FiNAL PROJECT

Group 8

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Description & list of sample types of analysis/queries for each data subset from the following perspectives:

## School administrator

### Absences

* + 1. What is the total number of student absence on particular day?
* **Query Description :** You have been asked to create a query that returns the total number of students absent on a particular day say 23rd January 2008
* **Type:** Select/Aggregate function(Count)/Where/
* **Tables Involved:** FactAbsence
* **Result**: Count of students absent on a given day
  + 1. What is the total number of student absence for particular reason?
       - **Query Description :** You have been asked to create a query that returns the total number of students absent due to reason like medical note
       - **Type:** Select/Aggregate function(Count)/Inner Joins/Where/Group by (Absence code)
       - **Tables Involved:** FactAbsence, dimAbsenceCode
       - **Result**: Count of students absent for medical reason
    2. For how many days particular student was absent?
       - **Query Description :** You have been asked to create a query that returns the total number of days Student(Kevin Kelly) was absent
       - **Type:** Select/Aggregate function(Sum)/Inner Joins/Where/Group by(StudentID)
       - **Tables Involved:** FactAbsence, dimStudent
       - **Result**: Count of days Kelvin was absent.
    3. What all are the reason for the absent of the particular student in a year?
       - **Query Description :** You have been asked to create a query that returns the distinct reason of absence of Kelvin Kelly in 2008
       - **Type:** Select/Distinct/Where/Inner Join/Group by(Year(AbsenceDate)
       - **Tables Involved:** FactAbsence. dimStudent, dimAbsenceCode
       - **Result**: distinct reason of absence for Kelvin Kelly student
    4. What is the number of students remain absent between particular dates?
       - **Query Description :** You have been asked to create a query that returns the number of students remain absent from 1st January 2008 to 3rd march 2008
       - **Type:** Select/Aggregate Function(Count)/Where
       - **Tables Involved:** FactAbsence
       - **Result**: Total number of student absent between 1st January 2008 to 3rd march 2008
    5. How many unexcused and excused type of leave student take?
       - **Query Description :** You have been asked to create a query that returns the number of excused leave together with number of unexcused leave taken by student kelvin Kelly
       - **Type:** Select/Aggregate Function(sum)/Where/inner join/Group by/union
       - **Tables Involved:** FactAbsence. dimStudent, dimAbsenceCode
       - **Result**: Number of days Kelvin remained absent due to excused and unexcused reason
    6. What is the ratio of Number of male to female students absent in a facility?
       - **Query Description :** You have been asked to create a query that returns the ratio of male student absent vs female student absent
       - **Type:** Select/Subquery(Aggregate Function(male count))/Subquery(count of female)/Where/inner join/Group by(Gender)
       - **Tables Involved:** FactAbsence. dimStudent,dimFacility
       - **Result**: Ratio of male vs female absence in each facility

### Discipline Behavior

1. What is the total number of student who got ADMINISTRATIVE DETENTION?
   * **Query Description :** You have been asked to create a query that returns the number of students who got Administrative Detention till now
   * **Type:** Select/Aggregate Function(Count)/Where/inner join/Group by(DiciplineActionCode)
   * **Tables Involved:** FactDicipline. dimDiciplineActionCode
   * **Result**: Count of students who got Administrative Detention
2. What is the total number of student given 5 Day letter due to MULTIPLE CR OFFENSE HANDLED BY TEACHER?

* **Query Description :** You have been asked to create a query that returns the number of students who were given 5 Day letter due to MULTIPLE CR OFFENSE HANDLED BY TEACHER
* **Type:** Select/Aggregate Function(Count)/Where/inner join/Group by(DiciplineEventCode,DiciplineActionCode)
* **Tables Involved:** FactDicipline. dimDiciplineActionCode, dimDiciplineEventCode
* **Result**: Count of students who got 5 Day letter due to MULTIPLE CR OFFENSE HANDLED BY TEACHER

1. What is the total number of student given counseling due to Aggressive Behavior?

* **Query Description :** You have been asked to create a query that returns the number of students who were given Counselling due to Aggressive Behavior
* **Type:** Select/Aggregate Function(Count)/Where/inner join/Group by(DiciplineEventCode,DiciplineActionCode)
* **Tables Involved:** FactDicipline. dimDiciplineActionCode, dimDiciplineEventCode
* **Result**: Count of students who need counseling due to Aggressive Behavior

1. What is the count of student for each disciplinary action?

* **Query Description :** You have been asked to create a query that returns the count of students for each disciplinary action
* **Type:** Select/Aggregate Function(Count)/Group by(DiciplineActionCode)
* **Tables Involved:** FactDicipline
* **Result**: Count of students for each disciplinary action

