

The main objective of this assignment is to learn how to use the object-oriented mechanism of *composition* to define classes in Java using BlueJ. To this end we will be reusing the *clock-display project* that has two classes: NumberDisplay, and ClockDisplay from Chapter 3. Source code for the *clock-display project* is available in cuLearn in the general block (Chapter 3).

1. Describe the changes that would be required to the ClockDisplay class in order to be able to display hours, minutes, and **seconds**. How many NumberDisplay objects would a ClockDisplay object need to use?
2. Write the code for the timeTick method in ClockDisplay that displays hours, minutes, and seconds, or even implement the whole class if you wish.
3. Rewrite the new version of ClockDisplay class by incorporating the changes you suggested in 1. and 2.
4. Instantiate an object of ClockDisplay and exercises the constructors and methods (especially the timeTick method) of the class ClockDisplay using BlueJ.

Important Notes and Submission Guidelines:

For this programming assignment No2, you have to submit a ZIP file that contains your BlueJ *project* source code. In addition, you also have to book and pass a *demo* using BlueJ with your teaching assistant (TA) in the lab room. Your TA will lead you and conduct the tests of your programs and evaluate your work. You are also allowed to do your *demo* using your own laptop.