

Applied Maths and Graphics Functional Checklist for your Graphics Application (year 2021-2022)

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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 Conf column

Rough Mark Category	Feature category: Images	Relevant Unit on NOW	Exists?	Access Tips	Conf
3rd	Load and show image from file using basic Processing	1,3	X	Use the drop-down menu with load and save.	
3rd- Mid 2.2	Basic RGB manipulation of image – e.g. convert a colour image to a black-and-white or greyscale versions of the image	1,2,3	X	Use image filter dropdown menu	
Mid 2.2- High 2.1	Implement separate input and output image, so images can be manipulated and returned to their original state	3	X	Image can be reset to original by clicking reset	
Mid 2.2-High 2.1	Implement own Point Functions such as brighten/contrast/invert to manipulate image. More marks for using LUTs.	4	X	Use Sliders on the right hand side	
Low 2.1-Low 1st	Implement own convolution filters to blur, sharpen and find edges	6	X	Use Sliders on right hand side	
Low 1 st - Mid 1st	Implement image as a “live shape” object (Can have multiple images, each can be placed, selected for process, moved and deleted)	9	X?	To add more images, load an image and then click image at the top. Finally drag on canvas like you would a shape. To change to a different image load again	
	Feature category: Drawing Shapes				
3rd- Mid 2.2	Drawing a single shape or “dead” shapes (which cannot be further manipulated) via a single mouse click to place the shape.	1, 7	X		
Mid2.2- High2.1	Dragging shapes to their correct size upon creation	8	X	Click shape names at the top and drag to create	
Mid 2.2-High 2.1	Implementing a “Drawing List” to show many shapes simultaneously. I.e. Achieve “live shapes”. More marks for different shape types.	8	X	Live images can be deleted but not moved	
Mid 2.2-High 2.1	“Live shapes” – Selecting and Deleting	8	X	Click select and the hit backspace once selected	
Mid 2.1-Low 1st	“Live shapes” - Set Fill colour, line colour and/or line-weight. More marks for ability to set each shape to a different colour/line weight.	Self-directed	X	Use the first set of sliders to change the line color; This changes it for all shapes. The fill function works independently for	

				each shape and uses the second set of sliders and the text boxes.	
1 st	“Live shapes” - Moving a previously drawn shape with the mouse	Self-directed			
1 st	Draw open polyline with mouse	Self-directed			
Low 1 st – Mid 1 st	Draw and close a polyline with mouse which then becomes a polygon that can be filled	Self-directed			
1 st – Mid 1 st	Drawing Bezier or Catmull-Rom Curves of any type with some degree of control	Self-directed			
	Feature category: User Interface				
3rd- Mid 2.2	Basic use of Graphical User Interface buttons to do various actions (process image), mainly adapted from the given examples.	5	X		
Mid 2.2-High 2.1	Loading and saving image via user interface and file dialogues.	5	X	<u>Menu>Save and then type the name followed by what type.</u> <u>ExL: “savedImage.png”</u>	
Mid 2.2-1st	Sophisticated use of User Interface Elements showing independent design beyond those of the given examples. Ease of use taken into consideration.	5,9 + Self-directed	X		
1 st	Use of own colour picker to set line and fill colour of shapes.	9 + Self-directed			
	Stretch Goals These are only suggestions... add your own if you think they are sufficiently advanced features				
1 st +	Extra Image processing operations outside of taught content – e.g. Change Hue, Saturation of image using own RGB-HSV conversion.	Self-directed	X	<u>Use Sliders on the Right hand side</u>	
1 st +	Drawing - The use of “handles” on shapes to scale	Self-directed			
1 st +	Saving the state of the drawing/images for later reload.	Self-directed			
Others? You suggest them.		Self-directed			

For tutor use only

Overall mark:

Feedback Comments: