15.01 Assignment Instructions
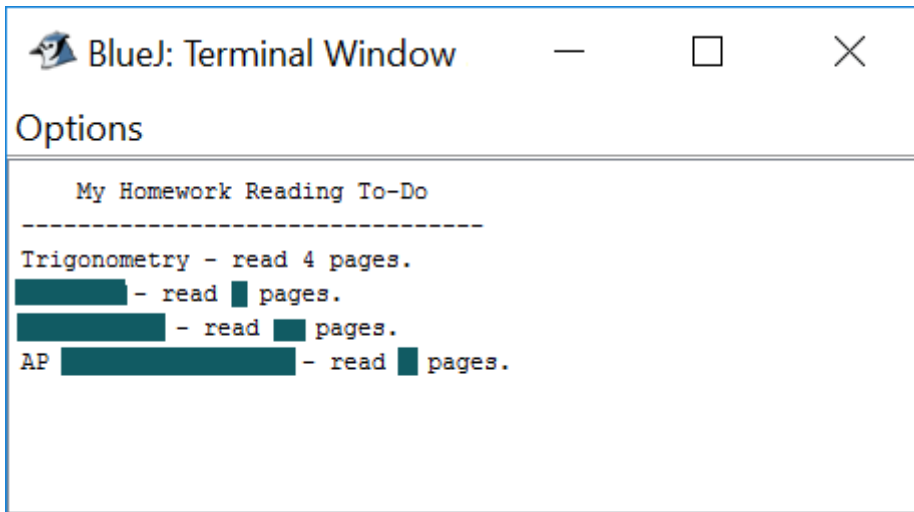
Instructions: For this assignment, create an abstract class for a homework reading assignment. Then create classes for courses so you can keep track of the homework assignment.

1. Create a new project called 15.01 Assignment in the Mod15 Assignment folder.
2. Create new classes to the new project folder as needed while working through this assignment.
3. An abstract class called `Homework` needs to be created. It will need:
    a. instance variables for the number of pages to read and the type of homework
    b. instance methods to get and set the number of pages to read
    c. an abstract method whose purpose in extended classes is to create an assignment by setting the number of pages to read and the homework type. This method should take one integer parameter for the pages to read. It will not return any values.
    d. the constructor should take no arguments but set the number of pages to a default value of 0 and the homework type with default value of "none"
4. Four subject classes representing various courses you have homework to do need to be created. They will extend the abstract class `Homework` and contain the following:
    a. a constructor that will have no arguments and will call `Homework`'s constructor
    b. implement the abstract method for creating an assignment by setting the number of pages to read using parameter, and then setting the type of the name of the subject, such as Trigonometry
    c. include a `toString` method that lists the homework type and the number of pages to read for homework
5. Create a client class to test the project.
    a. Create an instance of each course subject.
    b. Create an assignment for each course.
    c. Use an `ArrayList` to organize all the courses.

d. Display a list of assignments to be completed.

Expected Output: This is a sample of the expected output. The details will vary based on design choices you make while completing the project.

```
BlueJ: Terminal Window        —    □    ✕

Options

      My Homework Reading To-Do
----------------------------------
Trigonometry - read 4 pages.
         ▇ - read ▇ pages.
             ▇ - read ▇ pages.
AP ▇▇▇▇▇▇▇▇      - read ▇ pages.
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