# Bonuses List – Group # 24

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| **Category** | | **Bonus Name/Description (Filled by you)** | | | **Evaluation (Filled by TA)** |
| **Overall GUI** | | **Top 2 BEST UI ☺** | | |  |

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| **General** | * Open (.bmp, .jpg …etc.) Formats. * New image (background, size). * Opening P5/P6 PPM. * Multi-open files. * Saving the image in .PPM format. * Save all files. * Undo/Redo with multilevel. * MDI * Unsafe code. (whole package) * File info.(size & path) * About. * History: Listing all opened images with the ability to select any of them to apply any operation on it. * Restore original image. * Splash window. * Preview. * Auto update preview. | **OK**  **OK**  **OK**  **OK**  **OK**  **OK**  **OK**  **OK**  **OK**  **OK**  **OK**  **OK**  **OK**  **OK**  **OK**  **OK**  **OK**  **OK** |
| **Geometry Operations** | * Image shearing. * Image flipping. * Image translation. * Zooming. * Image Rotation. | **OK**  **OK**  **OK**  **OK** |
| **Pixel Operations** | * Auto-update histogram.(zed graph) * Brightness/gamma/contrast slide bar. * Binarization. * Logic Operations (and, or). | **OK**  **OK**  **OK**  **OK** |
| **Image Filtering** | * Custom filter with different size mask. * Fast 1D Mean filter. * Fast 1D Gaussian filter. * Fast 1D Sobel filter. | **OK**  **OK**  **OK**  **OK** |
| **Illumination Pre-processing** | * Local histogram equalization in C#. | **OK** |
| **Image Restoration** | * Adding Rayleigh, Gamma & Exponential noise. * Removing random noise using contra-harmonic mean filter. * Removing random noise using alpha-trimmed filter. * Fast Median Filter * Adaptive mean filter | **OK**  **OK**  **OK** |
| **Image Morphology** | * Automatic creation of circular SE (by specifying its radius) * Automatic creation of triangular SE (by specifying its base and height) * Opening with any specified rectangular SE * Closing with any specified rectangular SE * Boundary extraction * Automatic Selection of Origin Point Using Keyboard Click | **OK**  **OK**  **OK**  **OK**  **OK**  **OK** |
| **Image Segmentation** | * Adaptive Thresholding algorithm. |  |

**We would like to thank our GREAT teacher Dr.Ahmed Salah,**

**Really جزاك الله خيراً ☺**

**Done…**

**With All Our BEST Wishes for who comes after us إن شاء الله☺**

**Hadeel && Amal**