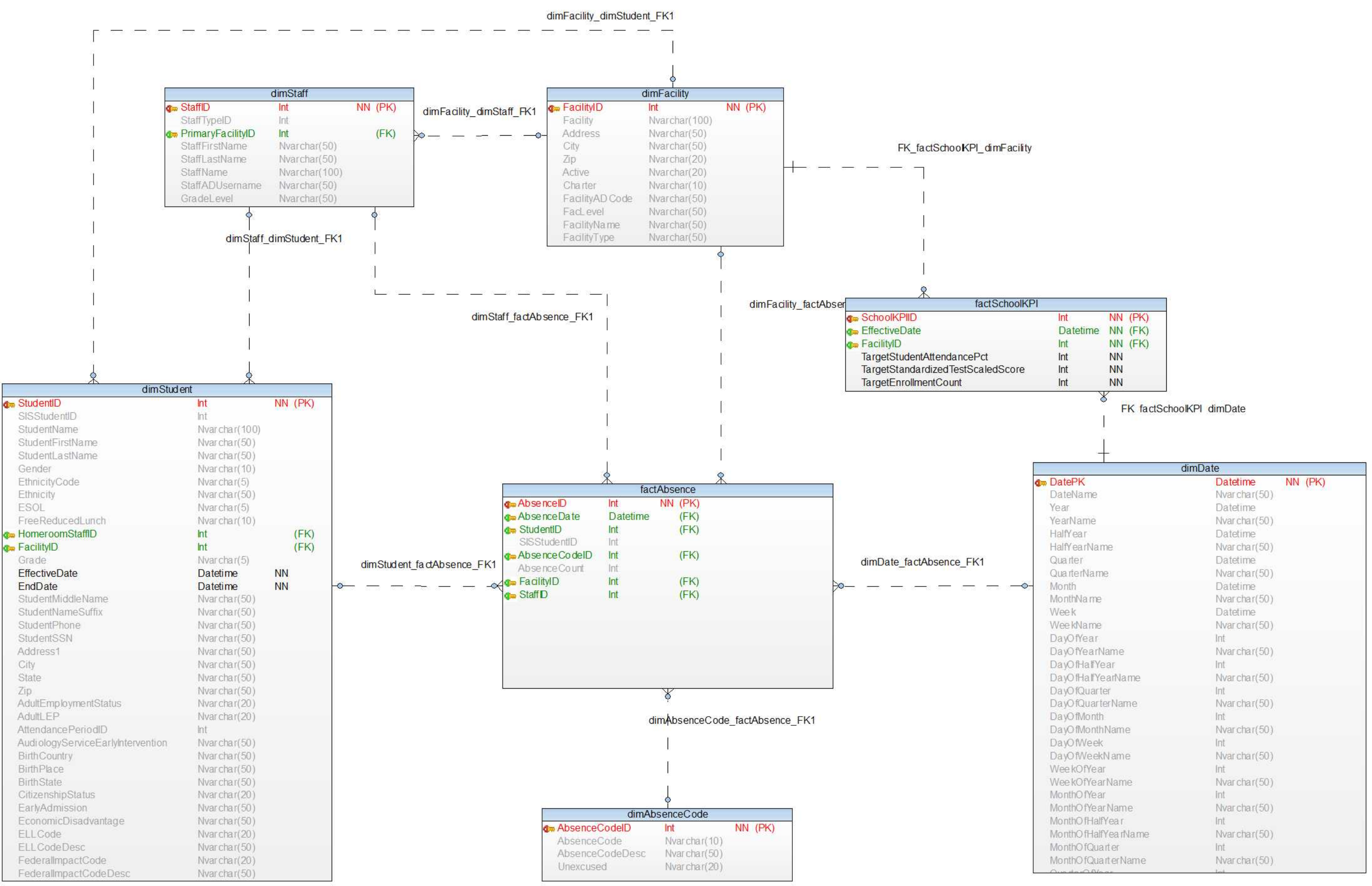
Biying Ma

Summary

1. Use Toad Data Modeler to create 4 Schools Dimensional data Models.
2. Use SQL Server Data Tools to create OLAP cubes
3. Create and use 3 Databses, MS SQL Server, MySQL, PostgreSQL to perform queries for each sample question.
4. Use OLAP (SSAS) cube perform queires for each sample queires.
5. Use PowerBI using OLAP cubes & display results of above queries/analysis.

Model1 Schools_Absences



dimStaff

StaffID	Int	NN	(PK)
StaffTypeID	Int		
PrimaryFacilityID	Int		(FK)
StaffFirstName	Nvarchar(50)		
StaffLastName	Nvarchar(50)		
StaffName	Nvarchar(100)		
StaffADUsername	Nvarchar(50)		
GradeLevel	Nvarchar(50)		

dimFacility

FacilityID	Int	NN	(PK)
Facility	Nvarchar(100)		
Address	Nvarchar(50)		
City	Nvarchar(50)		
Zip	Nvarchar(20)		
Active	Nvarchar(20)		
Charter	Nvarchar(10)		
FacilityAD Code	Nvarchar(50)		
FacLevel	Nvarchar(50)		
FacilityName	Nvarchar(50)		
FacilityType	Nvarchar(50)		

factSchoolKPI

SchoolKPIID	Int	NN	(PK)
EffectiveDate	Datetime	NN	(FK)
FacilityID	Int	NN	(FK)
TargetStudentAttendancePct	Int	NN	
TargetStandardizedTestScaledScore	Int	NN	
TargetEnrollmentCount	Int	NN	

dimStudent

StudentID	Int	NN	(PK)
SISStudentID	Int		
StudentName	Nvarchar(100)		
StudentFirstName	Nvarchar(50)		
StudentLastName	Nvarchar(50)		
Gender	Nvarchar(10)		
EthnicityCode	Nvarchar(5)		
Ethnicity	Nvarchar(50)		
ESOL	Nvarchar(5)		
FreeReducedLunch	Nvarchar(10)		
HomeroomStaffID	Int		(FK)
FacilityID	Int		(FK)
Grade	Nvarchar(5)		
EffectiveDate	Datetime	NN	
EndDate	Datetime	NN	
StudentMiddleName	Nvarchar(50)		
StudentNameSuffix	Nvarchar(50)		
StudentPhone	Nvarchar(50)		
StudentSSN	Nvarchar(50)		
Address1	Nvarchar(50)		
City	Nvarchar(50)		
State	Nvarchar(50)		
Zip	Nvarchar(50)		
AdultEmploymentStatus	Nvarchar(20)		
AdultLEP	Nvarchar(20)		
AttendancePeriodID	Int		
AudiologyServiceEarlyIntervention	Nvarchar(50)		
BirthCountry	Nvarchar(50)		
BirthPlace	Nvarchar(50)		
BirthState	Nvarchar(50)		
CitizenshipStatus	Nvarchar(20)		
EarlyAdmission	Nvarchar(50)		
EconomicDisadvantage	Nvarchar(50)		
ELLCode	Nvarchar(20)		
ELLCodeDesc	Nvarchar(50)		
FederalImpactCode	Nvarchar(20)		
FederalImpactCodeDesc	Nvarchar(50)		

factAbsence

AbsenceID	Int	NN	(PK)
AbsenceDate	Datetime		(FK)
StudentID	Int		(FK)
SISStudentID	Int		
AbsenceCodeID	Int		(FK)
AbsenceCount	Int		
FacilityID	Int		(FK)
StaffID	Int		(FK)

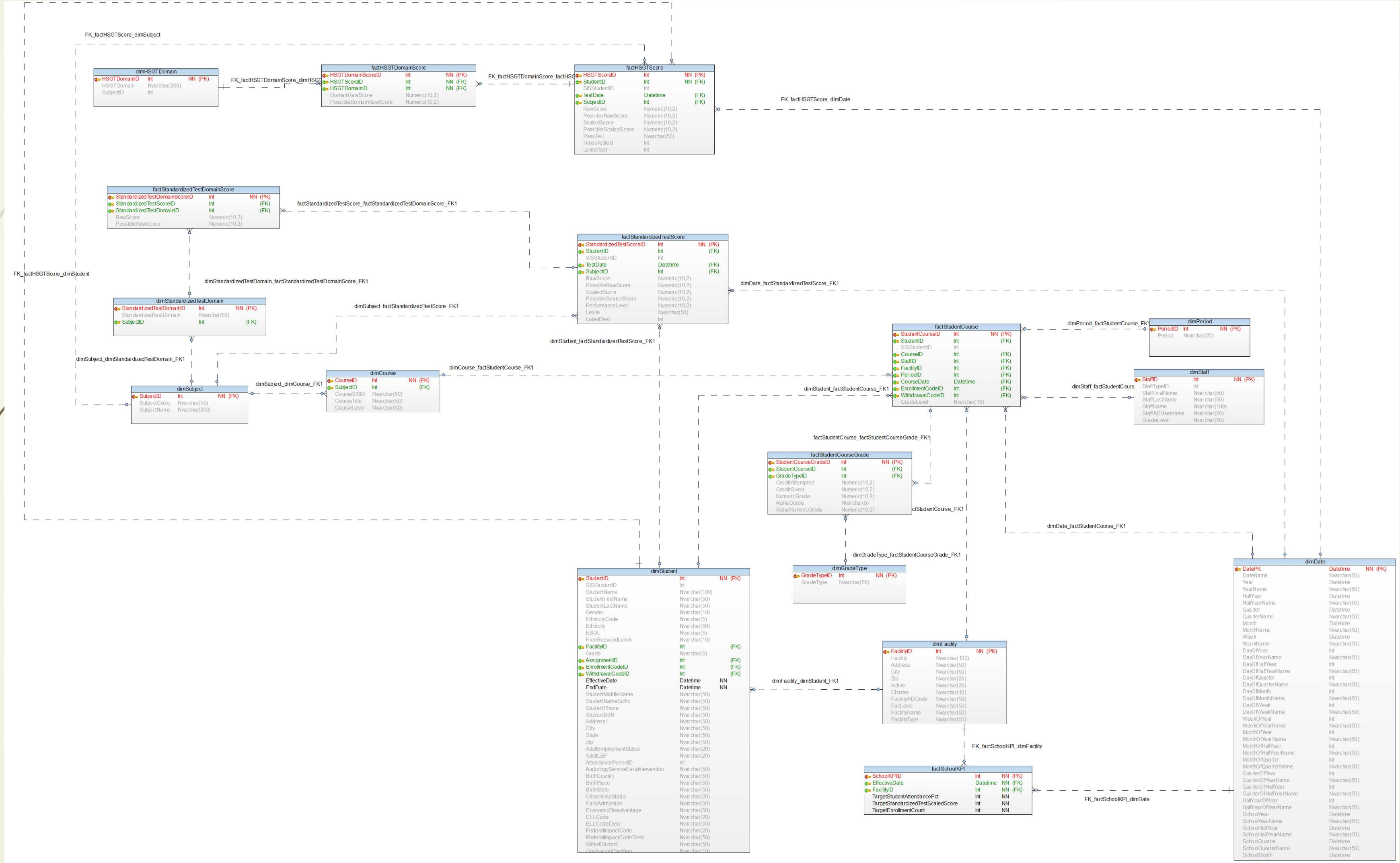
dimAbsenceCode

AbsenceCodeID	Int	NN	(PK)
AbsenceCode	Nvarchar(10)		
AbsenceCodeDesc	Nvarchar(50)		
Unexcused	Nvarchar(20)		

dimDate

DatePK	Datetime	NN	(PK)
DateName	Nvarchar(50)		
Year	Datetime		
YearName	Nvarchar(50)		
HalfYear	Datetime		
HalfYearName	Nvarchar(50)		
Quarter	Datetime		
QuarterName	Nvarchar(50)		
Month	Datetime		
MonthName	Nvarchar(50)		
Week	Datetime		
WeekName	Nvarchar(50)		
DayOfYear	Int		
DayOfYearName	Nvarchar(50)		
DayOfHalfYear	Int		
DayOfHalfYearName	Nvarchar(50)		
DayOfQuarter	Int		
DayOfQuarterName	Nvarchar(50)		
DayOfMonth	Int		
DayOfMonthName	Nvarchar(50)		
DayOfWeek	Int		
DayOfWeekName	Nvarchar(50)		
WeekOfYear	Int		
WeekOfYearName	Nvarchar(50)		
MonthOfYear	Int		
MonthOfYearName	Nvarchar(50)		
MonthOfHalfYear	Int		
MonthOfHalfYearName	Nvarchar(50)		
MonthOfQuarter	Int		
MonthOfQuarterName	Nvarchar(50)		

