** LEYTON SIXTH FORM COLLEGE – CENTRE NO: 13409**

**DEPARTMENT: COMPUTING AND IT**

**COURSE: BTEC EXTENDED DIPLOMA IN IT - ACADEMIC YEAR 2012-2013**

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| **Student Name: Student ID:** | | | | | | | |
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| **Unit No:** 28  **Unit Name:** Website Production  **Teacher Name:** Mr A. Tahir  **Internal Verifier:** Mrs J Niles-Brathwaite  **Date Verified:** 19/11/2012 | | | | | | | |
|  | | | | | | | |
| **Assignment No:** 3  **Assignment Title:** Web architecture and components  **Assignment Given Out:** 04/03/2013 **Assignment Submission Date:** 15/03/2013  **Learning Outcome:** LO2 - Understand the factors that influence website performance | | | | | | | |
| **Task** | **Unit** | **Grading Criteria**  **Reference** | **Grading Criteria** | **Review Date** | **Grade Awarded** | **Date Achieved** | **Page No#** |
| 8 | 28 | P2 | Explain the user side and server side factors that influence the performance of a website | 8/03/2013 |  |  |  |
| 9 | 28 | P3 | **E**xplain the security risks and protection mechanisms involved in website performance | 12/03/2013 |  |  |  |
|  |  |  |  |  |  |  |  |
| **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: | | | | | | | |

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**ASSESSMENT FEEDBACK FORM**

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| **Unit Number** |  | **Unit Title** | |  | | | |
| **Assignment Title** |  | | | | **Resubmission Date** |  | |
| **Assessors Feedback (**please be specific, addressing the assessment and grading criteria**)** | | | | | | | |
| **Assessment Criteria to be addressed** | **Feedback from Assessor** | | | | | | **Achieved Yes/No** |
|  |  | | | | | |  |
| **Literacy Skills assessed for development** | | | | | | | |
| **Literacy issue assessed (please circle)** | | | **Comment for development** | | | | |
| **Structure, meaning, punctuation, spelling, referencing, bibliography, plagiarism or specify** | | |  | | | | |

**Student Signature:** ………………………………………… **Date:** ………..…………….……..

**Assessor Signature:** ………………………………………  **Date:** ……………………………..

**IV Signature:** …………………………………………………  **Date:** ………………..……………

## Scenario

You work for a local web development company and have been asked to visit the director who just started a new business regarding the design and development of the business’s website. You have already been briefed on some of the content requirements:

* Create a name and logo for the business
* the manager would like an interesting homepage containing latest news items as well as a description of the business
* The sales manager has requested an online submission form that customers can request information about products.
* The sales advisors would like a section where they can display the opening hours, how to contact them, locations, frequently asked questions etc.
* The director would like you to use a range of different types of media including video, sound and animation
* An Interactive Photo Gallery for the business
* Products detail pages
* The director would like a minimum of 6 pages in the website and would like you to suggest other pages.

Throughout this project you will meet with your Project Manager (Your Teacher) to clarify the website requirements in more detail and report on your progress.

**Client Needs**

* The client would like the website to be coded with effective meta tags so that it can be visible on various search engines.
* The client has requested the current date and time to be displayed on the website homepage  
  You need to be able to support and maintain the website

**End User Needs:**

* The website will be accessed by a wide range of audience and therefore needs to have a clear and easy navigation system, the text should be easily readable and language that is clear and understandable
* The images should be appropriate and sized in proportion

**Nature of Interactivity**

* Interactive elements to be used: Rollover buttons, sound, video, animation, hotspots, drop-down menus, validation etc.

## 

## Assessment Tasks

**Task 8**

**P2: explain the user side and server side factors that influence the performance of a website**

The Network Manager would like you to go over the user side and server side factors that influence the performance of a website as he has had a number of complaints about the download speed of certain websites accessed by staff and students on the college network.

For this criterion, you need to focus on the user and server side factors which affect website performance. Write a report which considers the benefits of particular server side capabilities for a company website and also considering the limitations of the equipment and software customers may be using to browse the website.

***User side factors*:** download speed; PC performance factors e.g. browser, cache memory, processor speed

***Server side factors*:** web server capacity e.g. available bandwidth, executions to be performed before page load, number of hits; file types e.g. bitmap, vector, jpg, gif, wav, mp3; avi, swf

***User side factors*:**

* Download speed;
* PC performance factors
* Cache (Temporary files/browsing history)

***Server side factors*:**

* Web server capacity e.g. available bandwidth
* Client side scripting: executions to be performed before page load
* Number of hits
* Image file types e.g. bitmap, vector, jpg, gif,
* Sound file types wav, mp3;
* Video and animation files e.g. avi, swf

**Task 9**

**P3: explain the security risks and protection mechanisms involved in website performance**

As well as discussing the general security risks which threaten the integrity of data, you need to define the laws and guidelines that a particular website has to adhere to. This could include, for instance, a website that stores users’ details, will be legally required to comply with the Data Protection Act (DPA). Write a short report, with the use of screen screenshots, to evidence your understanding.

***Security*:** risks e.g. hacking, viruses, identity theft

***Security protection mechanisms*:** firewalls; Secure Socket Layers (SSL); adherence to standards e.g. strong passwords

* ***Pick a website***

*Pick a website that stores sensitive information e.g. customer’ details – this could also be an e-commerce website. Produce a screen print of the website and list the data that the website may store*

* ***Explain the risks to the data stored on the website***

Hacking

Viruses

Identity theft

* ***Explain the security protection mechanisms* to help reduce the risks**

Firewalls

SSL HTTPS and RSA certificates

Adherence to standards e.g. strong passwords *(refer to your work for Unit 8 P3/M2)*

* ***Explain legislation in place to reduce security risks***

Data Protection Act

Copyright Legislation

Computer Misuse Act

Freedom of Information Act