1. Which is the most occurring disciplinary violation act?

* **Query Description:** You have been asked to create a query that returns the name of most occurring disciplinary action.
* **Type:** Select/Inner Join/having Aggregate Function(Count)/Group by(DiciplineActionCode)/Order by desc/Limit 1
* **Tables Involved:** FactDicipline, dimDisciplineActionCode
* **Result**: Name of most occurring disciplinary action

1. Who is the most active staff to take disciplinary action?

* **Query Description:** You have been asked to create a query that returns the name of staff who took maximum disciplinary action
* **Type:** Select/Inner Join /having Aggregate Function(Count)/ Group by(ActionStaffId)/Order by desc/Limit 1
* **Tables Involved:** FactDicipline, dimStaff
* **Result**: Name of most active staff to take maximum disciplinary action

1. What is the highest disciplinary action taking place in Mountain View Elementary facility?

* **Query Description:** You have been asked to create a query that returns most occurring disciplinary action in Mountain View facility
* **Type:** Select/Aggregate Function(Count)/Inner Join/Where/Group by(DisciplinaryActionCode)/Order by desc/Limit 1
* **Tables Involved:** FactDicipline, dimFacility, dimDisciplineActionCode
* **Result**: Name of most occurring disciplinary action in Mountain View Elementary facility.

### Academic Performance

1. Find out top 10 student by facility/by grade

* **Query Description:** You have been asked to create a query that returns top 10 students of 9th grade in Mountain View Elementary facility
* **Type:** Select/Inner Join/Where/Order by desc/Limit 10
* **Tables Involved:** FactStudentCourseGrade, FactStudentCourse, dimStudent
* **Result**: Name of top 10 students by numeric grade in Mountain View Elementary facility

1. Which is the Best standardize test score of a student of each grade?

* **Query Description:** You have been asked to create a query that returns best standardize test score of Peter Villadsen for each grade
* **Type:** Select/Inner Join/Where/Order by desc/limit 1
* **Tables Involved:** FactStandardizedTestScore. FactStandardizedTestDomainScore, dimStudent,dimstandardizedTestDomain
* **Result**: Retrive the name of standardized test for Peter Villadsen scoring maximum marks

1. Which high school student scored highest in math? display students details

* **Query Description:** You have been asked to create a query that returns the details of high school student scoring maximum marks in math
* **Type:** Select/Inner Join/Where/Order by desc/limit 1
* **Tables Involved:** FactHSGTScore, FactHSGTDomainScore, dimStudent, dimSubject
* **Result**: Retrieve the name of high school student having highest math score

### Special Programs

1. What are the special programs available?

* **Query Description:** You have been asked to create a query that returns the special programs available in a facility Mountain View Elementary.
* **Type:** Select/InnerJoins (ProgramID)/Where
* **Tables Involved:** factSpecialProgram ,dimSpecialProgram
* **Result:** The result of this query would fetch all special programs available in Mountain View Elementary.

1. Number of students/Staff in EDUCABLE MENTALLY HANDICAPPED special program belongs to which facility?

* **Query Description:** You have been asked to create a query that returns the highest number of students/Staff belong to which facility
* **Type:** Select/Aggregate Function(count)/InnerJoins (StudentID, FacilityID) /Group By (Facility Name)
* **Tables Involved:** factSpecialProgram, dimFacility , dimStudent.
* **Result:** The result of this query would return the facility name and number of students enrolled in EDUCABLE MENTALLY HANDICAPPED program.

1. What is the total count enrollment in special program by facility?

* **Query Description:** You have been asked to create a query that displays the total number of enrollments of students in special program with its facilityname.
* **Type:** Select/ Aggregate Function(count)/InnerJoins (StudentID, FacilityID) /Group By (Facility Name)
* **Tables Involved:** factSpecialProgram, dimFacility , dimStudent
* **Result:** The result of this query would fetch number of enrollments of students in special program with its facilityname.

1. How many students withdrew from program and why?

* **Query Description:** You have been asked to create a query that displays the total number of students withdrew from special program along with withdrawal reasons
* **Type:** Select/ Aggregate Function(count)/InnerJoins (StudentID, WithdrawalID)/Group By (Special programid)
* **Tables Involved:** factSpecialProgram, dimStudent ,dimWithdrawalCode.
* **Result:** The result of this query would fetch number of students withdrew from each program and the withdrawalcode reason.