Model2 Schools_AcademicPerformance



dimHSGTDomain			
HSGTDomainID	Int	NN	(PK)
HSGTDomain	Nvarchar(200)		
SubjectID	Int		

factHSGTDomainScore			
HSGTDomainScoreID	Int	NN	(PK)
HSGTScoreID	Int	NN	(FK)
HSGTDomainID	Int	NN	(FK)
DomainRawScore	Numeric(10,2)		
PossibleDomainRawScore	Numeric(10,2)		

factHSGTScore			
HSGTScoreID	Int	NN	(PK)
StudentID	Int	NN	(FK)
SISStudentID	Int		
TestDate	Datetime		(FK)
SubjectID	Int		(FK)
RawScore	Numeric(10,2)		
PossibleRawScore	Numeric(10,2)		
ScaledScore	Numeric(10,2)		
PossibleScaledScore	Numeric(10,2)		
PassFail	Nvarchar(50)		
TimesTested	Int		
LatestTest	Int		

factStandardizedTestDomainScore			
StandardizedTestDomainScoreID	Int	NN	(PK)
StandardizedTestScoreID	Int		(FK)
StandardizedTestDomainID	Int		(FK)
RawScore	Numeric(10,2)		
PossibleRawScore	Numeric(10,2)		

factStandardizedTestScore			
StandardizedTestScoreID	Int	NN	(PK)
StudentID	Int		(FK)
SISStudentID	Int		
TestDate	Datetime		(FK)
SubjectID	Int		(FK)
RawScore	Numeric(10,2)		
PossibleRawScore	Numeric(10,2)		
ScaledScore	Numeric(10,2)		
PossibleScaledScore	Numeric(10,2)		
PerformanceLevel	Numeric(10,2)		
Lexile	Nvarchar(50)		
LatestTest	Int		

dimStandardizedTestDomain			
StandardizedTestDomainID	Int	NN	(PK)
StandardizedTestDomain	Nvarchar(50)		
SubjectID	Int		(FK)

dimSubject			
SubjectID	Int	NN	(PK)
SubjectCode	Nvarchar(50)		
SubjectName	Nvarchar(200)		

dimCourse			
CourseID	Int	NN	(PK)
SubjectID	Int		(FK)
CourseSISID	Nvarchar(50)		
CourseTitle	Nvarchar(50)		
CourseLevel	Nvarchar(50)		

factStudentCourse			
StudentCourseID	Int	NN	(PK)
StudentID	Int		(FK)
SISStudentID	Int		
CourseID	Int		(FK)
StaffID	Int		(FK)
FacilityID	Int		(FK)
PeriodID	Int		(FK)
CourseDate	Datetime		(FK)
EnrollmentCodeID	Int		(FK)
WithdrawalCodeID	Int		(FK)
GradeLevel	Nvarchar(10)		

dimPeriod			
PeriodID	Int	NN	(PK)
Period	Nvarchar(20)		

dimStaff			
StaffID	Int	NN	(PK)
StaffTypeID	Int		
StaffFirstName	Nvarchar(50)		
StaffLastName	Nvarchar(50)		
StaffName	Nvarchar(100)		
StaffADUsername	Nvarchar(50)		
GradeLevel	Nvarchar(50)		

factStudentCourseGrade			
StudentCourseGradeID	Int	NN	(PK)
StudentCourseID	Int		(FK)
GradeTypeID	Int		(FK)
CreditAttempted	Numeric(10,2)		
CreditGiven	Numeric(10,2)		
NumericGrade	Numeric(10,2)		
AlphaGrade	Nvarchar(5)		
AlphaNumericGrade	Numeric(10,2)		

dimGradeType			
GradeTypeID	Int	NN	(PK)
GradeType	Nvarchar(50)		

dimStudent			
StudentID	Int	NN	(PK)
SISStudentID	Int		
StudentName	Nvarchar(100)		
StudentFirstName	Nvarchar(50)		
StudentLastName	Nvarchar(50)		
Gender	Nvarchar(10)		
EthnicityCode	Nvarchar(5)		
Ethnicity	Nvarchar(50)		
ESOL	Nvarchar(5)		
FreeReducedLunch	Nvarchar(10)		
FacilityID	Int		(FK)
Grade	Nvarchar(5)		
AssignmentID	Int		(FK)
EnrollmentCodeID	Int		(FK)
WithdrawalCodeID	Int		(FK)
EffectiveDate	Datetime	NN	
EndDate	Datetime	NN	
StudentMiddleName	Nvarchar(50)		
StudentNameSuffix	Nvarchar(50)		
StudentPhone	Nvarchar(50)		
StudentSSN	Nvarchar(50)		
Address1	Nvarchar(50)		
City	Nvarchar(50)		
State	Nvarchar(50)		
Zip	Nvarchar(50)		
AdultEmploymentStatus	Nvarchar(20)		
AdultLEP	Nvarchar(20)		
AttendancePeriodID	Int		
AudiologyServiceEarlyIntervention	Nvarchar(50)		
BirthCountry	Nvarchar(50)		
BirthPlace	Nvarchar(50)		
BirthState	Nvarchar(50)		
CitizenshipStatus	Nvarchar(20)		
EarlyAdmission	Nvarchar(50)		
EconomicDisadvantage	Nvarchar(50)		
ELLCode	Nvarchar(20)		
ELLCodeDesc	Nvarchar(50)		
FederalImpactCode	Nvarchar(20)		
FederalImpactCodeDesc	Nvarchar(50)		
GiftedStudent	Nvarchar(50)		
GraduationPlanYear	Nvarchar(10)		

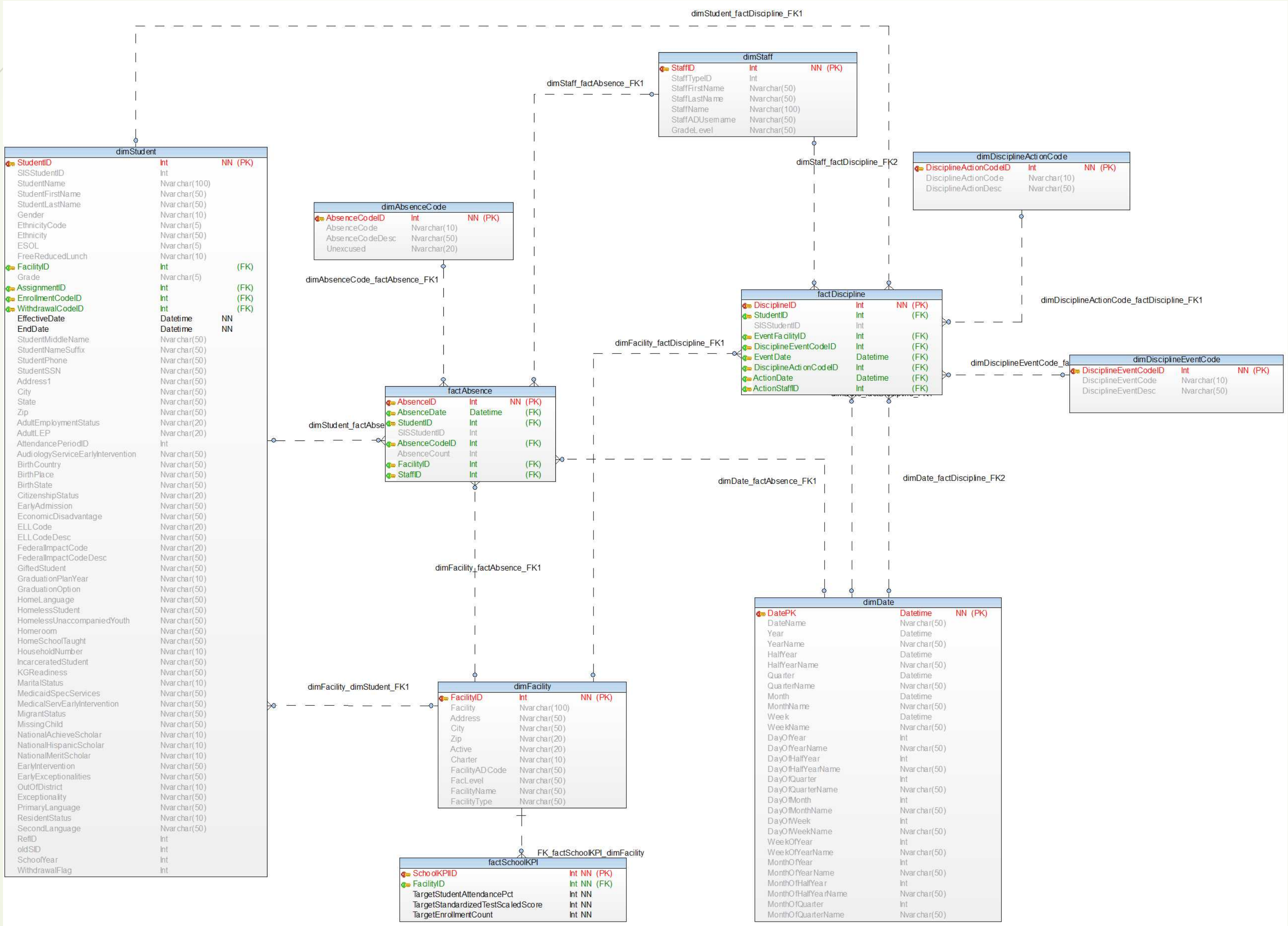
dimFacility			
FacilityID	Int	NN	(PK)
Facility	Nvarchar(100)		
Address	Nvarchar(50)		
City	Nvarchar(50)		
Zip	Nvarchar(20)		
Active	Nvarchar(20)		
Charter	Nvarchar(10)		
FacilityADCode	Nvarchar(50)		
FacLevel	Nvarchar(50)		
FacilityName	Nvarchar(50)		
FacilityType	Nvarchar(50)		

factSchoolKPI			
SchoolKPIID	Int	NN	(PK)
EffectiveDate	Datetime	NN	(FK)
FacilityID	Int	NN	(FK)
TargetStudentAttendancePct	Int	NN	
TargetStandardizedTestScaledScore	Int	NN	
TargetEnrollmentCount	Int	NN	

dimDate			
DatePK	Datetime	NN	(PK)
DateName	Nvarchar(50)		
Year	Datetime		
YearName	Nvarchar(50)		
HalfYear	Datetime		
HalfYearName	Nvarchar(50)		
Quarter	Datetime		
QuarterName	Nvarchar(50)		
Month	Datetime		
MonthName	Nvarchar(50)		
Week	Datetime		
WeekName	Nvarchar(50)		
DayOfYear	Int		
DayOfYearName	Nvarchar(50)		
DayOfHalfYear	Int		
DayOfHalfYearName	Nvarchar(50)		
DayOfQuarter	Int		
DayOfQuarterName	Nvarchar(50)		
DayOfMonth	Int		
DayOfMonthName	Nvarchar(50)		
DayOfWeek	Int		
DayOfWeekName	Nvarchar(50)		
WeekOfYear	Int		
WeekOfYearName	Nvarchar(50)		
MonthOfYear	Int		
MonthOfYearName	Nvarchar(50)		
MonthOfHalfYear	Int		
MonthOfHalfYearName	Nvarchar(50)		
MonthOfQuarter	Int		
MonthOfQuarterName	Nvarchar(50)		
QuarterOfYear	Int		
QuarterOfYearName	Nvarchar(50)		
QuarterOfHalfYear	Int		
QuarterOfHalfYearName	Nvarchar(50)		
HalfYearOfYear	Int		
HalfYearOfYearName	Nvarchar(50)		
SchoolYear	Datetime		
SchoolYearName	Nvarchar(50)		
SchoolHalfYear	Datetime		
SchoolHalfYearName	Nvarchar(50)		
SchoolQuarter	Datetime		
SchoolQuarterName	Nvarchar(50)		
SchoolMonth	Datetime		

FK_factHSGTScore_dimSubject
FK_factHSGTDomainScore_dimHSGT
FK_factHSGTDomainScore_factHSG
FK_factHSGTScore_dimDate
factStandardizedTestScore_factStandardizedTestDomainScore_FK1
FK_factHSGTScore_dimStudent
dimStandardizedTestDomain_factStandardizedTestDomainScore_FK1
dimDate_factStandardizedTestScore_FK1
dimSubject factStandardizedTestScore FK1
dimStudent_factStandardizedTestScore_FK1
dimSubject_dimStandardizedTestDomain_FK1
dimCourse_factStudentCourse_FK1
dimSubject_dimCourse_FK1
dimPeriod_factStudentCourse_FK1
dimStudent_factStudentCourse_FK1
dimStaff_factStudentCours
factStudentCourse_factStudentCourseGrade_FK1
ctStudentCourse_FK1
dimDate_factStudentCourse_FK1
dimGradeType_factStudentCourseGrade_FK1
dimFacility_dimStudent_FK1
FK_factSchoolKPI_dimFacility
FK_factSchoolKPI_dimDate

Model3 Schools_Misbehavior&Discipline


dimStudent_factDiscipline_FK1
dimStaff_factAbsence_FK1
dimStaff_factDiscipline_FK2
dimAbsenceCode_factAbsence_FK1
dimDisciplineActionCode_factDiscipline_FK1
dimFacility_factDiscipline_FK1
dimDisciplineEventCode_fa
dimStudent_factAbse
dimDate_factAbsence_FK1
dimDate_factDiscipline_FK2
dimFacility_factAbsence_FK1
dimFacility_dimStudent_FK1
FK_factSchoolKPI_dimFacility

dimStudent

StudentID	Int	NN	(PK)
SISStudentID	Int		
StudentName	Nvarchar(100)		
StudentFirstName	Nvarchar(50)		
StudentLastName	Nvarchar(50)		
Gender	Nvarchar(10)		
EthnicityCode	Nvarchar(5)		
Ethnicity	Nvarchar(50)		
ESOL	Nvarchar(5)		
FreeReducedLunch	Nvarchar(10)		
FacilityID	Int		(FK)
Grade	Nvarchar(5)		
AssignmentID	Int		(FK)
EnrollmentCodeID	Int		(FK)
WithdrawalCodeID	Int		(FK)
EffectiveDate	Datetime	NN	
EndDate	Datetime	NN	
StudentMiddleName	Nvarchar(50)		
StudentNameSuffix	Nvarchar(50)		
StudentPhone	Nvarchar(50)		
StudentSSN	Nvarchar(50)		
Address1	Nvarchar(50)		
City	Nvarchar(50)		
State	Nvarchar(50)		
Zip	Nvarchar(50)		
AdultEmploymentStatus	Nvarchar(20)		
AdultLEP	Nvarchar(20)		
AttendancePeriodID	Int		
AudiologyServiceEarlyIntervention	Nvarchar(50)		
BirthCountry	Nvarchar(50)		
BirthPlace	Nvarchar(50)		
BirthState	Nvarchar(50)		
CitizenshipStatus	Nvarchar(20)		
EarlyAdmission	Nvarchar(50)		
EconomicDisadvantage	Nvarchar(50)		
ELLCode	Nvarchar(20)		
ELLCodeDesc	Nvarchar(50)		
FederalImpactCode	Nvarchar(20)		
FederalImpactCodeDesc	Nvarchar(50)		
GiftedStudent	Nvarchar(50)		
GraduationPlanYear	Nvarchar(10)		
GraduationOption	Nvarchar(50)		
HomeLanguage	Nvarchar(50)		
HomelessStudent	Nvarchar(50)		
HomelessUnaccompaniedYouth	Nvarchar(50)		
Homeroom	Nvarchar(50)		
HomeSchoolTaught	Nvarchar(50)		
HouseholdNumber	Nvarchar(10)		
IncarceratedStudent	Nvarchar(50)		
KGReadiness	Nvarchar(50)		
MaritalStatus	Nvarchar(10)		
MedicaidSpecServices	Nvarchar(50)		
MedicalServEarlyIntervention	Nvarchar(50)		
MigrantStatus	Nvarchar(50)		
MissingChild	Nvarchar(50)		
NationalAchieveScholar	Nvarchar(10)		
NationalHispanicScholar	Nvarchar(10)		
NationalMeritScholar	Nvarchar(10)		
EarlyIntervention	Nvarchar(50)		
EarlyExceptionalities	Nvarchar(50)		
OutOfDistrict	Nvarchar(10)		
Exceptionality	Nvarchar(50)		
PrimaryLanguage	Nvarchar(50)		
ResidentStatus	Nvarchar(10)		
SecondLanguage	Nvarchar(50)		
RefID	Int		
oldSID	Int		
SchoolYear	Int		
WithdrawalFlag	Int		

