# Worksheet 1.3

In the first part of the tutorial, the tutor will demonstrate how to build a C++ implementation from a UML Class diagram. For this worksheet, you are expected to work in pairs to create your own C++ implementation of the UML class diagram given below using Visual Studio.

## Exercise 1: TEA Anyone?

**Difficult Level: ★★ Duration: 1hr**

Your task is to create a C++ implementation of the system shown below. This system is showing a UML Class diagram for a Tea-Making Algorithm. For this exercise, you will need to create header files (.h) and code files (.cpp) for every class. You should also include associations, constructors, getters, and setters all of which are shown or implied by the diagram. However, for this exercise you are not expected to add code to the functions - only to provide function stubs (i.e., function header with no code between the {} brackets).

Diagram

Description automatically generated

## EXERCISE 2: Its Alive!!

**Difficult Level: ★★★ Duration: 1hr**

This exercise focuses on building a working implementation. In other words, adding code to each function to make a working system. Everyone knows how to make a cup of tea and so being able to identify what each function does and how the classes need to work together to make this happen should be self-evident. You should provide some additional debugging output to your implementation to test it. Once you have a working system, show your system to your tutor.

Tutorial uml class daigram