1. Find total enrollment of students in particular program year wise.

* **Query Description:** You have been asked to create a query that returns total enrollment of students in GIFTED special program in each year
* **Type:** Select/ Aggregate Function(Count, year)/ InnerJoins (StudentID)/Group by (year)
* **Tables Involved:** factSpecialProgram, dimStudent
* **Result:** The result of this query would fetch total number of students enrolled in GIFTED program yearwise.

1. Who all Staff allocated to GIFTED special program?

* **Query Description:** You have been asked to create a query that returns the staff details that are allocated to special programs.
* **Type:** Select/InnerJoins (StudentID, StaffID)/Where (StudentID)
* **Tables Involved:** factSpecialProgram, dimStudent ,dimStaff
* **Result:** The result of this query would fetch staff details that are allocated to GIFTED special programs.

## Teacher

### Absences

1. What is total number of student absence on particular day?

* **Query Description :** You have been asked to create a query that returns the total number of students absent on a particular day say 23rd January 2008
* **Type:** Select/Aggregate function(Count)/Where
* **Tables Involved:** FactAbsence
* **Result**: Count of students absent on a given day

1. What is the total number of student absence for particular reason?

* **Query Description :** You have been asked to create a query that returns the total number of students absent due to reason like medical note
* **Type:** Select/Aggregate function(Count)/Inner Joins/Where/Group by (Absence code)
* **Tables Involved:** FactAbsence, dimAbsenceCode
* **Result**: Count of students absent for medical reason

1. Find absent student and absent duration.

* **Query Description :** You have been asked to create a query that returns the total number of days Student(Kevin Kelly) was absent
* **Type:** Select/Aggregate function(Sum)/Inner Joins/Where/Group by(StudentID)
* **Tables Involved:** FactAbsence, dimStudent
* **Result**: Count of days Kelvin was absent.

1. What all are the reason for the absent of the particular student in a year?

* **Query Description :** You have been asked to create a query that returns the distinct reason of absence of Kelvin Kelly in 2008
* **Type:** Select/Distinct/Where/Inner Join/Group by(Year(AbsenceDate)
* **Tables Involved:** FactAbsence. dimStudent, dimAbsenceCode
* **Result**: distinct reason of absence for Kelvin Kelly student

1. Find out count of students who remain absent between particular dates

* **Query Description :** You have been asked to create a query that returns the number of students remain absent from 1st January 2008 to 3rd march 2008
* **Type:** Select/Aggregate Function(Count)/Where
* **Tables Involved:** FactAbsence
* **Result**: Total number of student absent between 1st January 2008 to 3rd march 2008

1. How many unexcused and excused leave student take?

* **Query Description :** You have been asked to create a query that returns the number of excused leave together with number of unexcused leave taken by student kelvin Kelly
* **Type:** Select/Aggregate Function(sum)/Where/inner join/Group by/union
* **Tables Involved:** FactAbsence. dimStudent, dimAbsenceCode
* **Result**: Number of days Kelvin remained absent due to excused and unexcused reason

### Discipline Behavior

1. Find student who faced maximum disciplinary action

* **Query Description:** You have been asked to create a query that returns the name of student involving in maximum disciplinary action.
* **Type:** Select/Inner Join/having Aggregate Function(Count) of studentid/Order by desc/Limit 1
* **Tables Involved:** FactDicipline, dimStudent
* **Result**: Name of student doing most disciplinary action

1. What is the total number of student who got ADMINISTRATIVE DETENTION ?
   * **Query Description :** You have been asked to create a query that returns the number of students who got Administrative Detention till now
   * **Type:** Select/Aggregate Function(Count)/Where/inner join/Group by(DiciplineActionCode)
   * **Tables Involved:** FactDicipline. dimDiciplineActionCode
   * **Result**: Count of students who got Administrative Detention
2. What is the total number of student given 5 Day letter due to MULTIPLE CR OFFENSE HANDLED BY TEACHER?

