**MSSQL QUERIES**

**ABSENCE**

**School Admin perspective**

1] School admin wants to analyze absence of students. School admin wants to know which staff(teacher) has maximum number of students absent and which staff(teacher) has highest attendance in the class.

This clearly indicates that how efficiently teacher(staff) is teaching and how intensely student are interested in the lecture.

select dimStaff.StaffName+dimStaff.StaffLastName as StaffName,count(dimStudent.StudentID) as NoOfAbsentStudents

from Schools\_K12\_DW.dbo.dimStudent dimStudent

inner join Schools\_K12\_DW.dbo.factAbsence factAbsence on dimStudent.StudentID=factAbsence.StudentID

inner join Schools\_K12\_DW.dbo.dimStaff dimStaff on dimStaff.StaffID=factAbsence.StaffID

group by dimStaff.StaffName+dimStaff.StaffLastName

2] Admin wants to know the absent count for all the months of Year 2010 from the highest count to the least count.

This will help him to find out the count of absent students for all the months of year 2010

select d.MonthName,SUM(a.AbsenceCount) AS AbsenceCount

from Schools\_K12\_DW.dbo.factAbsence AS a

INNER JOIN Schools\_K12\_DW.dbo.dimDate AS d

ON a.AbsenceDate=d.DatePK

WHERE d.Year='2010'

GROUP BY d.MonthName

ORDER BY AbsenceCount Desc

3] Admin wants to know the absence count for the days of the week, with decreasing order of Absence count

This will help find the absence for the weeks of the day

SELECT d.DayOfWeekName,SUM(a.AbsenceCount) AS AbsenceCount

FROM Schools\_K12\_DW.dbo.factAbsence as a

INNER JOIN Schools\_K12\_DW.dbo.dimDate as d

ON a.AbsenceDate=d.DatePK

GROUP BY d.DayOfWeekName

ORDER BY AbsenceCount DESC

**Parent perspective**

4] Parent wants to find out the absent dates of the student and the description given for that absence

SELECT s.StudentID,s.StudentName, a.AbsenceDate,ab.AbsenceCodeDesc

FROM Schools\_K12\_DW.dbo.factAbsence as a

INNER JOIN Schools\_K12\_DW.dbo.dimAbsenceCode AS ab

ON a.AbsenceCodeID=ab.AbsenceCodeID

INNER JOIN Schools\_K12\_DW.dbo.dimStudent AS s

ON a.StudentID=s.StudentID

where s.StudentID=1660

5] Parent wants to find out the absentee of his child in all months

SELECT s.StudentID, d.MonthName,COUNT(a.AbsenceCount) as AbsenctCount

FROM Schools\_K12\_DW.dbo.factAbsence as a

INNER JOIN Schools\_K12\_DW.dbo.dimDate as d

ON a.AbsenceDate=d.DatePK

INNER JOIN Schools\_K12\_DW.dbo.dimStudent AS s

ON a.StudentID=s.StudentID

where s.StudentID=1660

GROUP BY s.StudentID,d.MonthName

ORDER BY MONTH(d.MonthName)

**Teacher Perspective**

6] Teacher wants to find out Top 3 students with least absence

SELECT TOP 3 f.StudentID,f.StudentFirstName +' ' +f.StudentLastName AS StudentName,SUM(a.AbsenceCount) as AbsenceCount

FROM Schools\_K12\_DW.dbo.factAbsence AS a

INNER JOIN Schools\_K12\_DW.dbo.dimStaff AS s

ON a.StaffID=s.StaffID

INNER JOIN Schools\_K12\_DW.dbo.dimStudent AS f

ON a.StudentID=f.StudentID

WHERE s.StaffFirstName='Hao'

GROUP BY f.StudentID,f.StudentFirstName +' ' +f.StudentLastName

ORDER BY AbsenceCount

7] Teacher wants to find out all the students under him and their absence count from highest to least count

SELECT f.StudentID,f.StudentFirstName +' ' +f.StudentLastName AS StudentName,SUM(a.AbsenceCount) as AbsenceCount

FROM Schools\_K12\_DW.dbo.factAbsence AS a

INNER JOIN Schools\_K12\_DW.dbo.dimStaff AS s

ON a.StaffID=s.StaffID

INNER JOIN Schools\_K12\_DW.dbo.dimStudent AS f

ON a.StudentID=f.StudentID

WHERE s.StaffFirstName='Hao'

GROUP BY f.StudentID,f.StudentFirstName +' ' +f.StudentLastName

ORDER BY AbsenceCount DESC

**DISCIPLINE**

**School Admin Perspective**

8] School admin wants to analyze which staff has reported the highest discipline issues and which kind of discipline issues are reported most.

