OCR L2 Cambridge Technical Diploma in IT

Responsible Team: **Computing**

Module Title:	**Developing Programming Solutions**	**Internal Verifier:**	**S. Terry**
Module Tutor:	**J. Terry / ?**	**Course Code:**	**FL2ECICTX**
Assignment Title/No:	**Assignment 2/4**	**Unit No:**	**27 (J/505/5214)**
Submission date/week:	**26/01/18**	**Hand out Date:**	**30/10/17**

Submission instructions

- To be submitted electronically via Cloud using links provided by 23:55 on 26th January 2018.

Learning Outcomes

2. Be able to produce 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.

TASK 1 (P2)

You have had a meeting with a representative from the college, and they have explained the following requirements of the new system:

You must develop an application for grading student work and storing results. You will need to develop a Windows-based (GUI) application with the following basic abilities:

1) Has an attractive and easy-to-use interface
2) Allows a user to select and open a text file of student names
3) Allows a user to select and open a text file of student marks
4) Allows the names and marks to be displayed in list boxes on the screen
5) Is able to process the mark for each student and output a grade according to the table given below
6) Is able to show the grades on screen in a third list box
7) Is able to show the percentage of students achieving each grade on the screen
8) Is able to save the complete data set to a single CSV text file to be shown in Microsoft Excel

Marks	Grades
0-39	Fail
40-64	Pass
65-79	Merit
80-100	Distinction

The program will be developed in the VB.NET programming language as an application as a proof of concept (a prototype).

Before you start working on your program, the company require you to document the design of your solution.

This work should be in the form of a report and include, where appropriate:

- Screen designs
- JSP diagram showing the processes involved in your application
- Details of any subroutines, modules, functions or variables that you will use in your program
- Any calculations or algorithms you will use
- Any examples of iteration or selection that will be used in your code
- The format of your input and output text files

Evidence: Written technical documentation uploaded electronically to Cloud.

TASK 2 (P3/M2/D1)

As additional technical documentation, you will need to show a code listing.

Produce your document showing:

- Form name
- Screen shot
- Short description
- Code listing

Your code should be indented correctly, with correct use of variable naming, object naming and correct syntax throughout. **(M2)** Ensure that there is good use of comments throughout your code. **(D1)**

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) The learner will:	Pass The assessment criteria are the pass requirements for this unit. The learner can:	Merit To achieve a merit the evidence must show that, in addition to the pass criteria, the learner is able to:	Distinction To achieve a distinction the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
2 Be able to produce programming code for a software solution	P2 outline the structure to be used for programming code to meet a proposed solution.		
	P3 produce programming code for a given specification using appropriate syntax	M2 format the code using appropriate layout and indentation	D1 annotate the code with appropriate comments