dimStaff

StaffID	Int	NN	(PK)
StaffTypeID	Int		
StaffFirstName	Nvarchar(50)		
StaffLastName	Nvarchar(50)		
StaffName	Nvarchar(100)		
StaffADUsername	Nvarchar(50)		
GradeLevel	Nvarchar(50)		

dimAbsenceCode

AbsenceCodeID	Int	NN	(PK)
AbsenceCode	Nvarchar(10)		
AbsenceCodeDesc	Nvarchar(50)		
Unexcused	Nvarchar(20)		

dimDisciplineActionCode

DisciplineActionCodeID	Int	NN	(PK)
DisciplineActionCode	Nvarchar(10)		
DisciplineActionDesc	Nvarchar(50)		

factDiscipline

DisciplineID	Int	NN	(PK)
StudentID	Int		(FK)
SISStudentID	Int		
EventFacilityID	Int		(FK)
DisciplineEventCodeID	Int		(FK)
EventDate	Datetime		(FK)
DisciplineActionCodeID	Int		(FK)
ActionDate	Datetime		(FK)
ActionStaffID	Int		(FK)

dimDisciplineEventCode

DisciplineEventCodeID	Int	NN	(PK)
DisciplineEventCode	Nvarchar(10)		
DisciplineEventDesc	Nvarchar(50)		

factAbsence

AbsenceID	Int	NN	(PK)
AbsenceDate	Datetime		(FK)
StudentID	Int		(FK)
SISStudentID	Int		
AbsenceCodeID	Int		(FK)
AbsenceCount	Int		
FacilityID	Int		(FK)
StaffID	Int		(FK)

dimFacility

FacilityID	Int	NN	(PK)
Facility	Nvarchar(100)		
Address	Nvarchar(50)		
City	Nvarchar(50)		
Zip	Nvarchar(20)		
Active	Nvarchar(20)		
Charter	Nvarchar(10)		
FacilityADCode	Nvarchar(50)		
FacLevel	Nvarchar(50)		
FacilityName	Nvarchar(50)		
FacilityType	Nvarchar(50)		

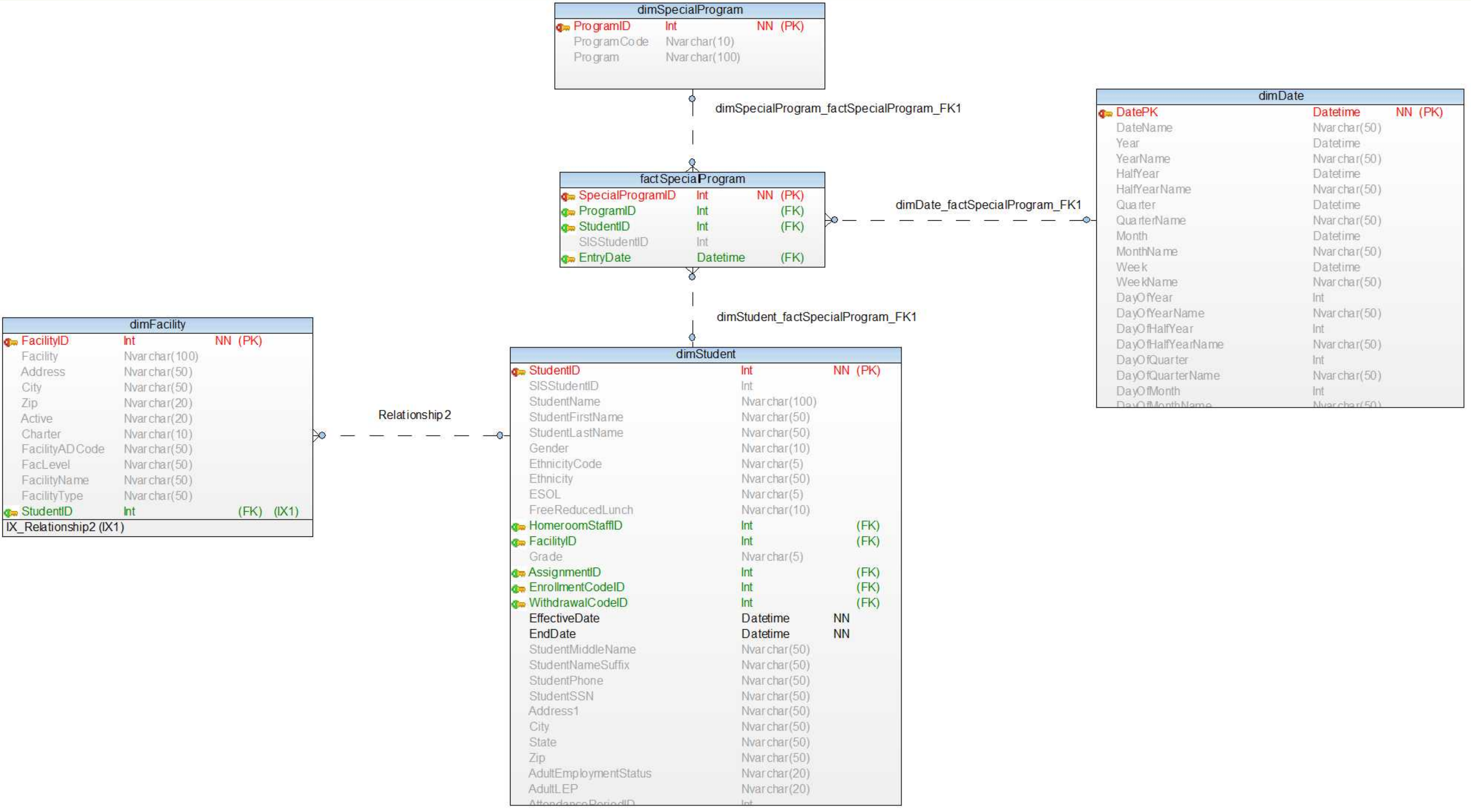
factSchoolKPI

SchoolKPIID	Int	NN	(PK)
FacilityID	Int	NN	(FK)
TargetStudentAttendancePct	Int	NN	
TargetStandardizedTestScaledScore	Int	NN	
TargetEnrollmentCount	Int	NN	

dimDate

DatePK	Datetime	NN	(PK)
DateName	Nvarchar(50)		
Year	Datetime		
YearName	Nvarchar(50)		
HalfYear	Datetime		
HalfYearName	Nvarchar(50)		
Quarter	Datetime		
QuarterName	Nvarchar(50)		
Month	Datetime		
MonthName	Nvarchar(50)		
Week	Datetime		
WeekName	Nvarchar(50)		
DayOfYear	Int		
DayOfYearName	Nvarchar(50)		
DayOfHalfYear	Int		
DayOfHalfYearName	Nvarchar(50)		
DayOfQuarter	Int		
DayOfQuarterName	Nvarchar(50)		
DayOfMonth	Int		
DayOfMonthName	Nvarchar(50)		
DayOfWeek	Int		
DayOfWeekName	Nvarchar(50)		
WeekOfYear	Int		
WeekOfYearName	Nvarchar(50)		
MonthOfYear	Int		
MonthOfYearName	Nvarchar(50)		
MonthOfHalfYear	Int		
MonthOfHalfYearName	Nvarchar(50)		
MonthOfQuarter	Int		
MonthOfQuarterName	Nvarchar(50)		

Model4 Schools_SpecialPrograms



dimSpecialProgram

ProgramID	Int	NN	(PK)
ProgramCode	Nvarchar(10)		
Program	Nvarchar(100)		

dimSpecialProgram_factSpecialProgram_FK1

factSpecialProgram

SpecialProgramID	Int	NN	(PK)
ProgramID	Int		(FK)
StudentID	Int		(FK)
SISStudentID	Int		
EntryDate	Datetime		(FK)

dimDate_factSpecialProgram_FK1

dimDate

DatePK	Datetime	NN	(PK)
DateName	Nvarchar(50)		
Year	Datetime		
YearName	Nvarchar(50)		
HalfYear	Datetime		
HalfYearName	Nvarchar(50)		
Quarter	Datetime		
QuarterName	Nvarchar(50)		
Month	Datetime		
MonthName	Nvarchar(50)		
Week	Datetime		
WeekName	Nvarchar(50)		
DayOfYear	Int		
DayOfYearName	Nvarchar(50)		
DayOfHalfYear	Int		
DayOfHalfYearName	Nvarchar(50)		
DayOfQuarter	Int		
DayOfQuarterName	Nvarchar(50)		
DayOfMonth	Int		
DayOfMonthName	Nvarchar(50)		

dimStudent_factSpecialProgram_FK1

dimFacility

FacilityID	Int	NN	(PK)	
Facility	Nvarchar(100)			
Address	Nvarchar(50)			
City	Nvarchar(50)			
Zip	Nvarchar(20)			
Active	Nvarchar(20)			
Charter	Nvarchar(10)			
FacilityADCode	Nvarchar(50)			
FacLevel	Nvarchar(50)			
FacilityName	Nvarchar(50)			
FacilityType	Nvarchar(50)			
StudentID	Int		(FK)	(IX1)

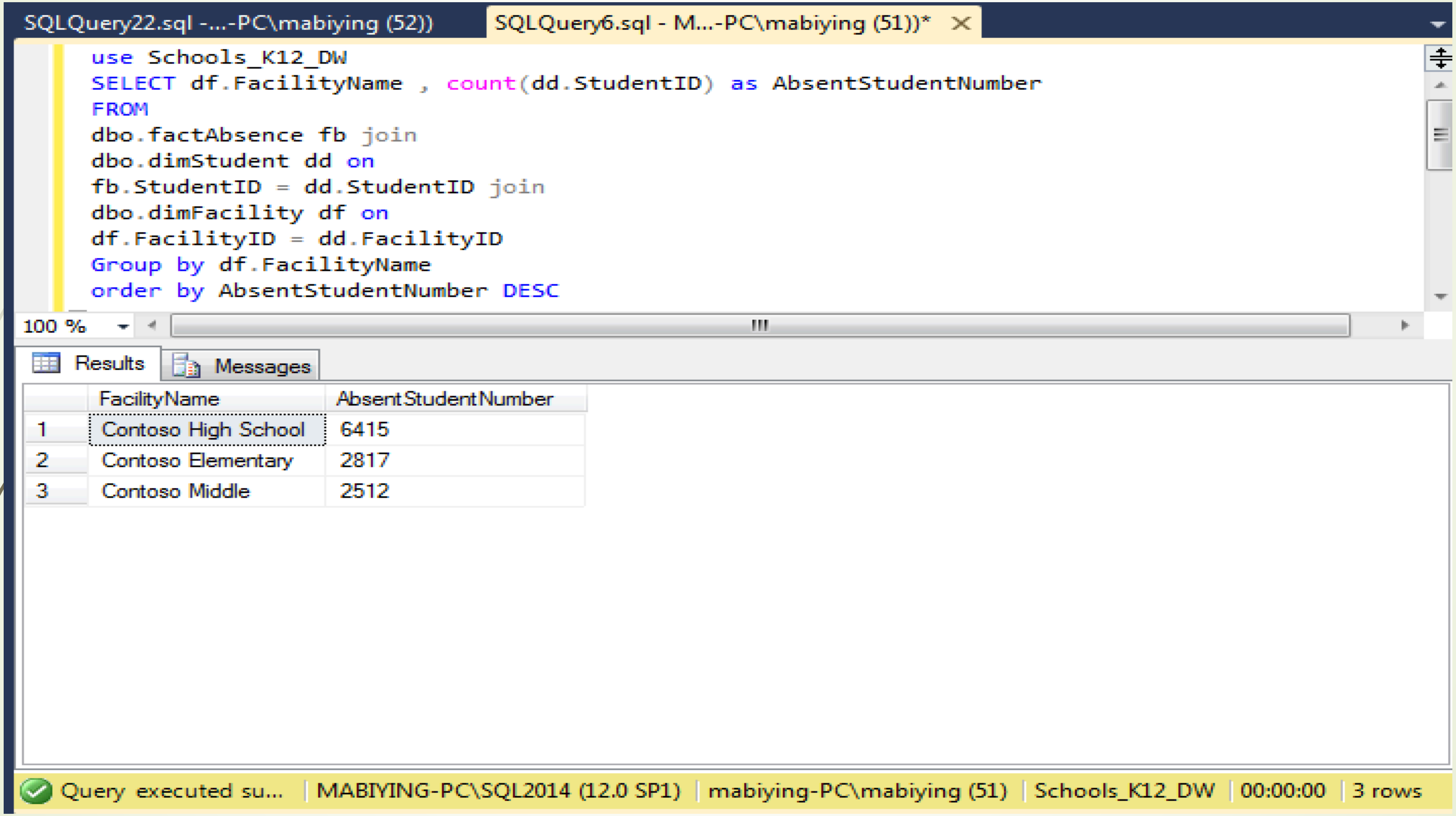
IX_Relationship2 (IX1)

