

Accomplishments This Iteration

- Added fully functional scrollbars
- Developed an efficient Zoom feature that can handle any angle
- Added information in the status bar at the bottom of the window
- Created an arbitrary rotate function
- Added resize capability (unlike zoom, resize changes the original image's properties)
- Refactored code periodically according to keep it clean
- Fixed several bugs and started some basic error handling

Tasks for Iteration 3

- Create an undo/redo feature
- Basic filters (e.g. grayscale, saturation)
- Enhance the GUI features (mainly the toolbar and overall user-friendliness)
- Create test cases (unit and integration)

Problems This Iteration

Overall, this iteration went smooth. We never got stuck for an extended period of time on a specific feature. The problems we ran into dealt with saving changes made to the original pictures properties, especially the ones that are not permanent (e.g. zoom). We decided to create an original image object to store the properties of the image when it was loaded. It also keeps track of the changes made. Some examples would be the degrees rotated or the zoom level. We found that this object will make future coding much easier and more efficient. The other problem we had was implementing rotate. At first, the image would rotate but the original image would still be in the background. We found a way to clear the picture box to fix this issue. Also, when the image was rotated more than once it would move from the top left of the window to the bottom right. We fixed this by using our original image object. Since we knew how much the image has been rotated already we would add (or subtract) the user's input and then do a rotate from 0 degrees.

Documentation Progress

We started creating our end-user manual and programmer's guide. The end-user manual will be attached to the e-mail with this document. Our programmer's guide is located on Andy's CS website. We decided to use Doxygen to generate useful, organized documentation. To do this you enter specially formatted comments in the code that will later be converted to HTML. The link is:

<http://www.cs.kent.edu/~avanek/Capstone/Doxygen/html/>

Member Contribution

We still believe that this project is not quite big enough to work on individually because of the lack of independent parts. If two people were working on this project at the same time there could either be code corruption or repeated effort. We are currently using the "pair programming" paradigm. Andy has been the main coder while Greg and Dan research and develop possible algorithms for our current focus. We have also found that having someone watch over the person typing leads to better, more efficient code, and less time spent debugging simple problems. During the next iteration, we should

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have an easier time distributing tasks because of testing. We also take turns doing documentation and progress reports.