

ASSESSMENT FRONT SHEET

GUILDHALL COLLEGE

Programme: BTEC Higher National Diploma (HND) in Computing
 Unit Number and Title: Computer Platforms (Unit 1)
 Unit Level: 1
 Assignment Ref. Number: 1.1.1- Designing a computer system
 Module Tutor: Elvy
 Email: elvy.sun@gmail.com
 Date Set: 07/08/2009

Learner's name and statement of authenticity

Learner's Name : _____ Learner's ID: _____ Date Handed-in: / /

I certify that the work submitted for this assignment is my own. Where the work of others has been used to support my work then credit has been acknowledged.

Signature: _____ Date: / /

Learning Outcome

The aim of this assignment are to measure the outcome of students' learning in terms of knowledge acquired, understanding developed and skills or abilities gained in relation to achieve the learning outcomes (LO) and criteria (i.e. P,M,D):

- LO1(01.1) : Investigate **computer systems**
 LO2(01.2) : Investigate **operating systems**
 LO3(01.3) : **Design a computer system**
 LO4(01.4) : **Test your computer system.**
- P1(01.1.01) : Select machine components or sub-systems appropriate to given tasks
 P2(01.1.02) : Evaluate the performance of the selected system
 P3(01.2.01) : Contrast the functions and features of different types of operating systems
 P4(01.2.02) : Understand how to customise operating systems
 P5(01.3.01) : Investigate and identify the key components for a computer system for a particular user
 P6(01.3.02) : Specify a complete computer system to suit a given task
 P7(01.4.01) : Produce a plan that checks the main hardware and software components, using standard techniques
 P8(01.4.02) : Produce user documentation for your system
 P9(01.4.03) : Produce a security policy for your system.
 P10(01.4.04): Demonstrate that the system meets health and safety requirements
- M1(01.1) : Identify and apply strategies to find appropriate solutions
 M2(01.2) : Select/design and apply appropriate methods/techniques
 M3(01.3) : Present and communicate appropriate findings
- D1(02.1) : Use critical reflection to evaluate own work and justify valid conclusions
 D2(02.1) : Take responsibility for managing and organising activities
 D3(02.1) : Demonstrate convergent/lateral/creative thinking

GUILDHALL COLLEGE**LEARNER'S BRIEF**

Programme : BTEC Higher National Diploma (HND) in Computing
Unit Number and Title : Computer Platforms (Unit 1)
Unit Level : Level 1
Assignment Ref. Number : 1.1.1 – Design of a Computer System
Module Tutor : Elvy
Email : elvy.sun@gmail.com

Key Dates

Distribution Date : 07/08/2009
Submission Date : 21/09/2009

Introduction

The aim of the assignment are to measure the outcome of students' learning in terms of knowledge acquired, understanding developed and skills or abilities gained in relation to achieve the learning outcomes.

This assignment is to develop a case study of planning an IT system and producing a specification which both describes the function of the selected components and evaluates the recommended system against the requirements. The assignment gives you opportunity to select an appropriate computer system for a defined set of applications.

You are required to exhibit sufficient knowledge of computer architecture to make rational and commercial decisions on the selection and specification of systems. You are expected to evaluate operating systems in order to create operating environment according to the requirements. You should also demonstrate how IT practitioners communicate with specialist technical support staff during the specification and planning of systems implementation. You show evidence of competence in both stand-alone and network operations and in upgrading a computer system.

You are required to write a report on the steps that you have taken to achieve the design and implementation. Your conclusions should have significant proofs in the report. In writing this report, the work that you present must be your own. However, you will clearly have to work and present the work of others. Ensure that you clearly indicate the relevant source(s) of material that you present to support your work.

Specification of Assessment 1 - Report

The students are required to create a case study on a typical System Requirement and to design the Computer System accordingly. The requirement could be an upgrade to the existing system or could be a new system. The students will go through the stages of

1. Requirement Specification

You create your own realistic requirements. The requirements should be stated in lay man's terms as you should assume that the person / organisation providing the specification would not have much knowledge in the field of computer systems. The requirement specification should include costs, productivity, any particular requirements (eg power, display, and special needs), and training needs.

2. Detailed analysis

You need to look into the feasibility of the requirements specification. A thorough understanding of the user's requirements should be achieved at this stage. Budget and User benefits need to be considered.

2.1 Investigate and identify the key components for a computer system for a particular user[Pass – P5]

3. Design

Your design should include the following parts:

i. Computer Systems

1. Processor

a. Factors (eg., Processor speed) affecting the selection of the processor should be explained.

2. Backing store

a. Performance factors of the choice need to be verified.

3. Peripherals

a. Performance factors of the choice need to be verified. Specialised components (e.g. sound cards, video cards, data logging interfaces), bus system, network readiness/adaptability need to be mentioned

4. Memory, Motherboard, Ports, case and power supply

a. Explanation of the performance factor is required.

ii. Operating Systems

a. An overview of functions (eg user interface, machine and peripheral management etc), comparison between functions of the selected operating system (personal computer, network, mainframe etc) to other OS.

Other Specifications can be included according to the requirement in the case study.

3.1 Select machine components or sub-systems appropriate to the requirement in the case study [Pass – P1]

3.2 Evaluate the performance of the selected system [Pass – P2][Log Book]

3.3 Show that an effective judgement has been made in the selection of the components or sub system[Merit – M1]

3.4 Justify the selection of the components based on the performance criterions [Distinction – D1]

3.5 Contrast the functions and features of different types of Operating Systems [Pass – P3][Log Book]

3.6 Show that the relevant theories and techniques have been applied in the selection of the Operating System. [Merit- M2]

3.7 Understand how to customise operating systems according to the user's needs [Pass – P4]

3.8 Specify a complete computer system to suit the given task [Pass –P6]

3.9 Demonstrate that convergent and lateral thinking have been applied in specifying the complete system. [Distinction – D3]

4. Testing

Testing Strategies should be explained in this section. This should include:

- a. Test plan: software testing (eg: black box, white box), hardware testing methodologies, documentation, health and safety issues (eg compliance)

4.1 Produce a plan that checks the main hardware and software components, using standard techniques [Pass –P7]

4.2 If there was any unforeseen issues uncovered in the testing explain how you overcame that

Or

Explain what the possible issues are which could be uncover in the testing stage and how you would have managed the issues. [Distinction-D2]

4.3 Demonstrate that the system meets health and safety requirements. [Pass – P10]

- b. User support planning: identifying user training needs, producing a training schedule, functions of a help desk/help line/help software

4.4 Produce user documentation for your system [Pass – P8]

4.5 Prove that the communication is appropriate for familiar and unfamiliar audiences and appropriate media have been used.[Merit – M3]

- c. Produce a security policy for your system. demonstrate that the system meets health and safety requirements

4.6 Produce a security policy for your system.[Pass – P9]

5. Conclusion

Learning Outcomes, Assessment and Grading Criteria

Outcomes	Assessment criteria for pass
	To achieve each outcome a learner must demonstrate the ability to:
1 Investigate computer systems	<ul style="list-style-type: none"> • select machine components or sub-systems appropriate to given tasks • evaluate the performance of the selected system
2 Investigate operating systems	<ul style="list-style-type: none"> • contrast the functions and features of different types of operating systems • understand how to customise operating systems
3 Design a computer system	<ul style="list-style-type: none"> • investigate and identify the key components for a computer system for a particular user • specify a complete computer system to suit a given task
4 Test a computer system	<ul style="list-style-type: none"> • produce a plan that checks the main hardware and software components, using standard techniques • produce user documentation for your system • produce a security policy for your system. • demonstrate that the system meets health and safety requirements

Merit Descriptors	Distinction Descriptors
M1: Identify and apply strategies to find appropriate solutions	D1: Use critical reflection to evaluate own work and justify valid conclusions
M2: Select/design and apply appropriate methods/techniques	D2: Take responsibility for managing and organising activities
M3: Present and communicate appropriate findings	D3: Demonstrate convergent/lateral/creative thinking

Achievement of a pass grade

A pass grade is achieved by meeting all the requirements defined in the assessment criteria for pass for each unit.

Achievement of a merit or Distinction grade

All the assessment criteria and merit grade descriptors need to be completed within a unit to achieve a merit grade.

All the assessment criteria, merit and distinction grade descriptors must be completed within a unit to achieve a distinction grade.

