**M1 – Limitations of Hardware and Software**

Graphics editing is done by software, be it a simple editor such as Paint, or an advanced 3D modelling program such as Blender.  
This software is limited by the hardware running it. One of the reason many early graphics tools on mobile devices were so limited was because they weren’t powerful enough. Now that all devices are steadily becoming more and more powerful, the capabilities of the software are increasing.

**Software**  
Software ranges from simple – such as Paint – to professional – such as Photoshop. Different graphics editing applications can do different things, and some are better at particular things than others. For example, Paint uses raster-based graphics only, and its most advanced feature is probably the option to fill an area with a colour. On the other hand, advanced or professional-level software such as Photoshop has many much more advanced features, such as layers, intelligent edge selection and multi-part effects.

**Hardware**Any edit applied to an image is computed by either the CPU or GPU, depending on what the effect is. For simple pixel changes, such as in paint, the CPU probably handles all the processing. However, for more complex tasks such as applying a filter, the GPU may be better suited to the task.  
Some tools, such as an edge-detection tool, may use both the CPU and GPU – the CPU for calculating what to change and the GPU for calculating how to change it.  
How powerful the hardware is will determine how quickly edits can be made. A powerful CPU/GPU can make the calculations faster and therefore any edits made will be applied faster.  
Other hardware contributes to the limitations of the software too. The medium storing the image and temporary files will affect loading times, and the monitor or printer may not reproduce colours accurately.

**Image capturing**Another important piece of hardware is whatever is being used to capture the image, such as a camera or scanner. The higher the DPI of the hardware, the higher quality the resulting image will be.