* **Query Description :** You have been asked to create a query that returns the number of students who were given 5 Day letter due to MULTIPLE CR OFFENSE HANDLED BY TEACHER
* **Type:** Select/Aggregate Function(Count)/Where/inner join/Group by(DiciplineEventCode,DiciplineActionCode)
* **Tables Involved:** FactDicipline. dimDiciplineActionCode, dimDiciplineEventCode
* **Result**: Count of students who got 5 Day letter due to MULTIPLE CR OFFENSE HANDLED BY TEACHER

1. What is the total number of student given counseling due to Aggressive Behavior?

* **Query Description :** You have been asked to create a query that returns the number of students who were given Counselling due to Aggressive Behavior
* **Type:** Select/Aggregate Function(Count)/Where/inner join/Group by(DiciplineEventCode,DiciplineActionCode)
* **Tables Involved:** FactDicipline. dimDiciplineActionCode, dimDiciplineEventCode
* **Result**: Count of students who need counseling due to Aggressive Behavior

1. What is the total number of student for each disciplinary action for particular facility?

* **Query Description :** You have been asked to create a query that returns the count of students for each disciplinary action for Mountain view Elementary
* **Type:** Select/Aggregate Function(Count)/inner join/Where/Group by(DiciplineActionCode)
* **Tables Involved:** FactDicipline, dimFacility
* **Result**: Count of students for each disciplinary action

1. Which is the most occurring disciplinary violation act for particular facility?

* **Query Description:** You have been asked to create a query that returns the name of most occurring disciplinary action in Mountain View Elementary
* **Type:** Select/Inner Join/Where/having Aggregate Function(Count)/Group by(DiciplineActionCode)/Order by desc/Limit 1
* **Tables Involved:** FactDicipline, dimDisciplinaryActionCode, dimFacility
* **Result**: Name of most occurring disciplinary action

### Academic Performance

1. Who are the top 10 student by grade/by subject?

* **Query Description:** You have been asked to create a query that returns top 10 students of 9th grade in Contoso High School facility
* **Type:** Select/Inner Join/Where/Order by desc/Limit 10
* **Tables Involved:** FactStudentCourseGrade , FactStudentScore ,dimStudent
* **Result**: Name of top 10 students of 9th grade by numeric grade in Contoso High School facility

1. Which all Students need grade improvement?

* **Query Description:** You have been asked to create a query that returns name of students in 9th grade in Contoso High School facility who got ‘D’ grade
* **Type:** Select/Inner Join/Where/Limit 10
* **Tables Involved:** FactStudentCourseGrade, FactStudentScore, dimStudent
* **Result**: Name of students of 9th grade by numeric grade in Contoso High School facility

1. Find first 3 Rank of students by grade

* **Query Description:** You have been asked to create a query that returns name of students in 9th grade in Contoso High School facility who got ‘D’ grade
* **Type:** Select/Inner Join/Where/Limit 10
* **Tables Involved:** FactStudentCourseGrade, FactStudentScore, dimStudent
* **Result**: Name of students of 9th grade by numeric grade in Contoso High School facility

1. Find percentage of particular student.

* **Query Description:** You have been asked to create a query that returns percentage of students in given grade
* **Type:** Function input student id, grade,facility
* **Tables Involved:** FactStudentCourseGrade, FactStudentScore, dimStudent, dimFacility
* **Result**: function returns the % of given student and grade

1. Which all student require improvement in particular subject?

* **Query Description:** You have been asked to create a query that returns name of students with Score who needs improvement in given subject
* **Type:** Store procedure input subject
* **Tables Involved:** FactStudentCourseGrade, FactStudentScore, dimStudent, dimSubject
* **Result**: procedure returns the name of students who has D grade and needs improvement in particular subject.

1. What is the performance level of StandardizedTestScore of a student on basis of subject?

* **Query Description:** You have been asked to create a query that returns the performance level of given student for all subjects
* **Type:** Store procedure input studentid
* **Tables Involved:** FactStandardizedTestScore, FactStandardizedTestDomainScore, dimStudent, dimStandardizedTestDomain
* **Result**: procedure returns performance sheet of given student for all subjects taken till now.

1. Which Students are good in vocabulary, algebra, geography, economic?

* **Query Description:** You have been asked to create a query that returns name of students good in vocabulary, algebra, geography, economics
* **Type:** Store procedure input Subject names
* **Tables Involved:** FactStandardizedTestScore, FactStandardizedTestDomainScore, dimStudent, dimStandardizedTestDomain
* **Result**: procedure returns name of students good in particular standardized test subject

1. Publish Scorecard of a student every student

* **Query Description:** You have been asked to create a query that returns name of students good in vocabulary, algebra, geography, economics
* **Type:** Store procedure input student names
* **Tables Involved:** FactStandardizedTestScore, FactStandardizedTestDomainScore, dimStudent, dimStandardizedTestDomain
* **Result**: procedure returns name of students good in particular standardized test subject

### Special Programs

1. What is the enrollment date in a special program for particular student?

* **Query Description:** You have been asked to create a query that returns the enrollment date in GIFTED Special program of particular student (Student ID=2)
* **Type:** Select/InnerJoins (StudentID)/Where (StudentID)
* **Tables Involved:** factSpecialProgram ,dimStudent
* **Result:** The result of this query would fetch enrollment date for a particular student in GIFTED special program.

