Digital Technologies

Learner Name	
Course	Pearson BTEC Higher National Certificate in Computing
Awarding Body	BTEC (Pearson)
Module Name(s)	Unit 1 – Programming (2019 rev)
Assignment Title & Number	Assignment 1 of 2
Assessor's Name	John Terry
Hand out Date	W/C 30th September 2019
Hand in Date	7th November 2019
Feedback Date	+3 weeks

Assessment Brief IQA by: *(Name & Signature)*	Dan Purdy 	**Assessment Brief sample by Lead IQA: *(Name & Signature)***	
Date:	15/09/2019	**Date**	

Specific outcomes and criteria being assessed

Module	Grading Criteria	Description
1	P1 (LO1)	Provide a definition of what an algorithm is and outline the process in building an application.
1	M1 (LO1)	Determine the steps taken from writing code to execution.
1	D1 (LO1)	Evaluate the implementation of an algorithm in a suitable language and the relationship between the written algorithm and the code variant.
1	P2 (LO2)	Give explanations of what procedural, object-oriented and event driven paradigms are; their characteristics and the relationship between them.
1	M2 (LO2)	Compare and contrast the procedural, object-oriented and event driven paradigms used in given source code of an application.
1	D2 (LO2)	Critically evaluate the source code of an application which implements the programming paradigms, in terms of the code structure and characteristics.

English, maths and other Skills for Success covered in this assignment	**English** **Written reports and presentations.**	**Maths** **-**	**Skills for Success** **Describing and explaining concepts**
Learner submission sampled by IQA: (Name and signature)		**Learner submission sampled by Lead IQA: (Name and signature)**	
Date		**Date**	

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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.

Student Signature:		**Date:**	

Assessor declaration	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.		
Assessor signature	John Terry	**Date**	
		Date of feedback to learner	
Resubmission authorisation by Lead Internal Quality Assurer*		**Date**	

* All resubmissions must be authorised by the Lead Internal Verifier. Only one resubmission is possible per assignment, providing:

- The learner has met initial deadlines set in the assignment, or has met an agreed deadline extension.
- The tutor considers that the learner will be able to provide improved evidence without further guidance.
- Evidence submitted for assessment has been authenticated and accompanied by a signed and dated declaration of authenticity by the learner.

**Any resubmission evidence must be submitted within 10 working days of receipt of results of assessment.

Vocational Scenario

You have recently started working for MKCoding Solutions Ltd – a small software development firm based in Milton Keynes. MKCoding provide bespoke solutions to local business and even nationally if required.

Task 1	**Grading Criteria Covered:** Unit 1: P1 (L01) Provide a definition of what an algorithm is and outline the process in building an application. Unit 1: M1 (L01) Determine the steps taken from writing code to execution.
Evidence Required	Report

MKCoding would like you to demonstrate you understand the basics of coding and algorithms.

You should create a report that gives the following:

- A definition of what an algorithm is
- An outline of the process by which applications are built
- The steps taken from writing code through to execution, giving Harvard references to your sources in determining these

For this report, you could refer to algorithms you have learned about.

Task 2	**Grading Criteria Covered:** Unit 1: D1 (LO1) Evaluate the implementation of an algorithm in a suitable language and the relationship between the written algorithm and the code variant.
Evidence Required	Illustrated Report

MKCoding have asked you to present an algorithm that you have written in C#.net. They have asked you to compare the algorithm's description with the code and evaluate the implementation and relationship between code and algorithm design.

You will need to show:

- The algorithm design/pseudocode/flowchart
- The code listing created for the algorithm with evaluation of its implementation
- Your evaluation of the relationship between each (something for each step)

Scenario

MKCoding has asked you to mentor one of the apprentice team members.

Task 3	**Grading Criteria Covered:** Unit 1: P2 (LO2) Give explanations of what procedural, object-oriented and event-driven paradigms are; their characteristics and the relationship between them.
Evidence Required	PowerPoint Presentation

Produce a presentation that explains the three different programming paradigms:

- Procedural
- Object-oriented
- Event-driven programming

For each type of paradigm, include:

- Your explanation of the paradigm
- The characteristics of the paradigm
- How it relates to the other paradigms

Task 4	**Grading Criteria Covered:** Unit 1: M2 (LO2) Compare and contrast the procedural, object-oriented and event driven paradigms used in given source code of an application. Unit 1: D2 (LO2) Critically evaluate the source code of an application which implements the procedural, object-oriented and event driven paradigms, in terms of the code structure and characteristics.
Evidence Required	PDF Guide

In respect of one of the GUI-based programs that you have created that implements more than one paradigm, **compare and contrast** the use of procedural, object-oriented and event driven paradigms in the source code of that program.

After comparing the use of the paradigms, you should **add a critical evaluation**, including good and bad points, about the implementation of the code using the three paradigms in your program. Give particular reference to the code structure and characteristics.

Feedback

Module Number	Criteria included in this assessment		Met or Not Met	Comments
Task 1				
1	P1 (L01)	Provide a definition of what an algorithm is and outline the process in building an application.		
1	M1 (L01)	Determine the steps taken from writing code to execution.		
Task 2				
1	D1 (LO1)	Evaluate the implementation of an algorithm in a suitable language and the relationship between the written algorithm and the code variant.		
Task 3				
1	P2 (LO2)	Give explanations of what procedural, object-oriented and event-driven paradigms are; their characteristics and the relationship between them.		
Task 4				
1	M2 (LO2)	Compare and contrast the procedural, object-oriented and event driven paradigms used in given source code of an application.		
1	D2 (LO2)	Critically evaluate the source code of an application which implements the procedural, object-oriented and event driven paradigms, in terms of the code structure and characteristics.		

Assessor's Feedback	
What Went Well? **Even Better If…** **SPaG & Maths Feedback**	
Assessor Signature:	**Date:**
Student Signature:	**Date:**

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