# Task:

Turn the following problem description into a web-based application. You should use HTML, CSS, and JavaScript to solve the problem. You may use any available libraries or tools to enhance your solution. You should design a web service interface and use it in your application.

Keep in mind that you should endeavour to follow the principles of clean enterprise application architecture / design, and please incorporate TDD principles and practices where appropriate.

# Problem description:

Your company has decided to create a web-based thermometer application. The thermometer needs to be able to provide temperature in both Fahrenheit and Celsius. It must be possible for users to define arbitrary thresholds such as ***freezing*** and ***boiling*** at which the user interface will inform the user that a specific threshold has been reached. The user may not want to be repeatedly informed that a given threshold has been reached if the temperature is fluctuating around the threshold point. For example, consider the following temperature readings from the external source:

1.5 C

1.0 C

0.5 C

***0.0 C***

-0.5 C

***0.0 C***

-0.5 C

***0.0 C***

0.5 C

***0.0 C***

The user may only want to be informed that the temperature has reached 0° C once, because they consider fluctuations of +/- 0.5° C insignificant.

It may also be important for some users to be informed that a threshold has been reached only if the threshold was reached from a certain direction. For example, some users may only care about a freezing point threshold if the previous temperature was above freezing (i.e. they only care about the threshold if it occurred while the temperature was dropping).