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“4+1 Architecture” models: Logical View

Class diagram

Brief Description

The logical view of the system’s architecture is represented by a full class diagram. The Student and Administrator classes are subclasses of the User superclass, where they inherit the methods of the latter, and overwrite the login() and logout() functions. The User class is an aggregate of SavedUsers, since the SavedUsers is comprised of many Users.

A student has a number of saved schedules, represented by the SavedSchedules class, a single schedule, and a number of preferences, which are the students preferred times and days of the week for classes.

The Section class is also related to the TimeDivision class by being offered at those times. Sections are also taken place in classrooms, therefore explaining the relationship between the two classes. It’s also related to the Course class through aggregation.

The Course class is an aggregation of the Section class, because a course is composed of many sections. A course has a number of prerequisites represented by the Prerequisites class, and a class CoursesPassed inherits from the Course class, which represents the courses from the Course class that have or have not been credited.

The Sequence class is an aggregation of the Course class, because a sequence is composed of courses. A program also contains its own default sequence of courses, which is shown with the relationship between the Program and Sequence classes. In addition, a program belongs to a department.