

Assignment front sheet

Qualification		Unit number and title			
Pearson BTEC Higher Nationals in Computing and Systems Development		Unit 42: Programming in .NET			
Student name		Assessor name			
		Dr Derek Peacock			
Date issued	Completion date	Submitted on			
18 th April 2017	Fri 12 th May 2017				
Assignment title		Assignment 1: .NET Framework			
O	Learning outcome (LO)	AC	In this assessment you will have the opportunity to present evidence that shows you are able to:	Task no	Evidence
U42 LO 1	Understand the principles of programming using a .NET framework	1.1	discuss the principles, characteristics and features of programming using a .NET framework	1	Web Pages
		1.2	critically compare different types of .NET framework architectures	2	Web Pages
		1.3	critically evaluate the components that support the .NET framework	1	Web Pages
U42 LO 2	Be able to design .NET solutions	2.1	design a .NET programming solution to a given problem	3	Web Pages
		2.2	explain the components and data and file structures required to implement a given design		
		2.3	evaluate potential delivery environments and interaction	3	Web Pages

Learner declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Student signature:

Date:

In addition to the above PASS criteria, this assignment gives you the opportunity to submit evidence in order to achieve the following MERIT and DISTINCTION grades

Grade Descriptor	Indicative characteristic/s	Contextualisation
M1 Identify and apply strategies to find appropriate solutions	effective judgements have been made	<i>NOT AVAILABLE IN THIS ASSESSMENT</i>
M2 Select/design and apply appropriate methods/techniques	a range of sources of information has been used	<i>NOT AVAILABLE IN THIS ASSESSMENT</i>
M3 Present and communicate appropriate findings	a range of methods of presentation have been used and technical language has been accurately used	<i>NOT AVAILABLE IN THIS ASSESSMENT</i>
D1 Use critical reflection to evaluate own work and justify valid conclusions	Self-criticism of approach has taken place	<i>NOT AVAILABLE IN THIS ASSESSMENT</i>
D2 Take responsibility for managing and organising activities	Effective planning, organising and managing of individual tasks	<i>NOT AVAILABLE IN THIS ASSESSMENT</i>
D3 Demonstrate convergent/lateral/creative thinking	ideas have been generated and decisions taken	<i>NOT AVAILABLE IN THIS ASSESSMENT</i>

Assignment brief

Unit number and title	Unit 42: Programming in .NET
Qualification	Pearson BTEC Higher Nationals in Computing and Systems Development
Start date	
Deadline/hand-in	
Assessor	Dr Derek Peacock

Assignment title	Assignment 1: .NET Framework
Purpose of this assignment To provide learners with an understanding of the principles of programming using a .NET Framework as an underpinning technological concept in the fields of programming and systems development. This assignment will provide an opportunity to compare the different technologies of Web Forms, Web Pages and MVC	
Scenario Valerian Software is a small software development firm newly established that is looking to develop novel dynamic interactive websites that make use of modern web development best practices. You have been recently appointed as a trainee web developer and you are required as part of your job to complete an on-going CPD program which will last two years. Your group has been given the job of evaluating the main .NET Framework technologies of Web Forms and MVC, and selecting the best choice for developing the online e-commerce application.	

Task 1 (U42 1.1 and 1.3)

Create example projects in Web Forms and MVC connecting to the same database. Compare the technologies in detail and evaluate the pros and cons of each technology. Include in that comparison the use of other frameworks and libraries such as Bootstrap and jQuery.

Summarise the architecture of the .NET Framework and include a suitable image. Discuss the different versions, design features, languages and in particular, new features of Visual Studio 2015/17 and .NET 5.0.

Task 2 (LO1.2)

Create a comparison table that compares the different technologies. Summarise your choice and support that with valid justifications.

Task 3 (LO2.2, LO2.3)

Design a suitable data structure and interface that will be suitable for implementing the basic CRUD operations on one of the entities in your teams project.

Create a ASP.NET MVC5 team project and explain the components and data and file structures required to implement the chosen design

Review the applications interface design in the light of the available deployment platforms. Review the deployment choices and delivery environments such as Web, Windows, Linux, IOS and Android then select the best platform for the first version of this application. Justify the choice made and document it.

Document the projects data and file structures of the Visual Studio application

Evidence checklist	Summary of evidence required by student	Evidence presented
Task 1	Web pages in an e-portfolio or a word report that clearly explain the components, characteristics and features of the .NET Framework.	
Task 2	Web pages in an e-portfolio or a word report that critically compare the three main .NET technologies and that select one with justifications	
Task 3	A software design for basic CRUD operations on a selected entity. Web pages in an e-portfolio or a word report that evaluate delivery environments and web pages that explain the components of the	

Achievement Summary

Qualification	Pearson BTEC Higher Nationals in Computing and Systems Development	Assessor name	Dr Derek Peacock
Unit Number and title	Unit 42: Programming in .NET Unit	Student name	
Criteria Reference	To achieve the criteria the evidence must show that the student is able to:	Achieved ? (tick)	
U42-1.1	discuss the principles, characteristics and features of programming using a .NET framework		
U42-1.2	critically compare different types of .NET framework architectures		
U42-1.3	Critically evaluate the components that support the .NET framework		
U42-2.1	design a .NET programming solution to a given problem		
U42-2.2	explain the components and data and file structures required to implement a given design		
U42-2.3	evaluate potential delivery environments and interaction		
Higher Grade achievements (where applicable)			
Grade descriptor	Achieved? (tick)	Grade descriptor	Achieved? (tick)
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	

Assignment Feedback

Formative Feedback: Assessor to Student

Action Plan

Summative feedback

Feedback: Student to Assessor

Assessor Signature

Date

Student Signature

Date