select count(factDiscipline.StudentID) as NoOfStudentsDisciplonedByTeacher, dimStaff.StaffFirstName from Schools\_K12\_DW.dbo.dimStaff dimStaff

inner join Schools\_K12\_DW.dbo.factDiscipline factDiscipline on dimStaff.StaffID=factDiscipline.ActionStaffID

inner join Schools\_K12\_DW.dbo.dimStudent dimStudent on dimStudent.StudentID=factDiscipline.StudentID

group by dimStaff.StaffFirstName

9] School admin wants to find out the ranking of discipline issues that has occured the highest number of time to least

SELECT d.DisciplineEventCodeID,d.DisciplineEventDesc, COUNT(d.DisciplineEventCodeID) AS NumberOFOccurrence

FROM Schools\_K12\_DW.dbo.factDiscipline AS fd

INNER JOIN Schools\_K12\_DW.dbo.dimDisciplineEventCode AS d

on fd.DisciplineEventCodeID=D.DisciplineEventCodeID

group by d.DisciplineEventCodeID,d.DisciplineEventDesc

ORDER BY NumberOFOccurrence DESC

10] School Admin wants to find out the count of various Discipline Actions taken in different years

SELECT year(date1.Year) as Year,dA.DisciplineActionCodeID,dA.DisciplineActionDesc,count(dA.DisciplineActionCodeID) AS CountOfDisciplineActionCode

FROM Schools\_K12\_DW.dbo.factDiscipline AS fd

INNER JOIN Schools\_K12\_DW.dbo.dimDisciplineActionCode AS da

ON fd.DisciplineActionCodeID=da.DisciplineActionCodeID

INNER JOIN Schools\_K12\_DW.dbo.dimDate AS date1

ON date1.DatePK=fd.EventDate

GROUP BY date1.Year,da.DisciplineActionCodeID,da.DisciplineActionDesc

ORDER BY CountOfDisciplineActionCode DESC

**Parent Perspective**

11] Parent wants to find out discipline relation information of student with ID=1.

--Parent wants to find out the discipline event and event date made by their child and the Discipline Action taken against it Action Date

SELECT s.StudentFirstName,de.DisciplineEventDesc,d.EventDate,da.DisciplineActionDesc,d.ActionDate

FROM Schools\_K12\_DW.DBO.factDiscipline AS d

INNER JOIN Schools\_K12\_DW.dbo.dimDisciplineEventCode AS de

ON d.DisciplineEventCodeID=de.DisciplineEventCodeID

INNER JOIN Schools\_K12\_DW.dbo.dimDisciplineActionCode AS da

ON da.DisciplineActionCodeID=d.DisciplineActionCodeID

INNER JOIN Schools\_K12\_DW.dbo.dimStudent AS s

ON s.StudentID=d.StudentID

WHERE s.StudentID=1

12] Parent wants to see which month his child has performed Discipline Events and its count

SELECT DATE1.MonthName,DE.DisciplineEventDesc,COUNT(DE.DisciplineEventCodeID) as DisciplineEventCount

FROM Schools\_K12\_DW.DBO.factDiscipline AS d

INNER JOIN Schools\_K12\_DW.dbo.dimDisciplineEventCode AS de

ON d.DisciplineEventCodeID=de.DisciplineEventCodeID

INNER JOIN Schools\_K12\_DW.dbo.dimDate AS date1

ON date1.DatePK=d.EventDate

WHERE d.StudentID=1

GROUP BY date1.MonthName,de.DisciplineEventDesc

ORDER BY month(date1.MonthName)

**Teacher Perspective**

13] Teacher wants to keep track of the count of discipline events violated by student under him

SELECT s.StudentID,s.StudentFirstName+' '+s.StudentLastName as Name,de.DisciplineActionDesc,COUNT(de.DisciplineActionCodeID) AS DisciplineEventCount

FROM Schools\_K12\_DW.DBO.factDiscipline AS d

INNER JOIN Schools\_K12\_DW.dbo.dimDisciplineActionCode AS de

ON d.DisciplineActionCodeID=de.DisciplineActionCodeID

INNER JOIN Schools\_K12\_DW.dbo.dimStudent AS s

ON s.StudentID=d.StudentID

INNER JOIN Schools\_K12\_DW.dbo.dimStaff AS st

ON s.HomeroomStaffID=st.StaffID

where st.StaffFirstName='Hao'

GROUP BY de.DisciplineActionDesc,s.StudentID,s.StudentFirstName,s.StudentLastName