1. Which all assignment type in a special program are assigned to students?

* **Query Description:** You have been asked to create a query that returns the assignment assigned to students in GIFTED special program
* **Type:** Select/InnerJoins (StudentID, AssignmentID)/Where (StudentID)/Group By(Assignment)
* **Tables Involved:** factSpecialProgram, dimStudent ,dimAssignment
* **Result:** The result of this query would fetch assignment assigned to each student in GIFTED special program

## Parent

### Absences

1. What is the total number of leave for the student?

* **Query Description:** You have been asked to create a query that returns the total number of leaves of given student for given grade
* **Type:** Store procedure input student names, grade
* **Tables Involved:** FactAbsence, dimStudent
* **Result**: procedure returns number of leaves taken by student in particular grade

1. Was student expelled from the school?

* **Query Description:** You have been asked to create a query that returns Yes/No depending on whether given student was expelled from the school
* **Type:** function returns Yes/No input student id
* **Tables Involved:** FactAbsence, dimAbsenceCode, dimStudent
* **Result**: function returns Yes/No whether student was expelled from school

### Discipline Behavior

* + - * 1. What all disciplinary action is face by the student?
* **Query Description:** You have been asked to create a query that returns disciplinary actions of student
* **Type:** Store procedure input student id
* **Tables Involved:** FactDiscipline, dimDisciplineActionCode, dimStudent
* **Result**: procedure returns the list of disciplinary action which student has undergone
  + - * 1. Who is the staff responsible for taking disciplinary action?
* **Query Description:** You have been asked to create a query that returns the staff responsible for taking action against each disciplinary action for a student
* **Type:** Store procedure input student id
* **Tables Involved:** FactDiscipline, dimDisciplineActionCode, dimStaff
* **Result**: procedure returns the list of staff responsible for taking disciplinary action for a student.

### Academic Performance

1. What is the rank of student?

* **Query Description:** You have been asked to create a query that returns the rank of student for particular grade
* **Type:** Select/Rank()/where
* **Tables Involved:** FactStudentCourseGrade, FactStudentCourse
* **Result**: query returns rank of student for particular grade

1. What is the percentage of particular student?

* **Query Description:** You have been asked to create a query that returns percentage of student of particular grade
* **Type:** Select/Calculated function(input studentid , grade)/where
* **Tables Involved:** FactStudentCourseGrade, FactStudentCourse
* **Result**: query returns percentage of student for particular grade

1. Which all subject does student required improvement?

* **Query Description:** You have been asked to create a query that returns list of subjects for particular student in which student needs improvement
* **Type:** Store procedure input student id , grade
* **Tables Involved:** FactStudentCourseGrade, FactStudentCourse, dimCourse
* **Result**: Procedure returns subjects in which student got ‘D’ grade and needs improvement.

1. What is the performance level of student on basis of subject?

* **Query Description:** You have been asked to create a query that returns the performance of student out of 3 for each subject
* **Type:** Store procedure input student id
* **Tables Involved:** FactStandardizedTestScore, FactStandardizedTestDomainScore, dimSubject
* **Result**: Procedure returns list subjects and performance level of student.

1. What is the scorecard of a student?

* **Query Description:** You have been asked to create a query that returns the scorecard of student for each grade
* **Type:** Store procedure input student id (Pivot table in store procedure)
* **Tables Involved: :** FactStudentCourseGrade, FactStudentCourse, dimSubject
* **Result**: Procedure returns a table consisting of marks of given student for each grade

### Special Programs

1. What are the special programs available in a facility?

* **Query Description:** You have been asked to create a query that returns the special programs available in a facility.
* **Type:** Select/InnerJoins (ProgramID)/Where
* **Tables Involved:** factSpecialProgram ,dimSpecialProgram, dimStudent, dimFacility
* **Result:** The result of this query would fetch all special programs available in a facility.

1. Who is the Staff associated with particular facility teaching in GIFTED special program the student?

* **Query Description:** You have been asked to create a query that returns the assignment assigned to GIFTED program
* **Type:** Select/InnerJoins (StudentID,StaffID,FacilityID)/Where (StudentID)
* **Tables Involved:** factSpecialProgram, dimStudent dimStaff ,dimFacility, dimSpecialProgram
* **Result:** The result of this query would fetch staffname along with facility name assigned to GIFTED special program