Lab 5: Component and Interprocess Communication Design for WMS

The architecture team has decided to use the CORBA standard for the design of the interprocess communication mechanisms and the software components involved in WMS.

Figure 1 depicts the new class diagram describing the static structure of the classes participating to the *Report weather data* scenario of the *Collect data* use case.
We assume that each weather station is connected to 3 instances of each kind of instruments (e.g. 3 barometers, 3 ground thermometers etc.). We assume also for the sake of simplicity that there are only two weather stations.

1. Refine the class diagram in order to provide a new diagram consisting only of corresponding CORBA interfaces and types definitions. More specifically your diagram must include:
    - CORBA Interfaces
    - Data types definitions for the parameters and arguments involved in the operations using Rose-CORBA stereotyped classes (see also Lab 3).
    - Definition and documentation when needed (using Rose) of the relationships among the different elements involved.
2. Based on the modularization strategy adopted in previous Labs, generate using Rose the IDL code corresponding to the refined class diagram obtained previously. The generated IDL code should consist of at least three modules corresponding to the different subsystems (for example *Sensor, Station*, and *DataCollection).*

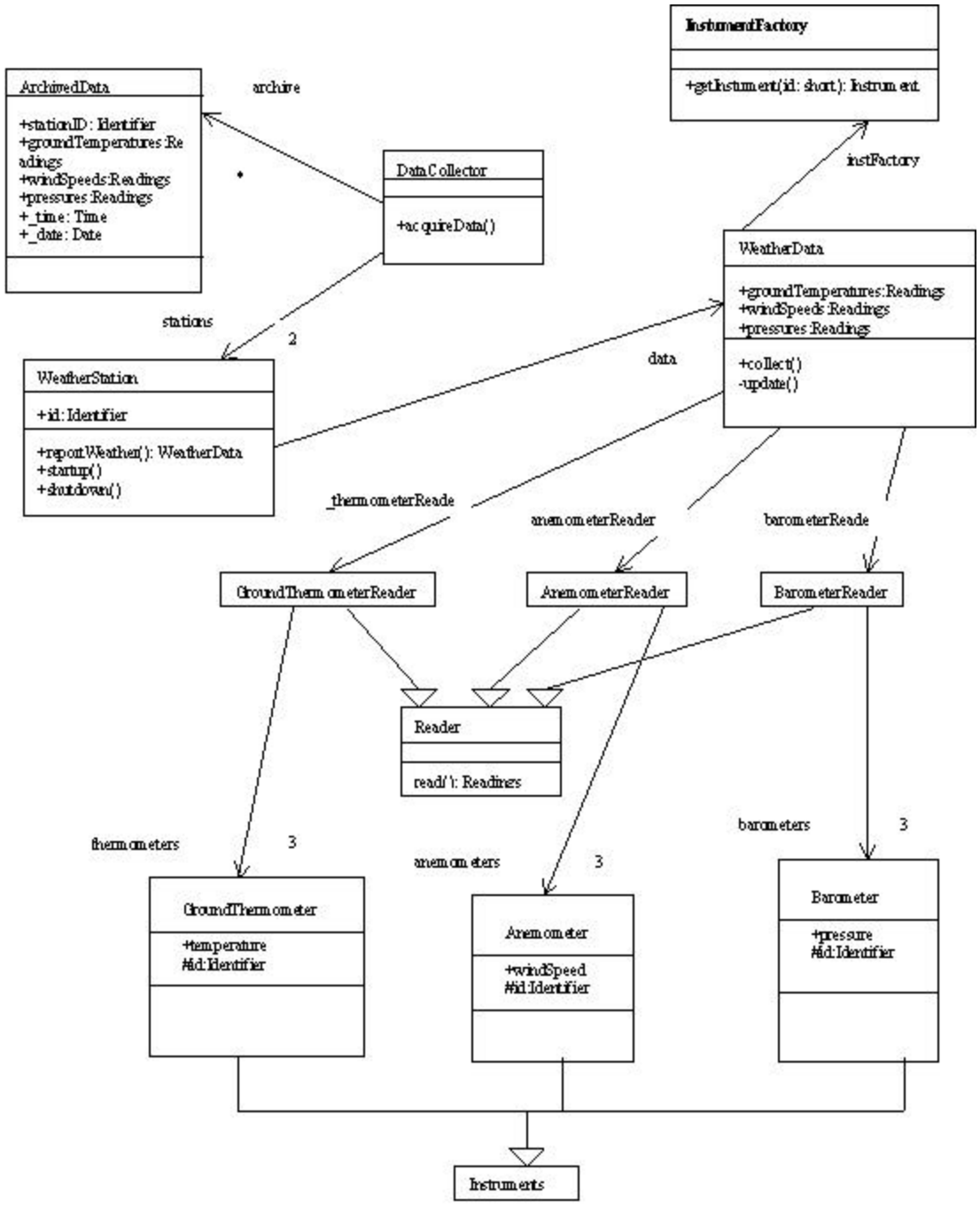

Figure 1: Class Diagram