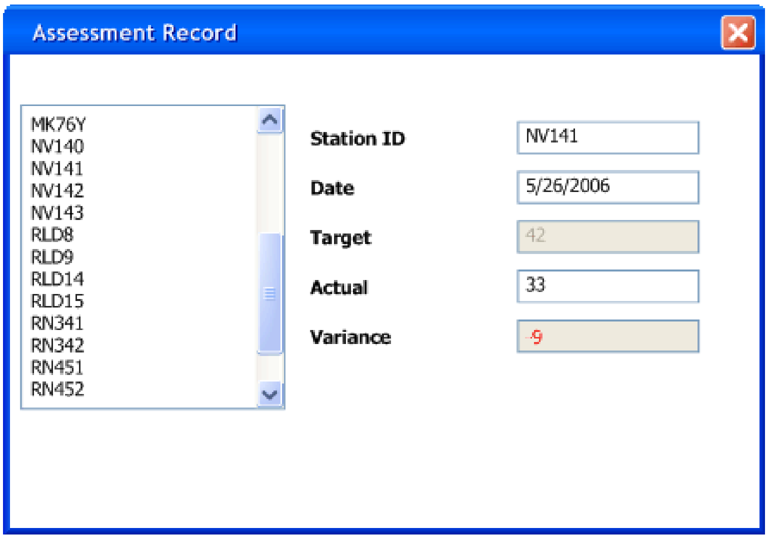
Project Task

The task is taken from Martin Fowler, “GUI Architectures”, http://martinfowler.com/eaaDev/uiArchs.html, 2006 (Status: 06.11.2019). Please be aware, that the original description is a little modified and there are more requirements. Maybe, you think that the domain “Monitoring the amount of ice-cream particulate in the atmosphere” is a little strange, but quoting Martin Fowler: “I like to use examples that are no less realistic as you usually find in books like this.”

There is a government program that monitors the amount of ice-cream particulate in the atmosphere. If the concentration is too low, this indicates that population isn't eating enough ice-cream - which poses a serious risk to the economy and public order.

To monitor the ice-cream health, the government has set up monitoring stations all over the states. Randomly, a new station can be added. Using complex atmospheric modeling the department sets a target for each monitoring station. Every so often staffers go out on an assessment where they go to various stations and note the actual ice-cream particulate concentrations.

This UI allows the staffers to select a station, and enter the date and actual value. The system then calculates and displays the variance from the target. The system highlights the variance in red when it is 10% or more below the target, or in green when 5% or more above the target. If the system adds a new station randomly and there has to be an alert at the GUI.



Station ID	NV141
Date	5/26/2006
Target	42
Actual	33
Variance	-9

Figure 1: GUI (Source: Martin Fowler, “GUI Architectures”, http://martinfowler.com/eaaDev/uiArchs.html, 2006)

Figure 1 shows the original GUI, which Martin Fowler uses as his example. This should give you an impression of the GUI. Of course, you are free to design you GUI differently.

Note, only the GUI and the system are of interest. The persistence of data like the stations, the actual ice-cream particulate concentration, target value of ice-cream particulate concentration and the variance are only of a practical matter. Therefore, the data can be permanently stored in a file. A data base system isn’t necessary as well as a persistence access layer. However, the GUI and the implementation of at least two different views of the data are of interest. And last not least the testability of the GUI is a further requirement.