

Attendance Checker Analysis Model

Submitted to:

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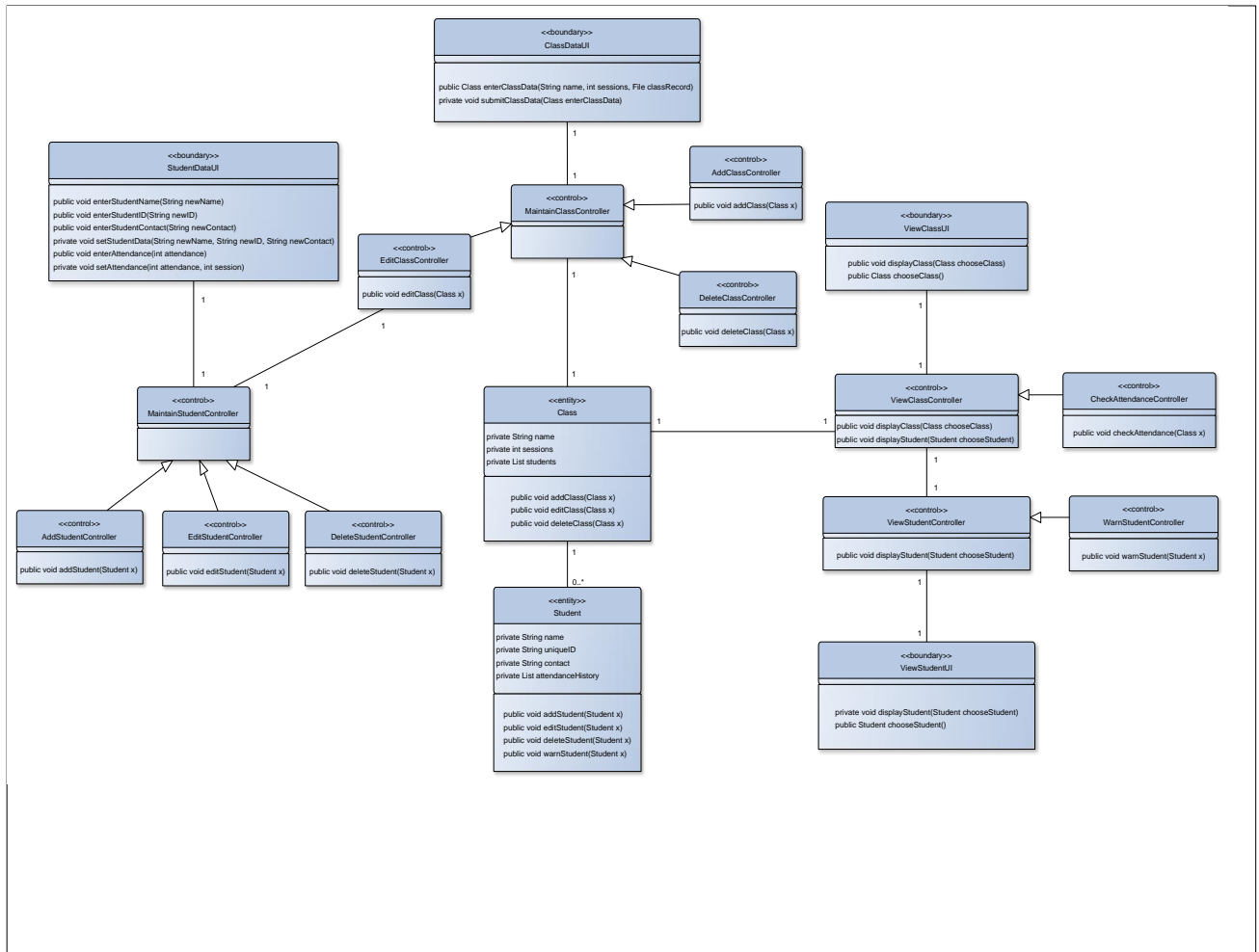
| <i>Revision Date</i> | <i>Person Responsible</i> | <i>Version Number</i> | <i>Modification</i> |
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| 10/20/2016 | Jeremy Micah Choa | 1.0 | Initial Document |
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Purpose:

This document describes the developers' analysis of the Attendance Checker system, its boundaries, controls, and entities.

Audience:

This document was written for the developers and for our instructor.



System Name: Attendance Checker

Description: The Attendance Checker allows the user (henceforth called Prof) to view, create, and modify classes; mark the class's students' attendance, and view the daily class attendance. Additionally, Attendance Checker provides the number of tardy attendances and absences from the attendance list; the user can send warnings to the students who are deemed too absent.

Class Diagram: (see above)

Boundary Classes:

| Class Name | Description |
|---------------|---|
| ClassDataUI | This interface allows the Prof to enter a Class's name, number of expected sessions; and upload a file containing a list of the class's students' unique IDs, names, and contact details. It sends these details to the MaintainClassController to be manipulated (create, edit, delete class). |
| StudentDataUI | <p>This interface allows the Prof to enter a Student's name, unique ID, and contact detail. It sends these details to the MaintainStudentController to be manipulated (add, edit, delete student).</p> <p>It also allows the Prof to enter their attendance for a session number. It sends the attendance status and session number to MaintainStudentController to be manipulated for updating the Student's attendance history.</p> |
| ViewClassUI | This interface allows the Prof to choose a Class to view, then to view the Class's details. It sends a signal to ViewClassController to retrieve the Class details of the Prof's selected Class. |
| ViewStudentUI | This interface allows the Prof to choose a Student to view, then to view the Student's details. It sends a signal to ViewStudentController to retrieve the Student details of the Prof's selected Student. |

Control Classes:

| Class Name | Description |
|---------------------------|--|
| MaintainClassController | This is the umbrella controller for functionalities that involve changing Class data. It exists to abstract the options of adding, editing, and deleting classes. |
| AddClassController | This controller is in charge of creating new Classes with the name, number of sessions, and list of students specified by the Prof. A new Class with these specifications are added to the Prof's total Classes. |
| EditClassController | <p>This controller is in charge of editing Classes by changing the name or the number of sessions with new ones specified by the Prof. The Class's name and number of sessions will change to reflect the editing.</p> <p>It is also in charge of maintaining the Students in a Class. See MaintainStudentController for more details.</p> |
| DeleteClassController | This controller is in charge of deleting a Class specified by a Prof. It removes that Class from the Prof's total Classes. |
| MaintainStudentController | This is the umbrella controller for functionalities that involve changing Class data. It exists to abstract the options of adding, editing, and deleting students. |
| AddStudentController | This controller is in charge of creating new Students in a selected Class with the name, unique ID, and contact detail specified by the Prof. A new Student with these specifications are added to the Prof's selected Class. |
| EditStudentController | This controller is in charge of editing Students in a selected Class by changing the name, unique ID, or contact detail with new ones specified by the Prof. The Student's name, unique ID, and contact detail will change to reflect the editing. |
| DeleteStudentController | This controller is in charge of deleting a Student from a Class, both specified by a Prof. It removes the selected Student from the selected Class. |
| ViewClassController | This controller prepares the list of Student names, the list of Student unique IDs, and the list of Student attendance histories in a selected Class. |
| ViewStudentController | This controller prepares the name, unique ID, and contact detail of a selected Student in a Class. |
| CheckAttendanceController | This controller is in charge of returning the attendance status of a selected Class's students for its most recent session number. It checks the attendance history of each student and takes the attendance status corresponding to the most recent session number. |
| WarnStudentController | This controller is responsible for sending the prewritten attendance warnings to a selected Student. It gets the contact detail of the selected Student and sends the warning to that contact detail. |

Entity Classes:

| Class Name | Description |
|-------------------|---|
| Class | The Class represents a group of students. A Class has a name, the number of sessions it is expected to span, and a list of the students enrolled in that class. A Class can be added, edited, or deleted. |
| Student | The Student represents a student in a certain class. A Student has a name, a unique ID assigned by their school, a contact detail, and a list of their attendance history in their class. A Student can be added, edited, or deleted. |