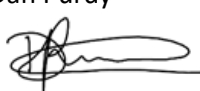


# Digital Technologies

<b>Learner Name</b>	
<b>Course</b>	Pearson BTEC Higher National Certificate in Computing
<b>Awarding Body</b>	BTEC (Pearson)
<b>Module Name(s)</b>	Unit 1 – Programming (2019 rev)
<b>Assignment Title &amp; Number</b>	Assignment 2 of 2
<b>Assessor's Name</b>	John Terry
<b>Hand out Date</b>	W/C 2 <sup>nd</sup> December 2019
<b>Hand in Date</b>	17 <sup>th</sup> January 2020
<b>Feedback Date</b>	+3 weeks

<b>Assessment Brief IQA by: (Name &amp; Signature)</b>	Dan Purdy 	<b>Assessment Brief sample by Lead IQA: (Name &amp; Signature)</b>	
<b>Date:</b>	16/09/2019	<b>Date</b>	
<b>Specific outcomes and criteria being assessed</b>			
<b>Module</b>	<b>Grading Criteria</b>	<b>Description</b>	
1	P3	Write a program that implements an algorithm using an IDE.	
1	P4	Explain the debugging process and explain the debugging facilities available in the IDE.	
1	P5	Outline the coding standard you have used in your code.	
1	M3	Use the IDE to manage the development process of the program.	
1	M4	Evaluate how the debugging process can be used to help develop more secure, robust applications.	
1	D3	Evaluate the use of an IDE for development of applications contrasted with not using an IDE.	
1	D4	Critically evaluate why a coding standard is necessary in a team as well as for the individual.	

<b>English, maths and other Skills for Success covered in this assignment</b>	<b>English Written design documentation.</b>	<b>Maths Algorithm design</b>	<b>Skills for Success Software design, Feasibility, Algorithms</b>
<b>Learner submission sampled by IQA: (Name and signature)</b>		<b>Learner submission sampled by Lead IQA: (Name and signature)</b>	
<b>Date</b>		<b>Date</b>	

## COPYING DISCLAIMER

I confirm that all the work contained in this assignment, being presented for assessment, is my own work.

I also confirm that I have not copied this work from other people's papers, electronically from their disk, from textbooks, CD ROM or from the Internet.

I also understand that if I hand in an assignment that has work in it that has been copied, this will be subject to disciplinary action and may cause me to lose my place on the course.

<b>Student Signature:</b>		<b>Date:</b>	
---------------------------	--	--------------	--

<b>Assessor declaration</b>	I certify that the evidence submitted for this assignment is the learner's own. The learner has clearly referenced any sources used in the work. I understand that false declaration is a form of malpractice.		
<b>Assessor signature</b>	John Terry	<b>Date</b>	
		<b>Date of feedback to learner</b>	
<b>Resubmission authorisation by Lead Internal Quality Assurer*</b>		<b>Date</b>	
<p>* All resubmissions must be authorised by the Lead Internal Verifier. Only one resubmission is possible per assignment, providing:</p> <ul style="list-style-type: none"><li>• The learner has met initial deadlines set in the assignment, or has met an agreed deadline extension.</li><li>• The tutor considers that the learner will be able to provide improved evidence without further guidance.</li><li>• Evidence submitted for assessment has been authenticated and accompanied by a signed and dated declaration of authenticity by the learner.</li></ul> <p>**Any resubmission evidence must be submitted within 10 working days of receipt of results of assessment.</p>			

## Scenario

MKcoders Ltd have been asked by a local secondary school to provide a program that helps them teach algorithms to their A-Level students.

You have been asked to create a program implemented in a Graphical User Interface that demonstrates the different speeds of two sorting or searching algorithms. It has been suggested that it would be good to see a step by step comparison on screen between the two, however the extent of this is up to you.

You will need to implement the program, test and debug it.

<b>Task 1</b>	<b>Grading Criteria Covered:</b> Unit 1: P3 Write a program that implements an algorithm using an IDE.
<b>Evidence Required</b>	Software documentation (screenshots with annotated code listing).
<p>Decide whether you would like to implement searches or sorts and indicate your choice.</p> <p>Create your application using an IDE according to the requirements shown above.</p> <p>You should include such information or diagrams as:</p> <ul style="list-style-type: none"><li>• Form designs (screen shots)</li><li>• Code (annotated code listings are required)</li></ul>	

<b>Task 2</b>	<b>Grading Criteria Covered:</b> Unit 1: M3 Use the IDE to manage the development process of the program. Unit 1: D3 Evaluate the use of an IDE for development of applications contrasted with not using an IDE.
<b>Evidence Required</b>	Written document
<p>Explain how using an IDE has helped to manage the development of your software:</p> <ul style="list-style-type: none"><li>• Managing the files that make up your project</li><li>• Version control</li><li>• Managing the testing and debugging process</li></ul> <p>Evaluate the use of the IDE that you chose to use to develop your software compared with having to create the same software without using an IDE.</p>	

<b>Task 3</b>	<b>Grading Criteria Covered:</b> Unit 1: P4 Explain the debugging process and explain the debugging facilities available in the IDE. Unit 1: M4 Evaluate how the debugging process can be used to help develop more secure, robust applications.
<b>Evidence Required</b>	Report with Test Plan
<p>Debug your program.</p> <p>Show you have undertaken this process by explaining your approach to debugging, show your test plan and explain the debugging facilities that you are able to use within the IDE you have chosen in order to fix your software.</p> <p>Once you have debugged your program, evaluate how the debugging process can be used to help develop more secure, robust applications.</p>	

<b>Task 4</b>	<b>Grading Criteria Covered:</b> Unit 1: P5 Outline the coding standard you have used in your code. Unit 1: D4 Critically evaluate why a coding standard is necessary in a team as well as for the individual.
<b>Evidence Required</b>	Report Document
<p>You have been asked by the company to document the code you have created.</p> <p>As part of this documentation, you have been asked to give a written outline of the coding standard you have used in your code. This need not exceed a page of written content.</p> <p>Finally, you have been asked to complete the document by giving a critical evaluation of why a coding standard is necessary for both teams and individuals.</p>	

# Feedback

Module Number	Criteria included in this assessment		Met or Not Met	Comments
<b>Task 1</b>				
1	P3	Write a program that implements an algorithm using an IDE		
<b>Task 2</b>				
1	M3	Use the IDE to manage the development process of the program.		
1	D3	Evaluate the use of an IDE for development of applications contrasted with not using an IDE.		
<b>Task 3</b>				
1	P4	Explain the debugging process and explain the debugging facilities available in the IDE.		
1	M4	Evaluate how the debugging process can be used to help develop more secure, robust applications.		
<b>Task 4</b>				
1	P5	Outline the coding standard you have used in your code.		
1	D4	Critically evaluate why a coding standard is necessary in a team as well as for the individual.		
<b>Assessor's Feedback</b>				
What Went Well?				
Even Better If...				
SPaG & Maths Feedback				
Assessor Signature:			Date:	
Student Signature:			Date:	

Student's Target (Student to complete from feedback)	
<i>Using the feedback provided, consider how you will improve the quality of your assessed work and identify targets to achieve this.</i>	
Signature:	Date: