# Refactoring

## Strategy Pattern for Controllers

In the TaskList and ListOfCourses controllers there was code to convert the ArrayList of Courses or Tasks returned by the Database module to a String array to be displayed on the page. This code was transferred into a static class called ArrayConverter using one or two methods: convertCourses or convertTasks. These methods then convert the ArrayList they are passed into an ArrayList of ListItems and return a call to convertListItems. ConvertListItems converts the ArrayList into the needed String array by calling getName() for each of the items in the ArrayList.

The reason for this was to reduce the amount of work done in the controllers without changing the signature of around a dozen methods in the SQLDatabase and StubDatabase classes. The purpose of the controllers is to operate the page they refer to, and by creating the ArrayConverter the controllers do not violate the Single Responsibility Principle.