**SPECIAL PROGRAM**

**School Admin Perspective**

14] School admin wants to analyze how many students are enrolled in a specific special program started in a specific academic year

select dimDate.YearName ,dimSpecialProgram.Program,count(dimStudent.StudentID) as 'NumberOFStudents'

from Schools\_K12\_DW.dbo.factSpecialProgram

inner join Schools\_K12\_DW.dbo.dimSpecialProgram

on factSpecialProgram.ProgramID=dimSpecialProgram.ProgramID

inner join Schools\_K12\_DW.dbo.dimStudent dimStudent

on dimStudent.StudentID=factSpecialProgram.StudentID

inner join Schools\_K12\_DW.dbo.dimDate on dimDate.DatePK=factSpecialProgram.EntryDate

where dimDate.YearName ='Calendar 2008'

group by dimDate.YearName ,dimSpecialProgram.Program

15] Admin wants to find out the rank of Special program according to number of students registered in it

SELECT RANK() OVER (ORDER BY COUNT(sd.ProgramID) desc) AS Rank,sd.Program,COUNT(sd.ProgramID) AS Count

from Schools\_K12\_DW.dbo.factSpecialProgram AS s

inner join Schools\_K12\_DW.dbo.dimSpecialProgram as sd

on s.ProgramID=sd.ProgramID

inner join Schools\_K12\_DW.dbo.dimStudent as s1

on s1.StudentID=s.StudentID

GROUP BY sd.Program

ORDER BY Count desc

**Parent Perspective**

16] Parent wants to find out the program code and description of special Program the student is registered to

SELECT student.StudentName,fact.SpecialProgramID,specialProgram.Program,specialProgram.ProgramCode

FROM Schools\_K12\_DW.dbo.factSpecialProgram AS fact

INNER JOIN Schools\_K12\_DW.dbo.dimSpecialProgram AS specialProgram

ON fact.SpecialProgramID=specialProgram.ProgramID

INNER JOIN Schools\_K12\_DW.dbo.dimStudent AS student

ON fact.StudentID=student.StudentID

WHERE student.StudentID=32;

17] Parent wants to find out the entry date of the special program the child is registered to.

SELECT fact.EntryDate,student.StudentName,fact.SpecialProgramID,specialProgram.Program,specialProgram.ProgramCode

FROM Schools\_K12\_DW.dbo.factSpecialProgram AS fact

INNER JOIN Schools\_K12\_DW.dbo.dimSpecialProgram AS specialProgram

ON fact.SpecialProgramID=specialProgram.ProgramID

INNER JOIN Schools\_K12\_DW.dbo.dimStudent AS student

ON fact.StudentID=student.StudentID

WHERE student.StudentID=32

**Teacher Perspective**

18] Teacher wants to find out which year was the maximum entry for Special Program

SELECT s.Program, COUNT(FACT.EntryDate)

FROM Schools\_K12\_DW.dbo.factSpecialProgram as fact

INNER JOIN Schools\_K12\_DW.dbo.dimDate AS date1

ON fact.EntryDate=DATE1.DatePK

INNER JOIN Schools\_K12\_DW.dbo.dimSpecialProgram as s

ON fact.SpecialProgramID=s.ProgramID

where DATE1.YearName ='Calendar 2008'

group by s.Program

**Academic Performance**

**School Admin Perspective**

19] School admin wants to analyze which staff has maximum students with A grade

select dimStaff.StaffName as TeachersName,count(dimStudent.StudentID) as noOfStudentsWithAGrade

from Schools\_K12\_DW.dbo.dimStudent dimStudent

inner join Schools\_K12\_DW.dbo.factStudentCourse factStudentCourse on dimStudent.StudentID=factStudentCourse.StudentID

inner join Schools\_K12\_DW.dbo.dimStaff dimStaff on dimStaff.StaffID=factStudentCourse.StaffID

inner join Schools\_K12\_DW.dbo.factStudentCourseGrade on factStudentCourse.StudentCourseID=factStudentCourseGrade.StudentCourseID

where factStudentCourseGrade.AlphaGrade='A'

group by dimStaff.StaffName

ORDER BY noOfStudentsWithAGrade desc

20] Academic performance of students by absency

select top 10 dimStudent.StudentName,count(\*) NoOfAbscenties,dimCourse.CourseTitle,avg(factStudentCourseGrade.NumericGrade) as CourseGrade

from Schools\_K12\_DW.dbo.factStudentCourseGrade

join Schools\_K12\_DW.dbo.factStudentCourse on factStudentCourseGrade.StudentCourseID=factStudentCourse.StudentCourseID

join Schools\_K12\_DW.dbo.factAbsence on factAbsence.StudentID=factStudentCourse.StudentID

join Schools\_K12\_DW.dbo.dimStudent on factAbsence.StudentID=dimStudent.StudentID

join Schools\_K12\_DW.dbo.dimCourse on factStudentCourse.CourseID=dimCourse.CourseID

group by dimStudent.StudentName,dimCourse.CourseTitle

order by NoOfAbscenties;

