** LEYTON SIXTH FORM COLLEGE – CENTRE NO: 1340**

**COURSE: BTEC EXTENDED DIPLOMA IN IT - ACADEMIC YEAR 2013 - 2014**

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| **Unit No: 30 Unit Name: Digital Graphics**  **Internal Verifier: Mrs Jacqueline Niles-Brathwaite Date Verified: 14/04/2014** | | | | | | | |
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| **Assignment No: # 1 Assignment Title: Graphics Hardware and Software**  **Assignment Given Out: 24/04/2014 Assignment Submission Date: 16th May 2014**  **Learning Outcome: LO1 , LO2, LO3, LO4** | | | | | | | |
| **Task** | **Unit** | **Grading Criteria**  **Reference** | **Grading Criteria** | **Review Date** | **Grade Awarded** | **Date Achieved** | **Page No#** |
|  |  | **P1:** | describe the hardware and software used to create and edit graphic images | 5th May 2014 |  |  |  |
|  |  | **P2:** | explain how different types of graphic images relate to file formats | 5th May 2014 |  |  |  |
|  |  | **P3:** | demonstrate the use of editing tools to edit and manipulate images | 9th May 2014 |  |  |  |
|  |  | **M1:** | compare the limitations of different hardware and software packages used in graphics work | 9th May 2014 |  |  |  |
|  |  | **M2:** | Justify the software, tools, file format, image resolution and colour depth used for creating graphic images. | 14th May 2014 |  |  |  |
|  |  | **D1:** | evaluate the impact of evolving output mediums on the design and creation of graphic images | 14th May 2014 |  |  |  |
| **Assignment Rules:**  Any work submitted after the deadline may not be marked. | | | | | | | |
| **Student declaration**  I declare that all of the work submitted for this assignment is my own work or, in the case of group work, the work of myself and the other members of the group in which l have worked has not been copied from any source. I understand that if any part of the work submitted for this assignment is found to be plagiarised, none of the work submitted will be allowed to count towards the assessment of the assignment.  **Student Signature: Date:**  **Assessor Signature: Date**: | | | | | | | |

**Scenario**

You are employed as a Senior Graphics Designer at a local newspaper publishing company. Your job involves managing the existing team of graphics designers and setting up training sessions for staff that have little knowledge of computer graphics.

Your training sessions will cover: hardware and software used to create and edit graphic images, the different types of graphics and file formats, image editing tools and the potential legal implications of using and editing graphical images.

**Assessment Tasks**

Task 1

**P1: describe the hardware and software used to create and edit graphic images**

You need to describe the role of the components of a computer system in the production and manipulation of graphics. You could produce an information leaflet covering items from each of the hardware and software groupings listed below:

***Hardware*:** graphics card features; internal memory e.g. cache, RAM; processors; other hardware e.g. digital camera drivers and card; file storage e.g. CD ROM, hard drive, flash cards, USB storage devices; input devices e.g. graphics tablet, mouse, digital camera, scanner

***Software*:** vector based e.g. CorelDRAW; bitmap e.g. Paintshop Pro, Paint; photo manipulation e.g. Photoshop; others e.g. image viewers, photo galleries, file conversion

Task 2

**P2: explain how different types of graphic images relate to file formats**

For P2, explain the features and limitations of different file formats, drawing conclusions regarding which lend themselves to particular graphical products. This could be evidenced as a presentation or in report format.

***File handling*:** converting files; file sizes; file formats e.g. jpg, bmp; file management e.g. naming files, folder structures, moving files, deleting files; compression techniques

***Graphic images*:** vector graphics; bitmaps; comparison e.g. file size, scaling; file format features, typical uses

Task 3

**P3: demonstrate the use of editing tools to edit and manipulate images**

One of the training sessions will require you to demonstrate editing tools to edit and manipulate images. You will either capture an image using a digital camera, or use a pre-existing image to edit. The image will be of a local business that has asked you to create a mini advertisement banner which will act as a hotspot from the newspaper’s online website. The requirements are for it to be eye catching and for it to draw attention. It must contain the name of the business and text that will make the users click on the hotspot directing them to a particular page of the business’s website.

For P3, capture an image using a digital camera, or use a pre-existing image to edit. You must manipulate the image to achieve a pre-defined effect which should be related to a defined user need. You will use a range of tools and techniques (see below). Produce an annotated screen-print explaining how the graphic meets the user requirements.

***Graphic creation*:** image e.g. scanning, importing, digital camera; image creation e.g. free hand draw, assemble shapes, pre-existing material

***Editing graphics*:** change an existing image

***Tools and techniques*:** standard software tools e.g. free hand draw, rotate, flip, crop, group/ungroup, resize; special effects e.g. soften, sharpen, watermark, invert; colour e.g. colour balance, colour depth e.g. 8-bit (256 colours), 16-bit (64,000 colours); layering; advanced techniques e.g. 3D images, masking

**M2: justify the software, tools, file format, image resolution and colour depth used for creating graphic images.**

Use Photoshop to change the colours of your image. You should use various available tools as outlined in the tutorial material.

Investigate the various file saving options available in Photoshop and decide the most suitable image format for your finished image.

You must now write up a document which justifies the software chosen (Photoshop and/or MS Paint), the file format chosen, the image resolution and the colour depth (256 colours/64000 colours/1.6 million colours/Greyscale).

Task 4

**M1: compare the limitations of different hardware and software packages used in graphics work**

M1 is a comparison. This could be done as an extension to your work for P1. Normally a comparison would consider both good and less good points, but in this case only the limitations are being compared. Within the remit that the hardware and software must relate to the production of graphics, you can select any hardware devices and compare the limitations of those, and then select any software packages and compare the limitations of these. Whilst it is more appropriate for you to select the items yourselves, your tutor can direct you to devices and packages, or can give you a short list of appropriate hardware and software from which to select.

**D1: evaluate the impact of evolving output mediums on the design and creation of graphic images**

For D1, you will research the ongoing changes in, and additions to, output media and the effect this has on the creation of graphic images.

***Output medium*:** printer; computer monitor; other e.g. mobile phone, PDA, plotter