

This app is designed to track class attendance for a school. It has a part where the Teacher can take attendance, and also where the Student can login and view information.

Web application using C# .net and Postgres database

Tables:

1) Teacher

Id int
ClientId int
FirstName nvarchar(50)
LastName nvarchar(50)
Title nvarchar(50)
Email nvarchar(50)
DateCreated datetime
DateModified datetime

2) Student

Id int
ClientId int
FirstName nvarchar(50)
LastName nvarchar(50)
Title nvarchar(50)
Email nvarchar(50)
DateCreated datetime
DateModified datetime

3) Client aka School

Id int
Name nvarchar(50)
DateCreated datetime
DateModified datetime

4) Semester

Id int
ClientId int
Name nvarchar(50)
FromDate datetime
EndDate datetime
Default bit

DateCreated datetime
DateModified datetime
Weeks int

5) Subject

Id int
ClientId int
Name nvarchar(50)
DateCreated datetime
DateModified datetime
PeriodCount int

6) Period

Id int
ClientId int
Name nvarchar(50)

7) StudentNotes

Id int
ClientId int
StudentId int
Note nvarchar(150)
AuditDate datetime

8) Class aka SemesterTeacherSubject

Id int
ClientId int
SemesterId int
TeacherId int
SubjectId int

9) ClassList

Id int
ClientId int
ClassId int
StudentId int

10) SubjectPeriod

Id int
ClientId int
SubjectId int
PeriodId int
DoW int

11) ClassAttendance

ClassId int
ClientId int
StudentId int
Date datetime
PeriodId int
AttendanceType int (1:Present, 2:Absent, 3:LateUnexcused)
Note nvarchar(150)

12) StudentAbsence

Id int
ClientId int
StudentId int
Date datetime (event date)
AbsenseType int (1:Excused, 2:Unexcused, 3:SchoolExcused, 4:LateUnexcused)
AuditDate datetime

13) SemesterDay

Id int
ClientId int
SemesterId int
Date

14) Admin

Id int
ClientId int
FirstName
LastName
Email

15) ClientSettings

ClientID
SettingName
SettingValue

(note, when logging in, the user session will load the client settings as an array of session variables)

Application Details:

16) Security

- a) Users will login with Google
- b) Separate url for student, teacher, admin logins each will reference the respective table. Meaning, if user logs in as student, verify SSO login for email of student. The same with Teacher or Admin. At the same time, identify the ClientId to filter related stuff.

17) Administrator pages:

>List Management - ability to view the lists for that clientid, add/edit/delete records

- a) Teachers
- b) Students
- c) Subjects
- d) Semesters
- e) SemesterDays
- f) Classes
- g) ClassList
- h) Periods
- i) SubjectPeriods - when records are added, we will also update the Subject.PeriodCount

18) ManageAbsenses

- a) Add record of excused absences
- b) Add record of school mandated absences

19) ManageAttendance - view raw attendance entries, filtering by subject, student, teacher, period, date range

20) Option to view Student view for a particular student, impersonating them, and edit the student's portal and add notes

21) Option to view Teacher view for a particular Teacher, impersonating them

22) StudentSummary - Be able to view a report of a teacher, subject for the whole class by: day, week, month or up until current

23) Student Pages, he sees upon login:

STUDENT PORTAL

Real time access to chart

Refer to mockup

Subject 1	How many times a week they take the class	Allowed amount of absences for this subject	Excused absences List of dates absent with any teacher/admin notes (ex. Appointment with dr.'s note)	unexcused absences List of dates absent with any teacher/admin notes	#of school mandated absences Such as for extra curricular prep time. List of dates absent with any teacher/admin notes (periods missed for extra curricular prep...)	How many allowed missed periods are left = total allowed - (excused + unexcused) Absences Does not include school mandated absences	# Late List of dates late with any teacher/admin notes	How many points are being deducted from grade	
Example: MATH	6 (would be a total of 90 for the year 6x15 - we do not need to see this number)	9	Sep 23 Sep 24 Oct 1...	Nov 8 Nov 9 Jan 5...	We do not need to see this number			-6	
COMPLIANCE GRADE	# of points lost + message compliance grade for uniform - only manually deduct points by admin but visible on the student portal								

Determining Compliance Grade:

Achrayus(compliance) grade triggered actions: (start at 100%)

status of unexcused absence = triggers automatic -2 from compliance grade

Status of late = triggers automatic -1 from compliance grade

Uniform infraction = triggers automatic -2 from compliance grade

(Not more than 4 achrayus points can be lost per specific date)

Points deducted from subject:

a) **AllowedAbsenses** =

Subject.PeriodCount * Semester.Weeks * ClientSetting.AllowedPercentage

For Example: 6 * 15 * .10

Note, if it isn't an even number take the ceiling when rounding

Absences whether excused or unexcused add up as used 'allowed missed periods'.
(Mandated absences do not count in the tally)

- b) points are deducted from subject- after exceed allowed
First above allowed = -2
Each additional is another -1
- c) PointsCalculation =
((ClientSetting.PointsPerUnexcusedAbsense * TotalUnexcusedAbsenses) - AllowedAbsenses) * ClientSetting.PointsPerOverAllowed +
(TotalLateUnexcused - ClientSetting.FreeLates) * ClientSetting.PointsPerLateAbsense

1) Teacher Pages, they see upon login:

Date:

Should automatically populate with current date, but should be adjustable

What # Period

1-11

Name:

Drop down for teacher's to choose their name

Subject

Drop down with only that teacher's subjects - such as for math teacher geometry, calculus, lower track algebra 1

Once Teacher and Subject are chosen the class list should appear:
class attendance forms - as shown in mockups

Name of Student	Multiple Choice*	Notes from teacher *	include notes from admin about the kid for the day - let's say if a girl is on a trip, or is excused from period for extra curricular?
	Present		
	Absent*		
	Late unexcused*		

e n t			
N a m e o f S t u d e n t			

*Teacher's notes show up in student portal, admin can add a note or change teacher note

*Default should be that students are always checked as present unless teacher changes status

*Student should get email notification every time teacher marks her late or absent

- 2) On an additional page, the user would be able to view circles with the names of the students so that they could organize them according to the seating chart. That would be saved as a child table of Class. The admin will need access to edit the seating chart as well.
- 3) The teacher would be able to flag the student as present simply by clicking the student's circle. They would see the list of absent students remaining.
- 4) Add photo per student

(a mockup was not made for this page.)

Student portal- as shown in mockups

Admin portal- as shown in mockups

Should have a list of reports from each period that attendance was taken.

A report should consist of

- 1) Subject name
- 2) Teacher name
- 3) Period number

And then a list of the students marked absent or late

Should be automatically updated to this report as teacher takes attendance

- Admin should be able to click on a student's name and be brought to that student's portal.
- There should be a place, as shown in image, where admin can record notes for each absence

- Admin should be able to indicate school closures / start date-end date & Student absence in advance start date-end date (due to covid or long distance trip...)
- Admin should be able to add an absence to the list. Refer to mockup
- When Admin clicks on an absence or late, a drop down of the following options should open.
 - Absent Excused- should trigger automatic +2 to Achrayus(compliance) grade.
 - Absent unexcused- should trigger automatic -2 to Achrayus(compliance) grade.
 - Mandated Absence - should trigger automatic +2 to Achrayus(compliance) grade.
 - Late - should trigger automatic -1 to Achrayus(compliance) grade.
 - Excused late- should trigger automatic +1 to Achrayus(compliance) grade.