

OCR L2 Cambridge Technical Diploma in IT

Responsible Team: **Computing**

Module Title:	Developing Programming Solutions	Internal Verifier:	S. Terry
Module Tutor:	J. Terry / S. Chime	Course Code:	FL2ECICTX
Assignment Title/No:	Assignment 3/4	Unit No:	27 (J/505/5214)
Submission date/week:	23/02/18	Hand out Date:	02/02/18

Submission instructions

- To be submitted electronically via Cloud using links provided by 23:55 on 23rd February 2018.

Learning Outcomes

- Be able to debug programming code for a software solution.

Tasks

Aylesbury IT Solutions Ltd.

Aylesbury IT Solutions Ltd. is a local company specialising in developing applications for desktops. They have recently employed you to build applications for their business customer solutions department.

Your programming task will be to create a graphical application to work within a Microsoft Windows environment.

Aylesbury College has approached Aylesbury IT Solutions to create a small application to calculate the results of students in examined units. The application should be able to turn marks into grades and be able to show the percentage of students gaining each grade.

The initial set of marks will be provided in a file, which should be loaded into the program before the calculations are made.

You have already developed an application for grading student work and storing results. You will have developed a Windows-based (GUI) application with the requested functionality.

TASK 1 (P4)

As you were developing the new system, you had to ensure that it worked as required. To do this, you will have fixed bugs as you went along using the tools available in the programming environment.

Show examples of the debugging tools you have used within the programming language.

Explain the parts of the program that you changed as a result of finding errors in your code.

Evidence: Written report uploaded electronically to Cloud.

TASK 2 (D2)

As we have learned in class, code can be enhanced by:

- Removing redundant code
- Use of iteration rather than repeated statements
- Putting the same code used several times into modules to cut down on repeated code
- Ensuring that data types used in the program are those which take up the least memory but are still able to hold the required data
- Use of local variables instead of global variables

Explain how you enhanced your code to improve efficiency and quality of the solution. Show “before” and “after” examples of your code.

Evidence: Written document uploaded electronically to Cloud.

Format for submission

The assignment should be submitted electronically using Cloud. The file format should be Microsoft Word or PDF.

Suggested Methods

You should use Microsoft Word, Google Docs or equivalent wordprocessing software.

Assessment Criteria

Learning Outcome (LO)	Pass	Merit	Distinction
The learner will:	The assessment criteria are the pass requirements for this unit.	To achieve a merit the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
3 Be able to debug programming code for a software solution	P4 use debugging techniques to find and correct errors in programming code		D2 enhance the code to improve efficiency and quality of solution