Relationship2

dimStudent

StudentID	Int	NN	(PK)
SISStudentID	Int		
StudentName	Nvarchar(100)		
StudentFirstName	Nvarchar(50)		
StudentLastName	Nvarchar(50)		
Gender	Nvarchar(10)		
EthnicityCode	Nvarchar(5)		
Ethnicity	Nvarchar(50)		
ESOL	Nvarchar(5)		
FreeReducedLunch	Nvarchar(10)		
HomeroomStaffID	Int		(FK)
FacilityID	Int		(FK)
Grade	Nvarchar(5)		
AssignmentID	Int		(FK)
EnrollmentCodeID	Int		(FK)
WithdrawalCodeID	Int		(FK)
EffectiveDate	Datetime	NN	
EndDate	Datetime	NN	
StudentMiddleName	Nvarchar(50)		
StudentNameSuffix	Nvarchar(50)		
StudentPhone	Nvarchar(50)		
StudentSSN	Nvarchar(50)		
Address1	Nvarchar(50)		
City	Nvarchar(50)		
State	Nvarchar(50)		
Zip	Nvarchar(50)		
AdultEmploymentStatus	Nvarchar(20)		
AdultLEP	Nvarchar(20)		
AttendancePeriodID	Int		

Query Snapshot 2.1



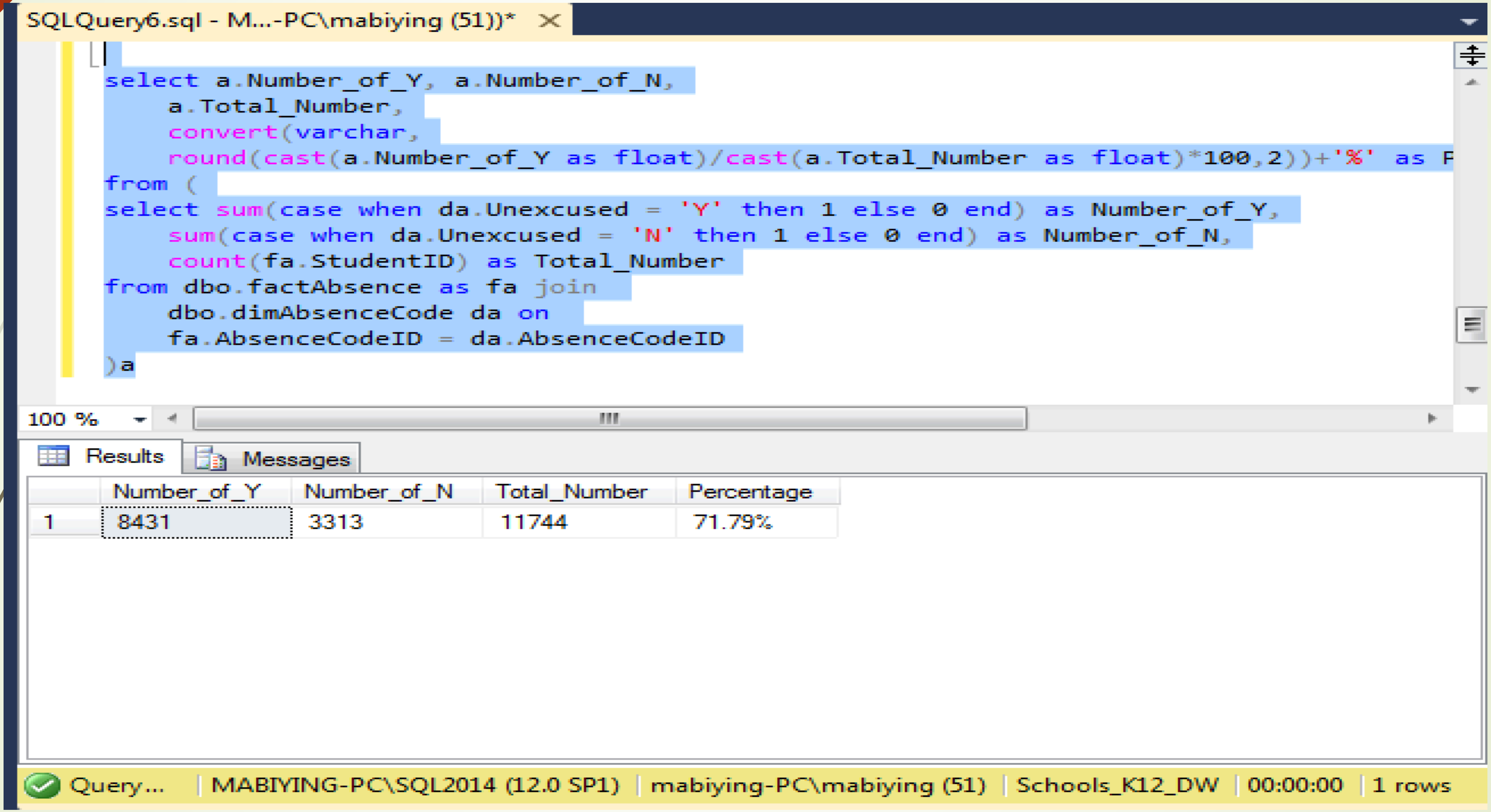
SQLQuery22.sql -...-PC\mabiying (52))
SQLQuery6.sql - M...-PC\mabiying (51))*
100 %
Results
Messages

```
use Schools_K12_DW
SELECT df.FacilityName , count(dd.StudentID) as AbsentStudentNumber
FROM
dbo.factAbsence fb join
dbo.dimStudent dd on
fb.StudentID = dd.StudentID join
dbo.dimFacility df on
df.FacilityID = dd.FacilityID
Group by df.FacilityName
order by AbsentStudentNumber DESC
```

	FacilityName	AbsentStudentNumber
1	Contoso High School	6415
2	Contoso Elementary	2817
3	Contoso Middle	2512

Query executed su... | MABIYING-PC\SQL2014 (12.0 SP1) | mabiying-PC\mabiying (51) | Schools_K12_DW | 00:00:00 | 3 rows

Query Snapshot 2.2

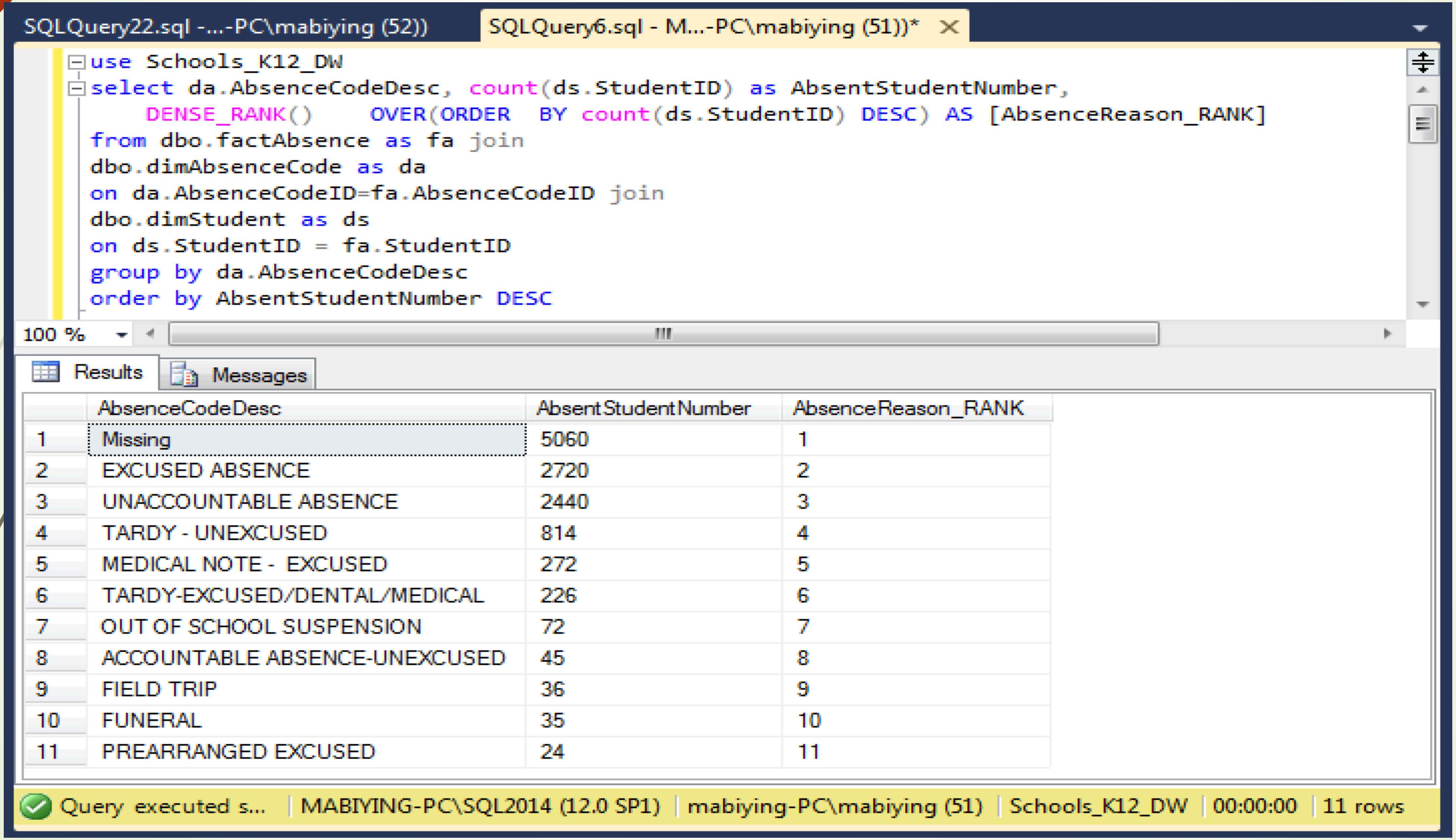


```sql
select a.Number_of_Y, a.Number_of_N,
    a.Total_Number,
    convert(varchar,
    round(cast(a.Number_of_Y as float)/cast(a.Total_Number as float)*100,2))+'%' as P
from (
select sum(case when da.Unexcused = 'Y' then 1 else 0 end) as Number_of_Y,
    sum(case when da.Unexcused = 'N' then 1 else 0 end) as Number_of_N,
    count(fa.StudentID) as Total_Number
from dbo.factAbsence as fa join
    dbo.dimAbsenceCode da on
    fa.AbsenceCodeID = da.AbsenceCodeID
)a
```

	Number_of_Y	Number_of_N	Total_Number	Percentage
1	8431	3313	11744	71.79%

Query... | MABIYING-PC\SQL2014 (12.0 SP1) | mabiying-PC\mabiying (51) | Schools_K12_DW | 00:00:00 | 1 rows

Query Snapshot 2.3



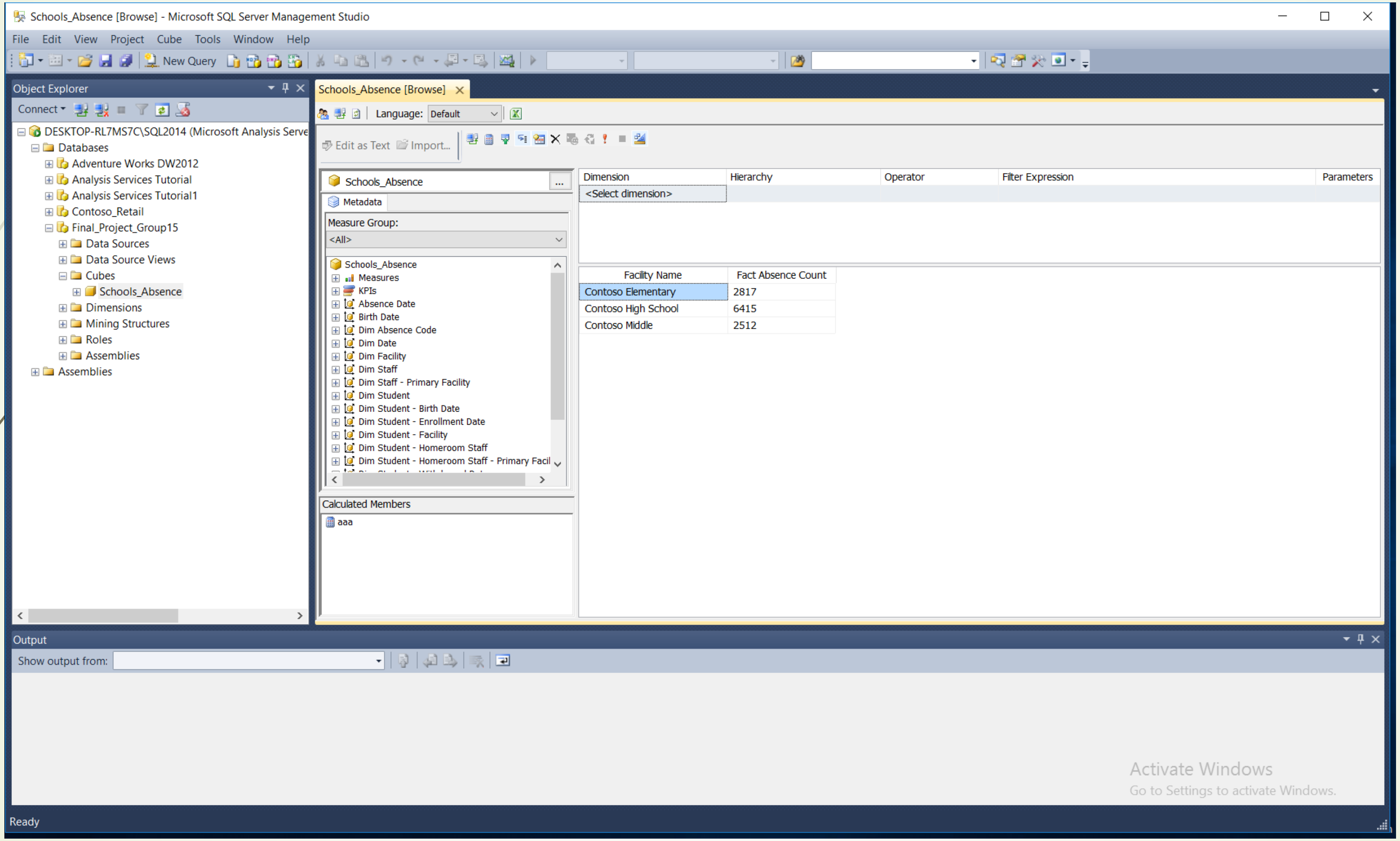
SQLQuery22.sql -...-PC\mabiying (52))
SQLQuery6.sql - M...-PC\mabiying (51))*
100 %
Results
Messages

```
use Schools_K12_DW
select da.AbsenceCodeDesc, count(ds.StudentID) as AbsentStudentNumber,
    DENSE_RANK()    OVER(ORDER  BY count(ds.StudentID) DESC) AS [AbsenceReason_RANK]
from dbo.factAbsence as fa join
dbo.dimAbsenceCode as da
on da.AbsenceCodeID=fa.AbsenceCodeID join
dbo.dimStudent as ds
on ds.StudentID = fa.StudentID
group by da.AbsenceCodeDesc
order by AbsentStudentNumber DESC
```