21 ] Academic performance of students in every subject

select dimStudent.StudentName,dimCourse.CourseTitle,avg(factStudentCourseGrade.NumericGrade) as CourseGrade

from Schools\_K12\_DW.dbo.factStudentCourseGrade

join Schools\_K12\_DW.dbo.factStudentCourse on factStudentCourseGrade.StudentCourseID=factStudentCourse.StudentCourseID

join Schools\_K12\_DW.dbo.dimStudent on factStudentCourse.StudentID=dimStudent.StudentID

join Schools\_K12\_DW.dbo.dimCourse on factStudentCourse.CourseID=dimCourse.CourseID

group by dimCourse.CourseTitle,dimStudent.StudentName

order by CourseGrade desc;

22] Academic performance of students in a particular subject

select dimStudent.StudentName,dimCourse.CourseTitle,avg(factStudentCourseGrade.NumericGrade) as CourseGrade

from Schools\_K12\_DW.dbo.factStudentCourseGrade

join Schools\_K12\_DW.dbo.factStudentCourse on factStudentCourseGrade.StudentCourseID=factStudentCourse.StudentCourseID

join Schools\_K12\_DW.dbo.dimStudent on factStudentCourse.StudentID=dimStudent.StudentID

join Schools\_K12\_DW.dbo.dimCourse on factStudentCourse.CourseID=dimCourse.CourseID

where dimCourse.CourseTitle='HEALTH'

group by dimCourse.CourseTitle,dimStudent.StudentName

order by CourseGrade desc;

23] Top professors with the students having high academic performance

select dimStaff.StaffName, count(distinct dimStudent.StudentID) NumberOfStudents,avg(factStudentCourseGrade.NumericGrade) as AverageCourseGrade

from Schools\_K12\_DW.dbo.factStudentCourseGrade

join Schools\_K12\_DW.dbo.factStudentCourse on factStudentCourseGrade.StudentCourseID=factStudentCourse.StudentCourseID

join Schools\_K12\_DW.dbo.dimStudent on factStudentCourse.StudentID=dimStudent.StudentID

join Schools\_K12\_DW.dbo.dimStaff on factStudentCourse.StaffID=dimStaff.StaffID

group by dimStaff.StaffName

order by AverageCourseGrade desc;

**Parent Perspective**

24] Top Grades of a student

select dimStudent.StudentName,count(\*) NoOfAttempts,dimCourse.CourseTitle,avg(factStudentCourseGrade.NumericGrade) as CourseGrade

from Schools\_K12\_DW.dbo.factStudentCourseGrade

join Schools\_K12\_DW.dbo.factStudentCourse on factStudentCourseGrade.StudentCourseID=factStudentCourse.StudentCourseID

join Schools\_K12\_DW.dbo.dimStudent on factStudentCourse.StudentID=dimStudent.StudentID

join Schools\_K12\_DW.dbo.dimCourse on factStudentCourse.CourseID=dimCourse.CourseID

where dimStudent.StudentName='Nupur Agarwal'

group by dimCourse.CourseTitle,dimStudent.StudentName

order by CourseGrade desc;

**Teachers Perspective**

25] Professor with his students academic performance

select dimStaff.StaffName,dimStudent.StudentName,dimCourse.CourseTitle,sum(factStudentCourseGrade.NumericGrade) as CourseGrade

from Schools\_K12\_DW.dbo.factStudentCourseGrade

join Schools\_K12\_DW.dbo.factStudentCourse on factStudentCourseGrade.StudentCourseID=factStudentCourse.StudentCourseID

join Schools\_K12\_DW.dbo.dimStudent on factStudentCourse.StudentID=dimStudent.StudentID

join Schools\_K12\_DW.dbo.dimStaff on factStudentCourse.StaffID=dimStaff.StaffID

join Schools\_K12\_DW.dbo.dimCourse on factStudentCourse.CourseID=dimCourse.CourseID

where dimStaff.StaffName='Colleen Bracy' and dimCourse.CourseTitle='ADV CHORUS 2A'

group by dimCourse.CourseTitle,dimStudent.StudentName,dimStaff.StaffName

order by CourseGrade desc;