Code Improvement Exercise

# Context

This code reads a stream of 2D co-ordinates from an eye tracker, and fires events in a standardised format for consumption by an application.  An eye tracker is a piece of hardware that can track a user’s eyes and provide a stream of 2d co‑ordinates representing the position on the screen where the user is looking.

The code is part of a library designed to support eye trackers from various manufacturers, and map their data into a common format, so that the application developer doesn’t need to worry about which eye tracker is being used.

The code was written to integrate another camera into our applications from the manufacture “SeeTech”. Another developer has finished the implementation, but it has some problems. You are tasked with finding and fixing the problems.

# Code information

The 3rd party camera company has provided their driver, which is represented by the ISeeTechDriver interface. This file cannot be changed but does contain some documentation about the functions in their driver.

The ICamera and IFrame interfaces already exist in our eye gaze library. There are already existing cameras that implement these interfaces, and there are already applications that use these interfaces. While changing these is possible, it’s a lot of work to do so.

The main new files that have been added are SeeTechEyeGazeCamera.cs and SeeTechFrame.cs. There is also a Program.cs which the developer used for testing the new camera implementation outside of the application that use the eye gaze library.