SOFTWARE ENGINEERING 2017 – TASK 3

Project name: Multiple-image viewer

Background

Viewing multiple digital images at once is an interesting feature that has been provided by some software solutions, e.g., FastStone Image Viewer. However, functionality of these viewers is limited and, more importantly, not extendable. Therefore, we need an application to be developed which is focused on displaying the images in parallel views.

Task description

The aim of this project is to develop a tool (in C#) for showing multiple images in tiled windows (with flexible arrangement), measuring the image properties and with some export options. The following issues should be addressed in particular:

1. A variety of file formats must be supported.
2. The number of windows (and their arrangement) to be flexible.
3. We may attach a file or a file list to each window.
4. Zooming and translations should be synchronized (with an option to desynchronize if necessary and resynchronize).
5. Possibility to measure the pixel values (synchronized position across particular views).
6. Possibility to annotate a region of interest and measure the statistics inside (average, min, max, deviation, etc.). This is also to be synchronized across the views.
7. Option to serialize the outcome (zoomed image regions, properties) to files.
8. Option to save the position and keep a list of recent positions to make it possible to browse quickly between them.