	AbsenceCodeDesc	AbsentStudentNumber	AbsenceReason_RANK
1	Missing	5060	1
2	EXCUSED ABSENCE	2720	2
3	UNACCOUNTABLE ABSENCE	2440	3
4	TARDY - UNEXCUSED	814	4
5	MEDICAL NOTE - EXCUSED	272	5
6	TARDY-EXCUSED/DENTAL/MEDICAL	226	6
7	OUT OF SCHOOL SUSPENSION	72	7
8	ACCOUNTABLE ABSENCE-UNEXCUSED	45	8
9	FIELD TRIP	36	9
10	FUNERAL	35	10
11	PREARRANGED EXCUSED	24	11

Query executed s... | MABIYING-PC\SQL2014 (12.0 SP1) | mabiying-PC\mabiying (51) | Schools_K12_DW | 00:00:00 | 11 rows

present query results 2.1

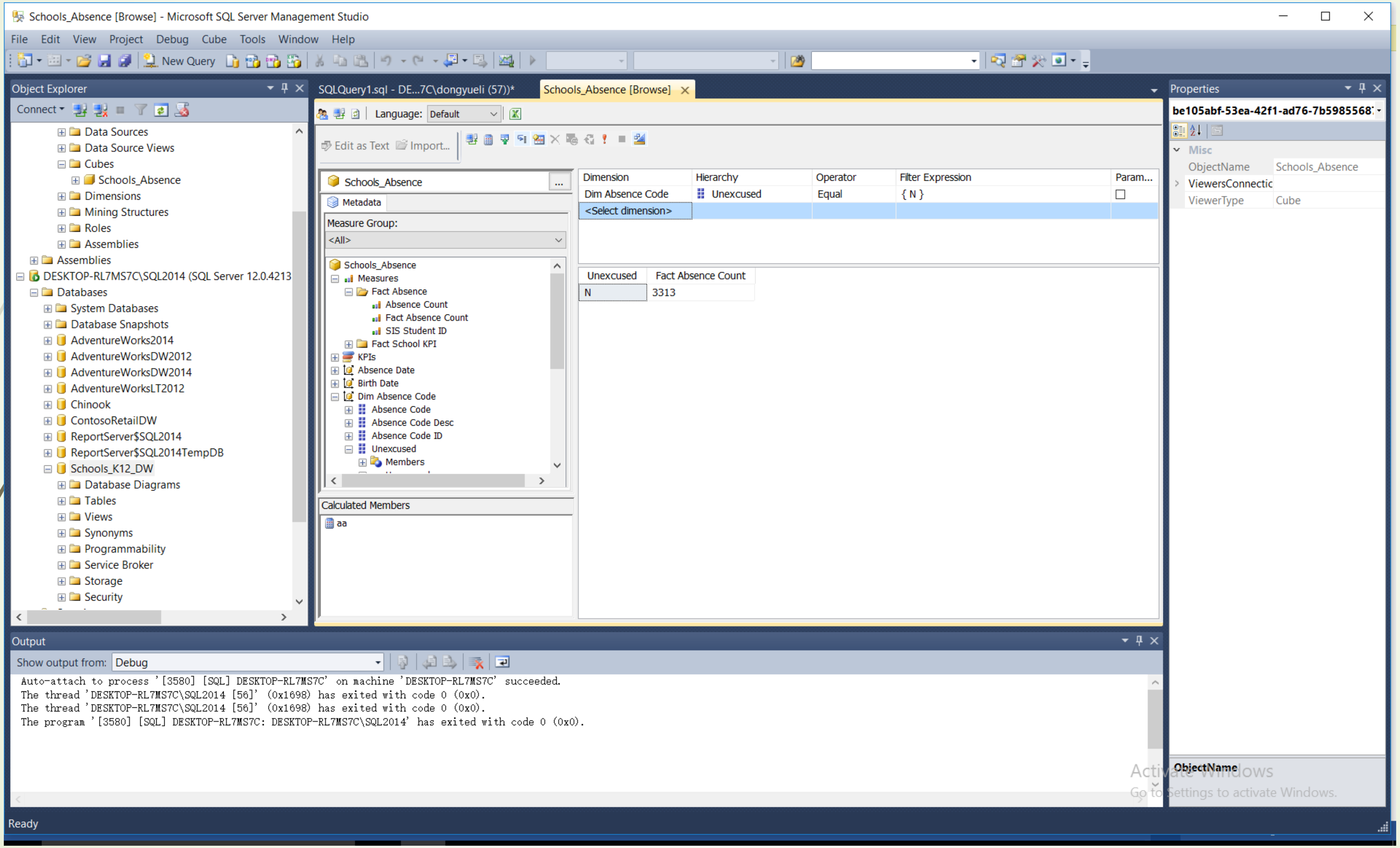


Language: Default

Measure Group: <All>

Facility Name	Fact Absence Count
Contoso Elementary	2817
Contoso High School	6415
Contoso Middle	2512

present query results 2.2



Language: Default

Measure Group: <All>

Dimension	Hierarchy	Operator	Filter Expression	Param...
Dim Absence Code	Unexcused	Equal	{ N }	□
<Select dimension>				

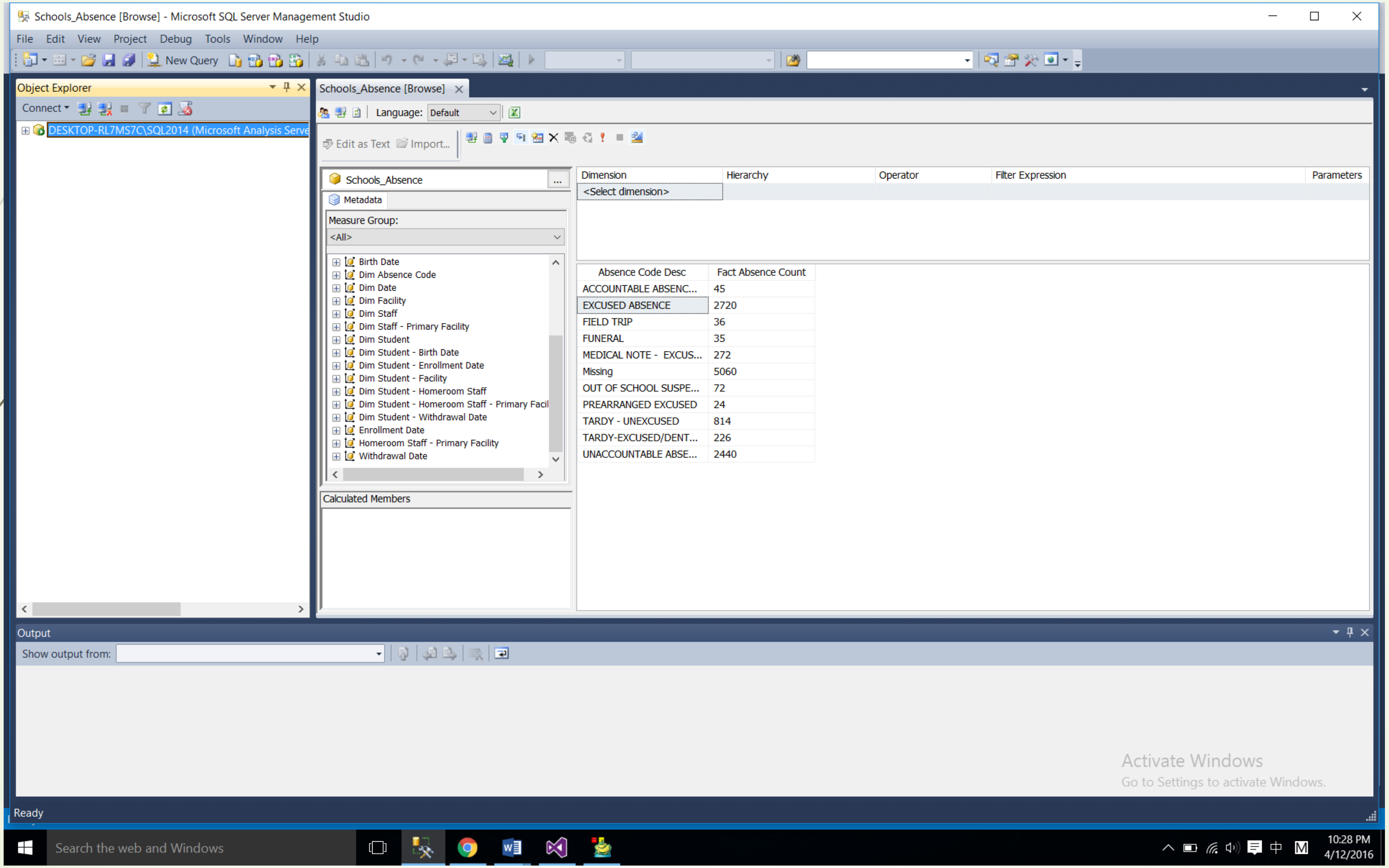
Unexcused	Fact Absence Count
N	3313

ObjectName	Schools_Absence
ViewerType	Cube

Show output from: Debug

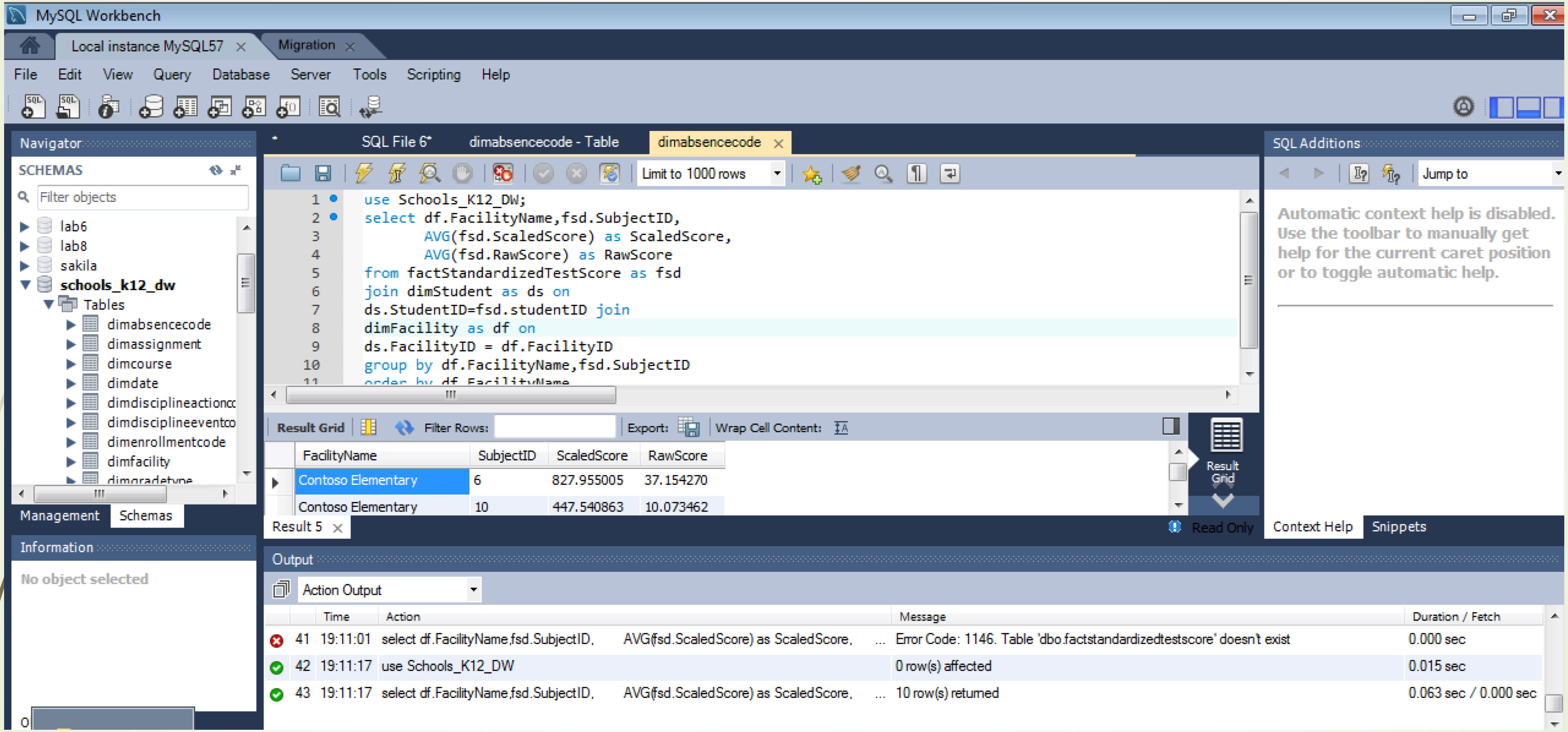
```
Auto-attach to process '[3580] [SQL] DESKTOP-RL7MS7C' on machine 'DESKTOP-RL7MS7C' succeeded.
The thread 'DESKTOP-RL7MS7C\SQL2014 [56]' (0x1698) has exited with code 0 (0x0).
The thread 'DESKTOP-RL7MS7C\SQL2014 [56]' (0x1698) has exited with code 0 (0x0).
The program '[3580] [SQL] DESKTOP-RL7MS7C: DESKTOP-RL7MS7C\SQL2014' has exited with code 0 (0x0).
```

present query results 2.3



Absence Code Desc	Fact Absence Count
ACCOUNTABLE ABSENC...	45
EXCUSED ABSENCE	2720
FIELD TRIP	36
FUNERAL	35
MEDICAL NOTE - EXCUS...	272
Missing	5060
OUT OF SCHOOL SUSPE...	72
PREARRANGED EXCUSED	24
TARDY - UNEXCUSED	814
TARDY-EXCUSED/DENT...	226
UNACCOUNTABLE ABSE...	2440

