SCHOOL ADMINISTRATOR :

ACADEMIC PERFORMANCE:

--Query to fetch the average student grade in each subject

This query is to fetch the average student grades in each subject. This is done by taking the average student grade in first and second semester and then taking the average of both semesters.

SELECT SubjectID,

SubjectName,

AVG(AverageGrade) 'Average Student Numerical Grade'

FROM(

SELECT e.SubjectID SubjectID,

e.SubjectName SubjectName,

d.GradeType GradeType,

AVG(b.NumericGrade) AverageGrade

FROM factStudentCourse a

JOIN factStudentCourseGrade b

ON a.StudentCourseID = b.StudentCourseID

JOIN dimCourse c

ON a.CourseID = c.CourseID

JOIN dimGradeType d

ON d.GradeTypeID = b.GradeTypeID

JOIN dimSubject e

ON c.SubjectID = e.SubjectID

WHERE b.GradeTypeID IN(5,11)

GROUP BY e.SubjectID,e.SubjectName,d.GradeType

) AS Main

GROUP BY SubjectID, SubjectName

ORDER BY SubjectID;

--Query to rank the staff under each facility for each course

This query is to rank the staff for each course in each facility. In a facility two staff may be teaching a course.So depending on the student performance under that staff we will rank the staff.

SELECT sc.FacilityID,

f.FacilityName,

sc.CourseID,

CourseTitle,

s.StaffName,

AVG(NumericGrade) AS 'Average Stdent Performance',

DENSE\_RANK() OVER(PARTITION BY sc.CourseID ORDER BY AVG(NumericGrade) DESC) AS Rank

FROM [dbo].[dimCourse] c

JOIN [dbo].[factStudentCourse] sc ON c.CourseID = sc.CourseID

JOIN [dbo].[dimStaff] s ON s.StaffID = sc.StaffID

JOIN [dbo].[factStudentCourseGrade] scg ON sc.StudentCourseID = scg.StudentCourseID

JOIN [dbo].[dimFacility] f ON sc.FacilityID = f.FacilityID

GROUP BY sc.FacilityID,f.FacilityName,CourseTitle,sc.CourseID,s.StaffName

ORDER BY sc.CourseID;

STUDENT ABSENCES:

--Query to fetch the absence counts for each facility in each year

This query will fetch the total student absence count for each year in each facility.

SELECT YEAR(a.AbsenceDate) AcademicYear,a.FacilityID,b.FacilityName,COUNT(\*) 'Absence Count'

FROM factAbsence a

JOIN dimFacility b

ON a.FacilityID = b.FacilityID

GROUP BY a.FacilityID,b.FacilityName,YEAR(a.AbsenceDate)

ORDER BY AcademicYear,a.FacilityID;

STUDENT MISBEHAVIOR AND DISCIPLINE:

--Query to fetch the misbehavior counts for each facility

This query will fetch the misbehavior counts for each facility.

SELECT YEAR(a.EventDate) AcademicYear,EventFacilityID FacilityID,b.FacilityName, COUNT(\*) 'Student Count'

FROM factDiscipline a

JOIN dimFacility b ON a.EventFacilityID = b.FacilityID

GROUP BY a.EventFacilityID,b.FacilityName,YEAR(a.EventDate)

ORDER BY AcademicYear,a.EventFacilityID;

--Query to fetch the misbehavior counts for each facility under event code (misbehavior type)

This query will fetch the count of students who did misbehave according to each misbehavior category under each facility.

SELECT EventFacilityID FacilityID,b.FacilityName,a.DisciplineEventCodeID,c.DisciplineEventDesc, COUNT(\*) 'Student Count'

FROM factDiscipline a

JOIN dimFacility b ON a.EventFacilityID = b.FacilityID

JOIN dimDisciplineEventCode c ON a.DisciplineEventCodeID = c.DisciplineEventCodeID

GROUP BY a.EventFacilityID,b.FacilityName,a.DisciplineEventCodeID,c.DisciplineEventDesc

ORDER BY a.EventFacilityID;

SPECIAL NEEDS PROGRAM :

--Query to fetch the number of students under each special program

This query fetches the count of students enrolled for each special program.

select a.ProgramID,b.Program,count(\*) 'Student Count' from factSpecialProgram a

JOIN dimSpecialProgram b

ON a.ProgramID = b.ProgramID

GROUP BY a.ProgramID,b.Program;

OVERALL :

--Query to fetch number of students in each course (to find popular course)

This query will fetch the number of students in each course. This will help School Administrator to identify the popular course.

select b.CourseID,c.CourseTitle,count(\*) StudentCount

from dimStudent a

join factStudentCourse b

on a.StudentID=b.StudentID

join dimCourse c

on b.CourseID=c.CourseID

group by b.CourseID,c.CourseTitle

Order by StudentCount DESC;

--Query to rank the student enrollment count each year

This query will fetch the number of students enrolled each year.

select year(b.EnrollmentDate) as YearofEnrollment, count(\*) as noofstudentsenrolled,RANK()OVER (ORDER BY count(\*) desc) as Ranking

from dimStudent a

join factStudentCourse b

on a.StudentID=b.StudentID

group by year(b.EnrollmentDate);

--Query to fetch average student performance for each course for each staff

This query will fetch the average student performance for all the courses a staff is teaching. It fetches the results for all the staff.

SELECT s.StaffName,sc.CourseID,CourseTitle,AVG(NumericGrade) AS 'Average grade'

FROM [dbo].[dimCourse] c

JOIN [dbo].[factStudentCourse] sc

ON c.CourseID = sc.CourseID

JOIN [dbo].[dimStaff] s

ON s.StaffID = sc.StaffID

JOIN [dbo].[factStudentCourseGrade] scg

ON sc.StudentCourseID = scg.StudentCourseID

GROUP BY s.StaffName,CourseTitle,sc.CourseID

ORDER BY s.StaffName,sc.CourseID;

TEACHER:

STUDENT ACADMIC PERFORMANCE:

--Query to fetch the number of students getting highest grade for each grade type

This query will fetch the number of students scoring highest grade at each specific grade type (like Final exam, 1st semester etc.) for each course.

select a.StaffID, sc.CourseID,CourseTitle,GradeType, count(StudentID) as 'Number of Students with A grade' from [dbo].[dimCourse] c

join[dbo].[factStudentCourse] sc on c.CourseID= sc.CourseID

join [dbo].[factStudentCourseGrade] scg on sc.StudentCourseID=scg.StudentCourseID

join [dbo].[dimGradeType] gt on scg.GradeTypeID=gt.GradeTypeID

join dbo.dimStaff a on sc.StaffID=a.StaffID

where scg.AlphaGrade ='A' and a.StaffID='62'

group by c.CourseTitle,sc.CourseID, gt.GradeType,a.StaffID

order by sc.CourseID;

--Query to fetch the average student performance in each course he is teaching

This query is to fetch the average student performance of all courses a staff is teaching.

select sc.CourseID,CourseTitle,Avg(NumericGrade) as'Average grade'

from [dbo].[dimCourse] c

join[dbo].[factStudentCourse] sc on c.CourseID= sc.CourseID

join [dbo].[dimStaff] s on s.StaffID = sc.StaffID

join [dbo].[factStudentCourseGrade] scg on sc.StudentCourseID= scg.StudentCourseID where s.StaffName ='David Alexander'

group by CourseTitle,sc.CourseID;

--Query to fetch the count of each grade for each course he is teaching for first and second semester

This query fetch the count of each grade for each course under each grade type under David Alexander (For example: no of A in his course)

select StaffName,sc.CourseID,CourseTitle,gt.GradeType,scg.AlphaGrade,count(\*) StudentCount from [dbo].[dimCourse] c

join[dbo].[factStudentCourse] sc on c.CourseID= sc.CourseID

join [dbo].[dimStaff] s on s.StaffID = sc.StaffID

join [dbo].[factStudentCourseGrade] scg on sc.StudentCourseID= scg.StudentCourseID

join [dbo].[dimGradeType] gt on scg.GradeTypeID=gt.GradeTypeID

where StaffName= 'David Alexander' AND gt.GradeTypeID IN(5,11)

group by sc.CourseID,CourseTitle,scg.AlphaGrade,gt.GradeType,StaffName

order by sc.CourseID,gt.GradeType;

-- Query to fetch the Bottom 10 students based on their grade for specific grade type for a specific course

This query fetch the fetch the Bottom 10 students based on their grade for specific grade type for a specific course

SELECT TOP 10 s.StudentFirstName,c.CourseTitle,scg.NumericGrade,st.StaffName

FROM [dbo].[dimCourse] c

JOIN [dbo].[factStudentCourse] sc

ON c.CourseID = sc.CourseID

JOIN [dbo].[dimStaff] st

ON st.StaffID = sc.StaffID

JOIN [dbo].[dimStudent] s

ON s.StudentID = sc.StudentID

JOIN [dbo].[factStudentCourseGrade] scg

ON sc.StudentCourseID = scg.StudentCourseID

JOIN [dbo].[dimGradeType] gt

ON scg.GradeTypeID = gt.GradeTypeID

WHERE st.StaffID = 9

AND c.CourseTitle = '9TH GRD STUDY SKILLS'

AND gt.GradeType = 'First Semester'

ORDER BY scg.NumericGrade

STUDENT ABSENCES :

--Query to fetch the number of students absent for his course

This query will fetch the number of students absent for the courses he is teaching.

select StaffName,sc.CourseID,c.CourseTitle, count(\*)as NoofStudentsAbsent

from [dbo].[factAbsence] a

join[dbo].[factStudentCourse] sc on a.StudentID= sc.StudentID

join [dbo].[dimCourse] c on sc.CourseID= c.CourseID

join [dbo].[dimStaff] s on s.StaffID = sc.StaffID

where StaffName = 'David Alexander'

group by sc.CourseID,c.CourseTitle,StaffName

order by NoofStudentsAbsent desc;

STUDENT MISBEHAVIOR AND DISCIPLINE

--Query to fetch the number of students reported by a particular staff in each course he is teaching

This query will fetch the number of students reported by a specific staff in each course he is teaching.

SELECT s.StaffName,sc.CourseID,c.CourseTitle,COUNT(fd.StudentID) NumberofStudents

FROM dbo.factDiscipline fd

join[dbo].[factStudentCourse] sc on fd.StudentID= sc.StudentID

join [dbo].[dimCourse] c on sc.CourseID= c.CourseID

JOIN [dbo].[dimStaff] s

ON fd.EventReportingStaffID = s.StaffID

JOIN [dbo].[dimDisciplineEventCode] dac

ON fd.DisciplineEventCodeID = dac.DisciplineEventCodeID

WHERE fd.EventReportingStaffID=6

GROUP BY s.StaffName,sc.CourseID,c.CourseTitle

ORDER BY NumberofStudents DESC;

PARENT :

STUDENT ACADEMIC PERFORMANCE:

--Query to fetch the course grade of a specific student for each course at a specific grade type

This query will fetch the course grade of a specific student for each course for specific grade type (1st semester/2nd semester)

select b.CourseID,d.CourseTitle,a.NumericGrade from factStudentCourseGrade a

join factStudentCourse b

on a.StudentCourseID=b.StudentCourseID

join dimGradeType c

on a.GradeTypeID=c.GradeTypeID

Join dimCourse d

ON d.CourseID = b.CourseID

where GradeType='Second Semester' and b.StudentID='48';

--Query to fetch the student performance of a particular student in various years

This query is used by the parent to see his child’s performance each year. This is used for performance measurement analysis.

SELECT e.SchoolYear,AVG(a.NumericGrade) 'Yearly Perforamnce'

FROM factStudentCourseGrade a

JOIN factStudentCourse b

ON a.StudentCourseID = b.StudentCourseID

JOIN dimStudent e

ON b.StudentID = e.StudentID

WHERE a.GradeTypeID =11 AND e.StudentName='Kim Abercrombie'

GROUP BY SchoolYear;

-- Query to fetch the courses in which a student scored well

This query will fetch the courses in which he scored well.

SELECT a.StudentID,a.StudentName,d.CourseTitle,c.AlphaGrade

FROM dimStudent a

JOIN factStudentCourse b ON b.StudentID = a.StudentID

JOIN factStudentCourseGrade c ON c.StudentCourseID = b.StudentCourseID

JOIN dimCourse d ON b.CourseID = d.CourseID

WHERE a.StudentID = '1' AND c.AlphaGrade = 'A'

GROUP BY c.AlphaGrade,a.StudentID,a.StudentName,d.CourseTitle;

--Query to fetch the absent counts (number of absent days) of a specific student

This query will fetch the absent counts (number of absent days) of a specific student.

SELECT COUNT(AbsenceCount) AS numberofdaysabsent

FROM factAbsence a

WHERE StudentID = '1660';

--Query to fetch the misbehavior details of a specific student

This query will fetch the misbehavior details of a specific student.

SELECT StudentID,b.DisciplineActionCodeID,DisciplineActionDesc,a.DisciplineEventCodeID,DisciplineEventDesc,ActionDate

FROM factDiscipline a

JOIN dimDisciplineActionCode b

ON a.DisciplineActionCodeID = b.DisciplineActionCodeID

JOIN dimDisciplineEventCode c

ON c.DisciplineEventCodeID = a.DisciplineEventCodeID

WHERE StudentID = '1'

ORDER BY StudentID,DisciplineActionDesc,DisciplineEventDesc;

--Query to fetch the special program details of a specific student enrolled to

This query will fetch the special program details for which a specific student is enrolled to.

SELECT StudentID,a.ProgramID,programcode,Program,EntryDate

FROM factSpecialProgram a

JOIN dimSpecialProgram

ON a.ProgramID = dimSpecialProgram.ProgramID

WHERE StudentID = '32';

***Overall:***

**Query-1:**

--Query to fetch the courses and respective professors of a specific student

This query will fetch the courses and staff details of a particular student.

SELECT a.StudentID,a.CourseID,b.CourseTitle,a.StaffID,c.StaffName

FROM factStudentCourse a

JOIN dimCourse b

ON a.CourseID = b.CourseID

JOIN dimStaff c

ON a.StaffID = c.StaffID

WHERE a.StudentID = 12;