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AbsenceCheck: Student Attendance Tracker and Notifier

**High-level Design Document**

AbsenceCheck will include four subsystems: ac-config, ac-attendance, ac-notify, and ac-stats.

* ac-config
  + is used to set up data fields that will be used by the other subsystems
    - data will include:
      * class description (topics, textbook pages, etc.)
      * teacher name
      * teacher email
  + the data will then be stored in this class
    - teacher is an object of class teacher
    - class description is a string
  + other classes will get and set data in this class
    - this class has an object of class teacher
* ac-attendance
  + is used to take the class attendance
    - class role will be kept in a csv file used as input for this system
    - attendance will be kept in a data structure in this class
  + the data will be stored in this class
    - listOfStudents is a list of student objects
    - listOfAbsentStudents is also a list of student objects
  + other classes will be able get attendance from this class
    - this class has a list of objects of class student
* ac-notify
  + is used to send emails to absent students, or an administrator
    - data sent will be
      * the data in ac-config in the case of emailing students
      * the data in ac-stats in the case of emailing administrators
  + this system is not storing any additional data
  + this system will get sent data from ac-config and ac-attendance
    - the system will also communicate with ac-stats, it will be able to get administrator data and cumulative attendance in the case of notifying an administrator
* ac-stats
  + is used to calculate cumulative class attendance, and optionally notify administrators of the cumulative attendance
    - cumulative attendance will be kept in a data structure in this class
  + the data will be stored in this class
    - some sort of list or dictionary will be used
  + this system needs to get attendance from ac-attendance and will send ac-notify its data if the user chooses to email an administrator