MySQL query results 3.1

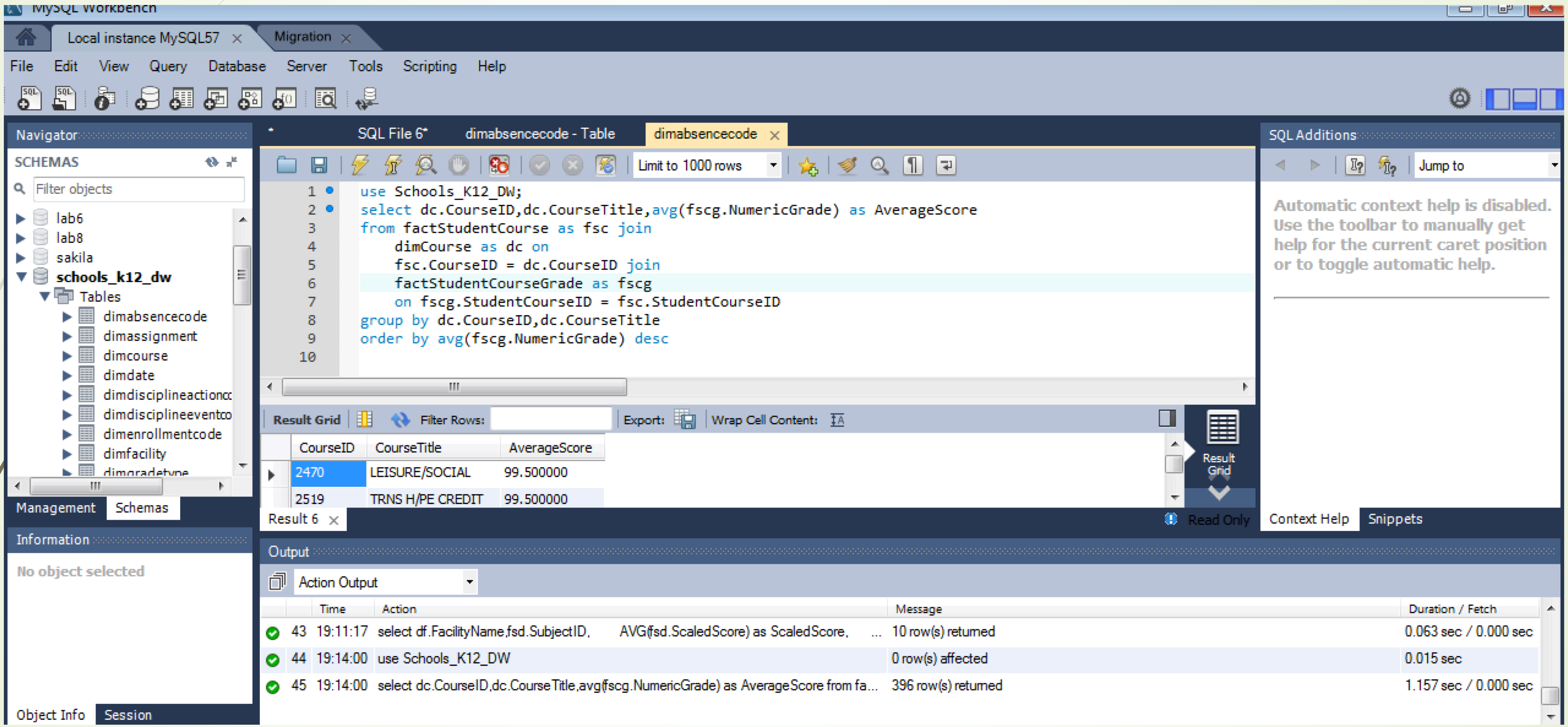


```
use Schools_K12_DW;
select df.FacilityName,fsd.SubjectID,
       AVG(fsd.ScaledScore) as ScaledScore,
       AVG(fsd.RawScore) as RawScore
from factStandardizedTestScore as fsd
join dimStudent as ds on
ds.StudentID=fsd.studentID join
dimFacility as df on
ds.FacilityID = df.FacilityID
group by df.FacilityName,fsd.SubjectID
order by df.FacilityName
```

FacilityName	SubjectID	ScaledScore	RawScore
Contoso Elementary	6	827.955005	37.154270
Contoso Elementary	10	447.540863	10.073462

```
    Time      Action                                                                      Message                                                        Duration / Fetch
41  19:11:01  select df.FacilityName,fsd.SubjectID,     AVG(fsd.ScaledScore) as ScaledScore,  ...  Error Code: 1146. Table 'dbo.factstandardizedtestscore' doesn't exist  0.000 sec
42  19:11:17  use Schools_K12_DW                                                          0 row(s) affected                                              0.015 sec
43  19:11:17  select df.FacilityName,fsd.SubjectID,     AVG(fsd.ScaledScore) as ScaledScore,  ...  10 row(s) returned                                             0.063 sec / 0.000 sec
```

MySQL query results 3.2

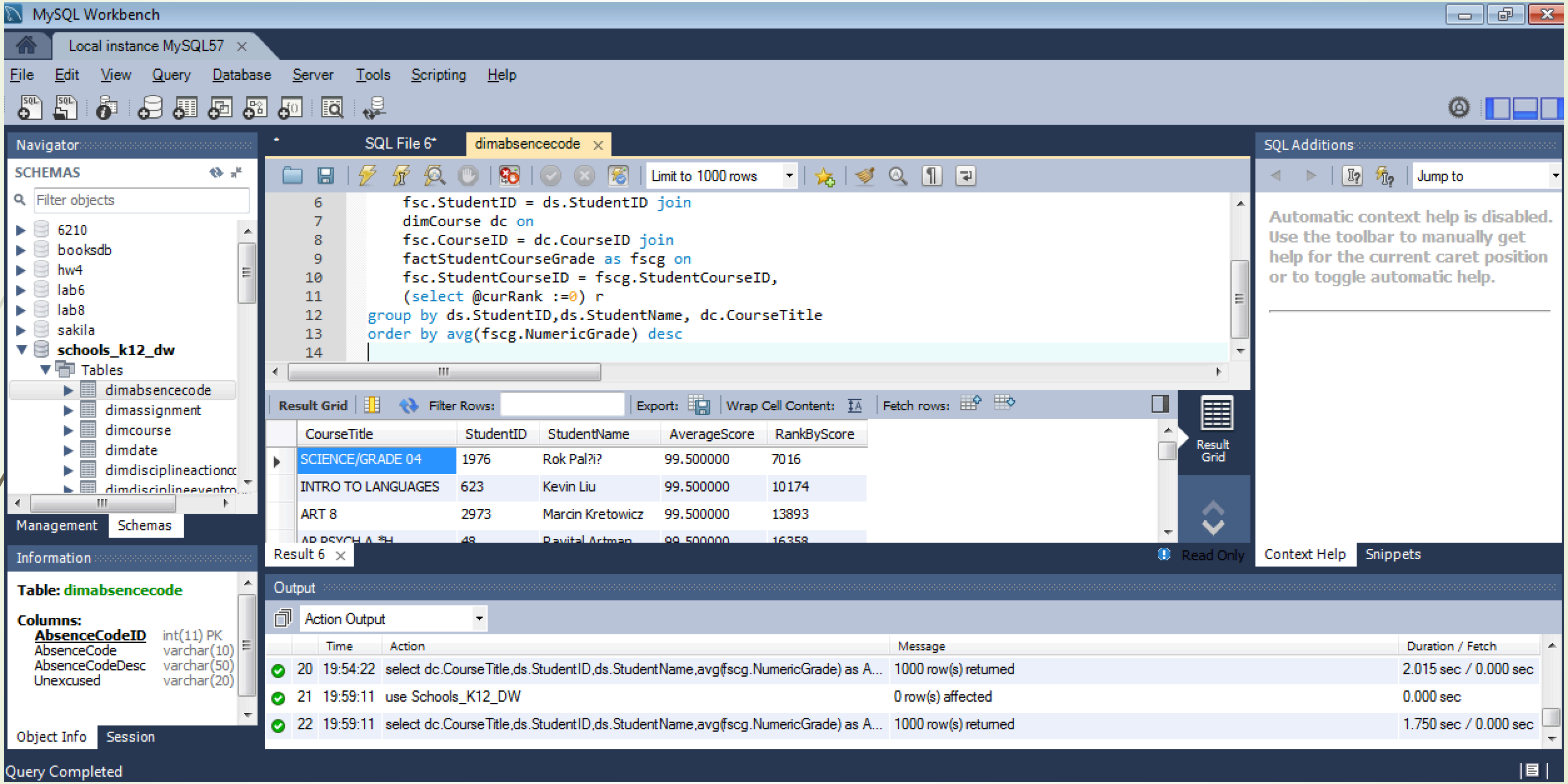


```
use Schools_K12_DW;
select dc.CourseID,dc.CourseTitle,avg(fscg.NumericGrade) as AverageScore
from factStudentCourse as fsc join
    dimCourse as dc on
    fsc.CourseID = dc.CourseID join
    factStudentCourseGrade as fscg
    on fscg.StudentCourseID = fsc.StudentCourseID
group by dc.CourseID,dc.CourseTitle
order by avg(fscg.NumericGrade) desc
```

CourseID	CourseTitle	AverageScore
2470	LEISURE/SOCIAL	99.500000
2519	TRNS H/PE CREDIT	99.500000

	Time	Action	Message	Duration / Fetch
43	19:11:17	select df.FacilityName,fsd.SubjectID, AVG(fsd.ScaledScore) as ScaledScore, ...	10 row(s) returned	0.063 sec / 0.000 sec
44	19:14:00	use Schools_K12_DW	0 row(s) affected	0.015 sec
45	19:14:00	select dc.CourseID,dc.CourseTitle,avg(fscg.NumericGrade) as AverageScore from fa...	396 row(s) returned	1.157 sec / 0.000 sec

MySQL query results 3.3



```
    fsc.StudentID = ds.StudentID join
    dimCourse dc on
    fsc.CourseID = dc.CourseID join
    factStudentCourseGrade as fscg on
    fsc.StudentCourseID = fscg.StudentCourseID,
    (select @curRank :=0) r
group by ds.StudentID,ds.StudentName, dc.CourseTitle
order by avg(fscg.NumericGrade) desc
```

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

CourseTitle	StudentID	StudentName	AverageScore	RankByScore
SCIENCE/GRADE 04	1976	Rok Pal?i?	99.500000	7016
INTRO TO LANGUAGES	623	Kevin Liu	99.500000	10174
ART 8	2973	Marcin Kretowicz	99.500000	13893
AP PSYCH A *H	48	Ravital Artman	99.500000	16358

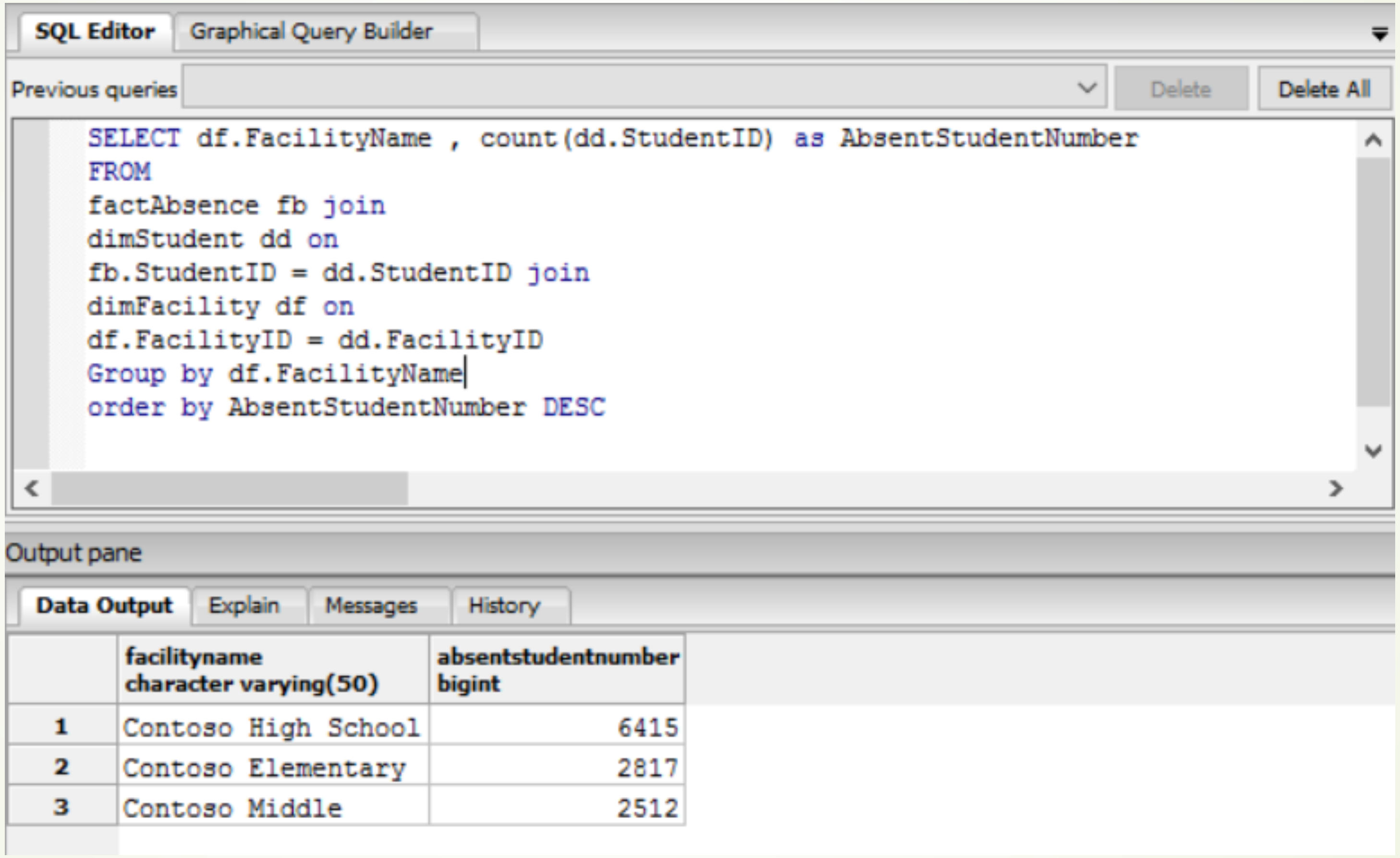
Table: dimabsencecode

Columns:

AbsenceCodeID	int(11) PK
AbsenceCode	varchar(10)
AbsenceCodeDesc	varchar(50)
Unexcused	varchar(20)

```
    Time      Action                                                                      Message                 Duration / Fetch
20  19:54:22  select dc.CourseTitle,ds.StudentID,ds.StudentName,avg(fscg.NumericGrade) as A...  1000 row(s) returned    2.015 sec / 0.000 sec
21  19:59:11  use Schools_K12_DW                                                          0 row(s) affected       0.000 sec
22  19:59:11  select dc.CourseTitle,ds.StudentID,ds.StudentName,avg(fscg.NumericGrade) as A...  1000 row(s) returned    1.750 sec / 0.000 sec
```

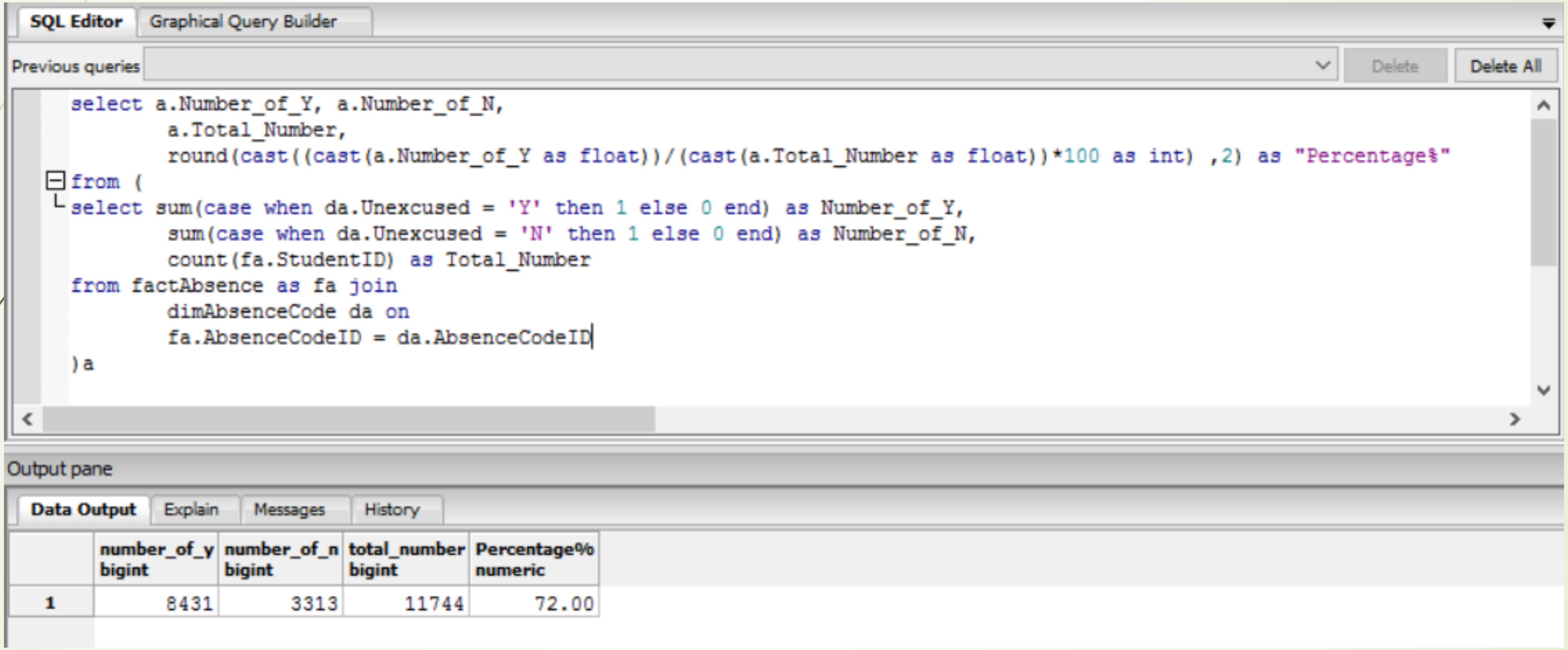
PostgreSQL Query 2.1



```
SELECT df.FacilityName , count(dd.StudentID) as AbsentStudentNumber
FROM
factAbsence fb join
dimStudent dd on
fb.StudentID = dd.StudentID join
dimFacility df on
df.FacilityID = dd.FacilityID
Group by df.FacilityName
order by AbsentStudentNumber DESC
```

	facilityname character varying(50)	absentstudentnumber bigint
1	Contoso High School	6415
2	Contoso Elementary	2817
3	Contoso Middle	2512

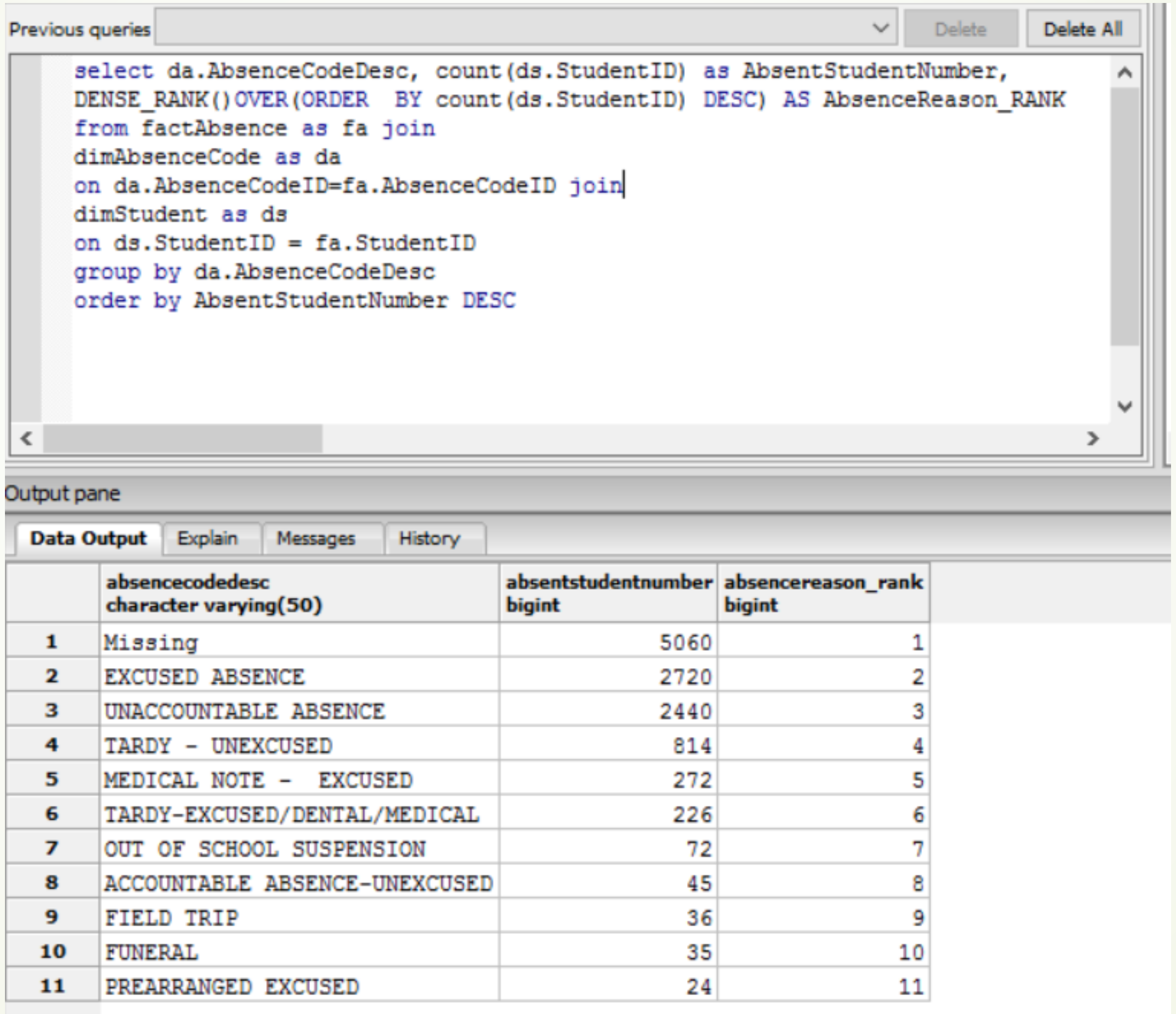
PostgreSQL Query 2.2



```
select a.Number_of_Y, a.Number_of_N,
        a.Total_Number,
        round(cast((cast(a.Number_of_Y as float))/(cast(a.Total_Number as float))*100 as int) ,2) as "Percentage%"
from (
select sum(case when da.Unexcused = 'Y' then 1 else 0 end) as Number_of_Y,
        sum(case when da.Unexcused = 'N' then 1 else 0 end) as Number_of_N,
        count(fa.StudentID) as Total_Number
from factAbsence as fa join
        dimAbsenceCode da on
        fa.AbsenceCodeID = da.AbsenceCodeID
)a
```

	number_of_y bigint	number_of_n bigint	total_number bigint	Percentage% numeric
1	8431	3313	11744	72.00

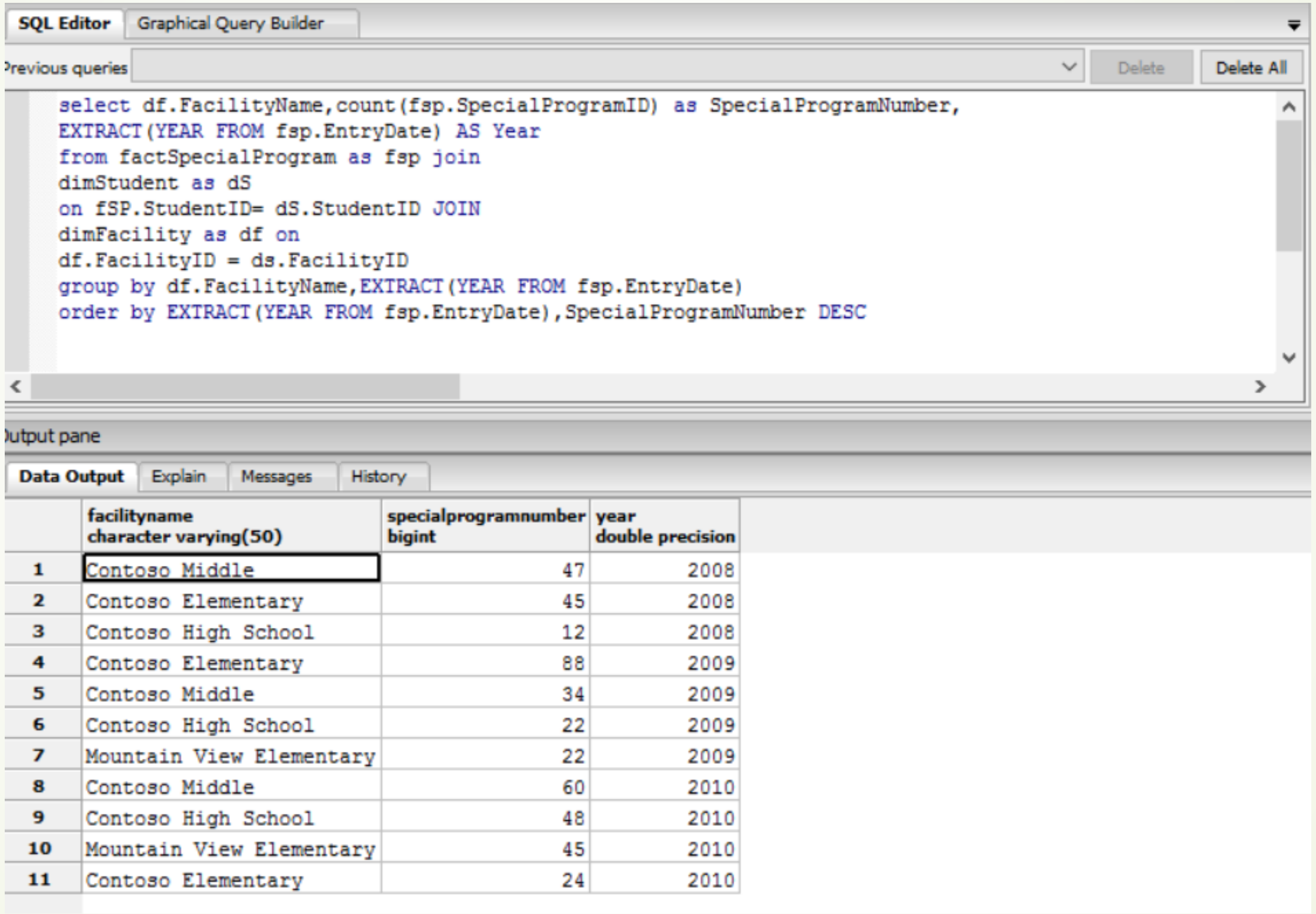
PostgreSQL Query 2.3



```sql
select da.AbsenceCodeDesc, count(ds.StudentID) as AbsentStudentNumber,
DENSE_RANK()OVER(ORDER  BY count(ds.StudentID) DESC) AS AbsenceReason_RANK
from factAbsence as fa join
dimAbsenceCode as da
on da.AbsenceCodeID=fa.AbsenceCodeID join
dimStudent as ds
on ds.StudentID = fa.StudentID
group by da.AbsenceCodeDesc
order by AbsentStudentNumber DESC
```

	absencecodedesc character varying(50)	absentstudentnumber bigint	absencereason_rank bigint
1	Missing	5060	1
2	EXCUSED ABSENCE	2720	2
3	UNACCOUNTABLE ABSENCE	2440	3
4	TARDY - UNEXCUSED	814	4
5	MEDICAL NOTE - EXCUSED	272	5
6	TARDY-EXCUSED/DENTAL/MEDICAL	226	6
7	OUT OF SCHOOL SUSPENSION	72	7
8	ACCOUNTABLE ABSENCE-UNEXCUSED	45	8
9	FIELD TRIP	36	9
10	FUNERAL	35	10
11	PREARRANGED EXCUSED	24	11

