**Applied Maths and Graphics Functional Checklist for your Graphics Application**

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Please place an “x” in the **Exists**? column if the feature is included in your submission. If accessing the feature is not completely obvious, please add comments in the **Access Tips** column. Please do not edit the Mark category, Features or Conf columns

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mark Category | Feature category: Images | Exists? | Access Tips | Conf |
| 3rd- Mid 2.2 | Load and save image from/to file using basic Processing | Yes | Click either the load file or save file options at the top left corner of the GUI to access the options |  |
| 3rd- Mid 2.2 | Convert a colour image to a black-and-white and greyscale versions of the image | Yes | Open the Filters drop down menu and click on the filter of choice |  |
| Mid 2.2-High 2.1 | Change contrast/brightness or any other aspect of the image using Point Functions | Yes | Use the sliders present on the left-hand side of the GUI by simply holding down the slider and dragging it either back or forth to the desired value, letting go of it will update the image |  |
| Mid 2.2-High 2.1 | Implement convolution filter to blur, sharpen and find edges | Yes | Open the Filters drop down menu and click on the filter of choice |  |
| 1st | Change Hue, Saturation using own RGB-HSV conversion | Yes | Repeatedly clicking the HUE button will cycle through a series of Hue/Saturation image combinations |  |
|  | Feature category: Drawing Shapes |  |  |  |
| 3rd- Mid 2.2 | Drawing “dead” shapes (which cannot be further manipulated) via a single mouse click to place the shape. |  |  |  |
| 3rd- Mid 2.2 | Drawing “dead” shapes (which cannot be further manipulated) via interactively placing and dragging shapes to define their size |  |  |  |
| Mid 2.2-Low 2.1 | Drawing “live” shapes to the canvas (stored for further manipulation) |  |  |  |
| Mid 2.2-High 2.1 | Implementing a “Drawing List” to show many shapes simultaneously |  |  |  |
| Mid 2.2-High 2.1 | “Live shapes” - Selecting |  |  |  |
| Mid 2.2-High 2.1 | “Live shapes” - Deleting |  |  |  |
| Mid 2.2-High 2.1 | “Live shapes” - Set Fill colour |  |  |  |
| Mid 2.2-High 2.1 | “Live shapes” - Set Line colour |  |  |  |
| Mid 2.2-High 2.1 | “Live shapes” - Set Line weight |  |  |  |
| 1st | Moving a previously drawn shape with the mouse |  |  |  |
| 1st | Scale a drawn shape using a slider |  |  |  |
| 1st | Draw an Arc with the mouse |  |  |  |
| 1st | Draw open polyline with mouse |  |  |  |
| 1st | Draw and close a polyline with mouse, which then becomes a polygon that can be filled |  |  |  |
| 1st | Drawing Curves of any type |  |  |  |
|  | Feature category: User Interface |  |  |  |
| 3rd- Mid 2.2 | Basic use of Graphical User Interface buttons to do various actions (process image, load file), adapted beyond the given examples. | Yes |  |  |
| Mid 2.2-High 2.1 | Good use of User Interface Elements showing independent design. | Yes |  |  |
| Mid 2.2-High 2.1 | Loading and saving image via user interface and file dialogues. | Yes | Click either the load file or save file options at the top left corner of the GUI to access the options and have the dialogues pop up |  |
| 1st | Use of sliders to alter image “live” | Yes | There are sliders present to alter the brightness and contrast values of the image |  |
| 1st | Use of own colour pickers to set line and fill colour of shapes. |  |  |  |
|  | Stretch Goals  These are examples… add your own if you think they are sufficiently advanced features |  |  |  |
| 1st+ | Saving and re-loading of drawing data as separate file. |  |  |  |
| 1st+ | Further geometric manipulation of shape once drawn (rotation, shear, manipulation of curves) . |  |  |  |
| 1st+ | The use of “handles” on shapes |  |  |  |
| Others? |  |  |  |  |
| Others? |  |  |  |  |

**Overall mark:**

**Feedback Comments:**