Assessment Criteria	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Requirements	3.1	3.2	3.5	3.7	2.1	3.8	4.1	4.4	4.6	4.3

Grading Criteria	M1	M2	M3	D1	D2	D3
Requirements	3.3	3.6	4.5	3.4	4.2	3.9

Plagiarism and Collusion

Any act of plagiarism and collusion will be seriously dealt with according to the regulations. In this context the definition and scope of plagiarism are presented below:

‘Plagiarism occurs when a student misrepresents, as his/her own work, the work, written or otherwise, of any other person (including another student) or of any institution. Examples of forms of plagiarism include¹:

- the verbatim (word for word) copying of another’s work without appropriate and correctly presented acknowledgement;
- the close paraphrasing of another’s work by simply changing a few words or altering the order of presentation, without appropriate and correctly presented acknowledgement;
- unacknowledged quotation of phrases from another’s work;
- The deliberate and detailed presentation of another’s concept as one’s own.’

All types of work submitted by students are covered by this definition, including, written work, diagrams, designs, engineering drawings and pictures.

‘Collusion occurs when, unless with official approval (e.g. in the case of group projects), two or more students consciously collaborate in the preparation and production of work which is ultimately submitted by each in an identical, or substantially similar, form and/or is represented by each to be the product of his or her individual efforts. Collusion also occurs where there is unauthorised co-operation between a student and another person in the preparation and production of work which is presented as the student’s own. (ibid)’

Extension and Late Submission

If an extension is necessary for a valid reason, requests can be made using a course work extension request form available from the college. Please note that the lecturers do not have the authority to extend the coursework deadlines and therefore do not ask them to award a coursework extension.

The completed form must be accompanied by evidence such as a medical certificate in the event of you being sick.

¹

¹ Guidelines for dealing with plagiarism and collusion, Liverpool University at http://www.liv.ac.uk/tqsd/pol_strat_cop/plag_pol_final_17Feb05.doc

Support Material**Textbooks**

- The P.C. Support Handbook: The Configuration and Systems Guide, David Dick, 2008, Dumbreck Publishing.
- Computer Organisation and Architecture: An Introduction, Antony Carter ,Robert Hind ,B.S. Chalk,2003, Palgrave Macmillan.

Further Reading

- Computer Organisation and Architecture, William Stallings, 2001, Pearson US Imports.
- Structured Computer Organisation, Andrew S. Tanenbaum, 2005, Prentice Hall; 5 edition
- PC Hardware in a Nutshell, Robert Thompson, Barbara Fritchman Thompson, 2003, O'Reilly Media.
- Upgrading and Repairing PCs, Scott Mueller,2007, QUE.

ASSESSMENT INFORMATION

GUILDHALL COLLEGE

Programme : BTEC Higher National Diploma (HND) in Business. / (HND) in Computing
 Unit Number and Title : Computer Platforms (Unit 54) / Computer Platforms (Unit 1)
 Assignment Ref. Number : 1.1.1- Designing a computer system
 Module Tutor : Elvy

Learner's Name : _____

Learner ID: _____

Information /Feedback on assessment and grading criteria

Assessment Criteria		Achieved	Evidence	Feedback
P1	Select machine components or sub-systems appropriate to given tasks	Yes/No	Report / LogBook	
P2	Evaluate the performance of the selected system	Yes/No	Report / LogBook	
P3	Contrast the functions and features of different types of operating systems	Yes/No	Report / LogBook	
P4	Understand how to customise operating systems	Yes/No	Report / LogBook	
P5	Investigate and identify the key components for a computer system for a particular user	Yes/No	Report / LogBook	
P6	Specify a complete computer system to suit a given task	Yes/No	Report / LogBook	
P7	Produce a plan that checks the main hardware and software components, using standard techniques	Yes/No	Report / LogBook	
P8	Produce user documentation for your system	Yes/No	Report / LogBook	
P9	Produce a security policy for your system.	Yes/No	Report / LogBook	
P10	Demonstrate that the system meets health and safety requirements	Yes/No	Report / LogBook	

Grading Criteria (Merit -M; Distinction -D)		Achieved	Evidence	Feedback
M1	Identify and apply strategies to find appropriate solutions	Yes/No	Report / LogBook	
M2	Select/design and apply appropriate methods/techniques	Yes/No	Report / LogBook	
M3	Present and communicate appropriate findings	Yes/No	Report / LogBook	
D1	Use critical reflection to evaluate own work and justify valid conclusions	Yes/No	Report / LogBook	
D2	Take responsibility for managing and organising activities	Yes/No	Report / LogBook	
D3	Demonstrate convergent/lateral/creative thinking	Yes/No	Report / LogBook	

Assessor's General Comments:

Assessor's Signature:

Date:

Print Name:

Learner's Comments:

Signature:

Date:

Print Name:

Feedback of this coursework will normally be given to students four week after the submission of an assignment.