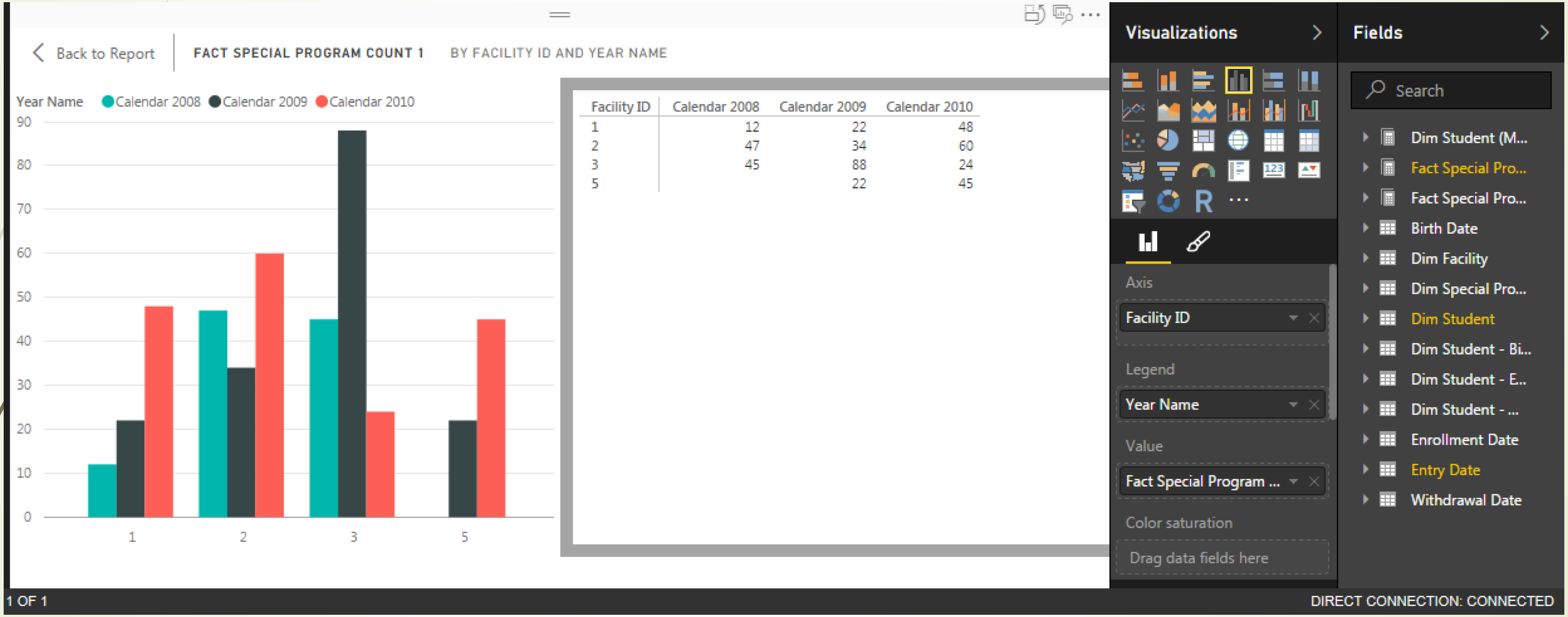
PostgreSQL Query 4.1



```sql
select df.FacilityName,count(fsp.SpecialProgramID) as SpecialProgramNumber,
EXTRACT(YEAR FROM fsp.EntryDate) AS Year
from factSpecialProgram as fsp join
dimStudent as dS
on fSP.StudentID= dS.StudentID JOIN
dimFacility as df on
df.FacilityID = ds.FacilityID
group by df.FacilityName,EXTRACT(YEAR FROM fsp.EntryDate)
order by EXTRACT(YEAR FROM fsp.EntryDate),SpecialProgramNumber DESC
```

	facilityname character varying(50)	specialprogramnumber bigint	year double precision
1	Contoso Middle	47	2008
2	Contoso Elementary	45	2008
3	Contoso High School	12	2008
4	Contoso Elementary	88	2009
5	Contoso Middle	34	2009
6	Contoso High School	22	2009
7	Mountain View Elementary	22	2009
8	Contoso Middle	60	2010
9	Contoso High School	48	2010
10	Mountain View Elementary	45	2010
11	Contoso Elementary	24	2010

Power BI 4.1



Back to Report

FACT SPECIAL PROGRAM COUNT 1 BY FACILITY ID AND YEAR NAME

Facility ID	Calendar 2008	Calendar 2009	Calendar 2010
1	12	22	48
2	47	34	60
3	45	88	24
5		22	45

Visualizations

Axis: Facility ID

Legend: Year Name

Value: Fact Special Program ...

Color saturation: Drag data fields here

Fields

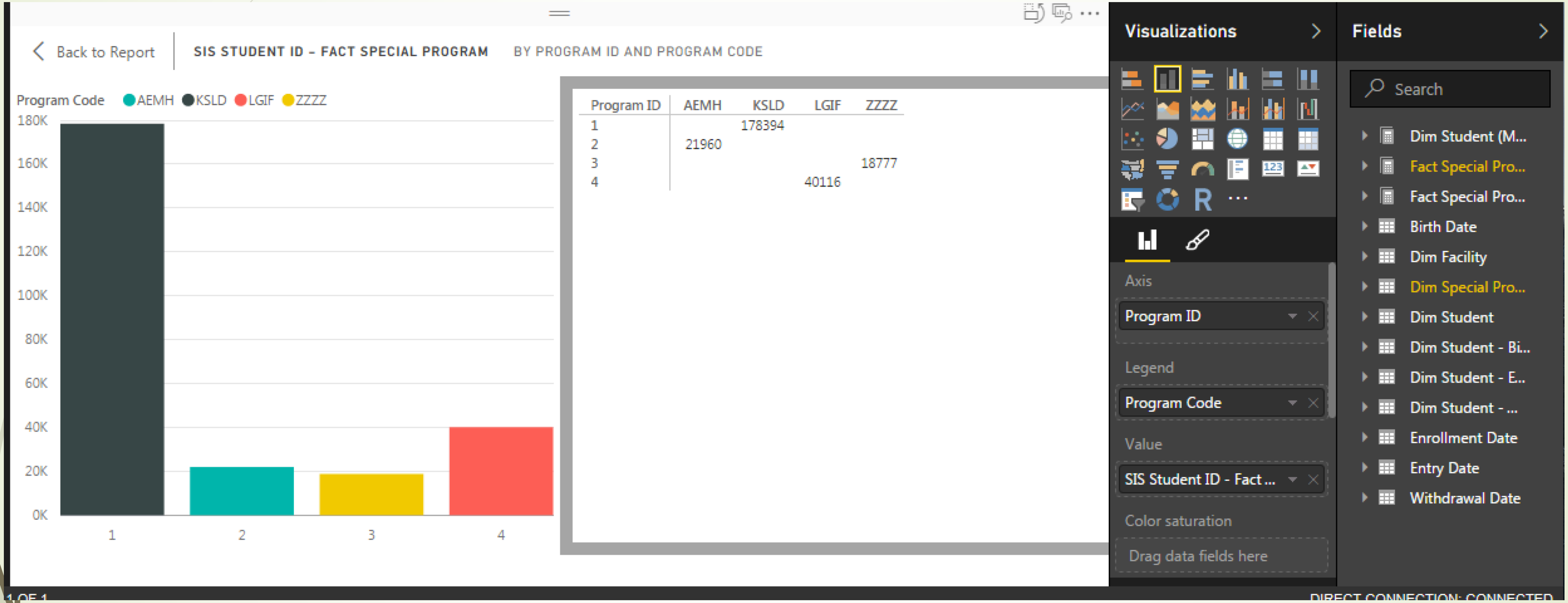
Search

- Dim Student (M...
- Fact Special Pro...
- Fact Special Pro...
- Birth Date
- Dim Facility
- Dim Special Pro...
- Dim Student
- Dim Student - Bi...
- Dim Student - E...
- Dim Student - ...
- Enrollment Date
- Entry Date
- Withdrawal Date

1 OF 1

DIRECT CONNECTION: CONNECTED

Power BI 4.2



< Back to Report

SIS STUDENT ID – FACT SPECIAL PROGRAM BY PROGRAM ID AND PROGRAM CODE

Program ID	AEMH	KSLD	LGIF	ZZZZ
1		178394		
2	21960			
3				18777
4			40116	

Visualizations

Axis: Program ID

Legend: Program Code

Value: SIS Student ID - Fact ...

Color saturation: Drag data fields here

Fields

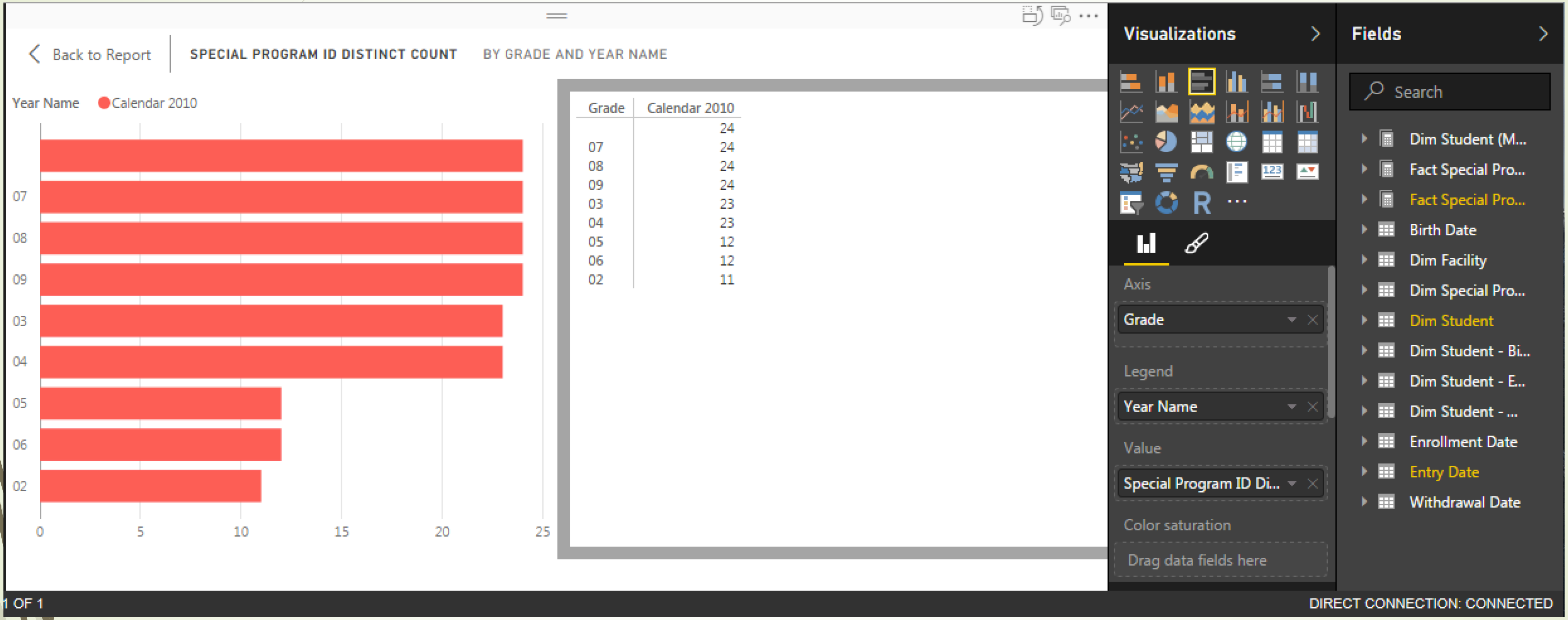
Search

- Dim Student (M...
- Fact Special Pro...
- Fact Special Pro...
- Birth Date
- Dim Facility
- Dim Special Pro...
- Dim Student
- Dim Student - Bi...
- Dim Student - E...
- Dim Student - ...
- Enrollment Date
- Entry Date
- Withdrawal Date

1 OF 1

DIRECT CONNECTION: CONNECTED

Power BI 4.3



Grade	Calendar 2010
	24
07	24
08	24
09	24
03	23
04	23
05	12
06	12
02	11

Axis: Grade

Legend: Year Name

Value: Special Program ID Di...