Level 2 Create software components using C# (7266/7267-206)

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Assignment guide for Candidates
Assignment D

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Level 2 Create software components using C# (7266/7267-206) Assignment D

Introduction – Information for Candidates

About this document

This assignment comprises part of the assessment for Level 2 Create software components using C# (7266/7267-206).

Health and safety

You are asked to consider the importance of safe working practices at all times.

You are responsible for maintaining the safety of others as well as your own. Anyone behaving in an unsafe fashion will be stopped and a suitable warning given. You will **not** be allowed to continue with an assignment if you compromise any of the Health and Safety requirements. This may seem rather strict but, apart from the potentially unpleasant consequences, you must acquire the habits required for the workplace.

Time allowance

The recommended time allowance for this assignment is **4 hours**.

Level 2 Create software components using C# (7266/7267-206)
Candidate instructions

Candidates are advised to read **all instructions** carefully before starting work and to check with your assessor, if necessary, to ensure that you have fully understood what is required.

Time allowance: 4 hours

Assignment set up:

This assignment is made up of **two** tasks

- Task A - Create software from a given design specification
- Task B - Test the software and produce documentation

Scenario

You work as a software developer for Fremantle Solutions a company which develops software. You have been asked to create and test software for an order calculator.
The software will include the following functionality:

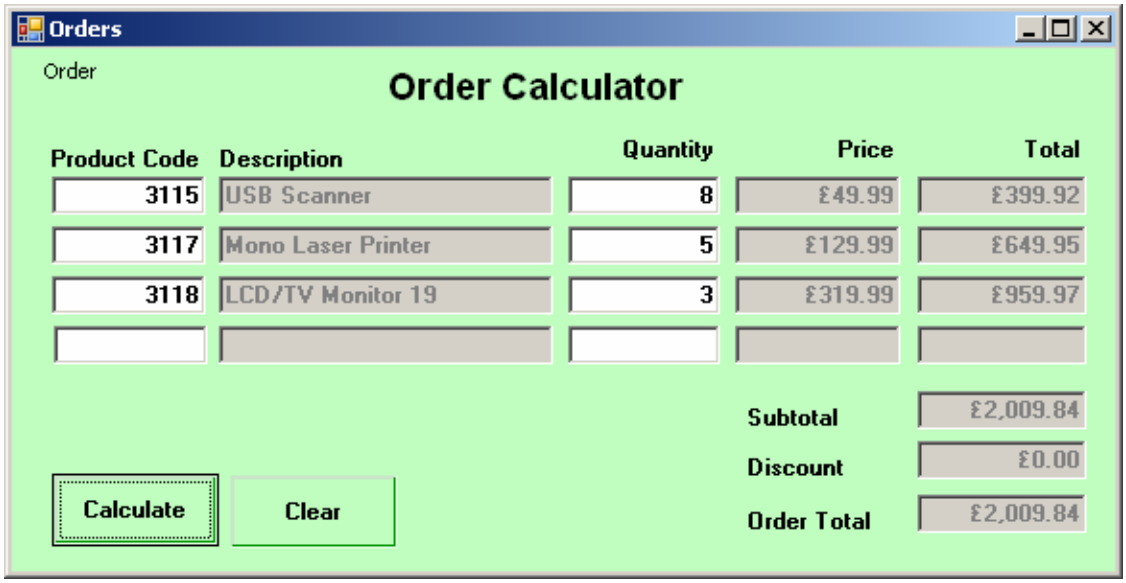
- entry of a product code and quantity for each item on an order
- lookup of the related product description and price
- calculation of each line total, the subtotal, discount and order total
- display of the total value of orders entered.

Task A
In this task you are required to create software to provide calculation of an order.

1 Save the project at regular intervals as you work through the task. Save the form as frmOrder and the Project as OrderCalc.

2 No variables in the class, for the form, should be declared as public and where possible variables should be declared locally within a function.

3



frmOrder

Create a form to appear similar to the form shown above as follows:

- add a Label for the heading with the Text property set to Order Calculator and the font set to Arial, Bold and a larger size.
- add a Label with the Text property set to Product Code
- add four TextBoxes for entry of the product code
- add a Label with the Text property set to Description
- add four TextBoxes to display the product description with the Enabled property of each of these TextBoxes set to False
- add a Label with the Text property set to Quantity
- add four TextBoxes for entry of the product quantity
- add a Label with the Text property set to Price
- add four TextBoxes to display the product price with the Enabled property of each of these TextBoxes set to False
- add a Label with the Text property set to Total
- add seven TextBoxes to display the totals with the Enabled property of each of these TextBoxes set to False
- add three Labels with the Text property set to SubTotal, Discount and Order Total.
- the font for all the labels should be set to Bold.
- add a menu with four menu options named mnuOrder, mnuCalculate, mnuClear and mnuExit with their Text properties set to Order, Calculate, Clear and Exit.
- add shortcut keys for the Calculate, Clear and Exit menu options
- add two buttons named btnCalculate and btnClear with their Text properties set to Calculate and Clear
- the TabIndex property should be set so that the user enters a product code and quantity for the first line then for the next line and so on
- the background colour of the form set to a light green
- the StartPosition property of the form set to CenterScreen.

4 Set the Text property of the form frmOrder to:
Orders *your name* and today's date

5 Declare single dimension arrays, within the class, to hold the data for the product code, product description and product price for FIVE products.

6 Write code so that when the form is loaded the appropriate data is stored, in the arrays, for the FIVE products listed below:
3115 USB Scanner 49.99
3116 Monitor 17 159.99
3117 Mono Laser Printer 129.99
3118 LCD/TV Monitor 19 319.99
3119 Colour Laser Printer 349.99

7 Write code for the Clear button to clear all the text boxes on the form.

8 Write code for the Calculate button to
- display the product description for each product code that has been entered
- display the product price for each product code that has been entered
- display each line total if a product code and quantity have been entered for that line
- display the subtotal for each line total
- display a discount of 10% if the subtotal is greater than 5000 otherwise the discount is 0
- display the total for the order after subtracting the discount from the subtotal
- add the order total to an accumulated total of orders
- display all prices and totals as currency to two decimal places
- use error handling to trap any errors and display an appropriate message if an error occurs.

9 Write code for the mnuCalculate menu option to perform the click action of the button btnCalculate.

10 Write code for the mnuClear menu option to perform the click action of the button btnClear.

11 Write code for the Exit menu option that displays a message to the user to show the total amount of orders e.g. 'Total amount of order = £nnnnn.nn' and then terminates the software.

Task B

In this task you are required to test the software and produce documentation.

1 Create test data and expected results. Test the software and compare the expected results to the actual results and correct any errors found.

2 Create or locate the EXE file and demonstrate that the software works correctly.

3 Produce a program listing of the code for the software.

4 Produce a screen print of the form frmOrder while the software is running

Candidates should check that the software produced meets the following criteria.

5 The software conforms to the design specification.

6 The code of the program is commented.

7 Meaningful names are used for constants, variables, and controls using a consistent naming convention.

Note

- Candidates should produce the following for their assessor:
  - a printed program listing
  - screen print of the form frmOrder
- Ensure that your name is on all documentation
- If the assignment is taken over more than one period, all paperwork must be returned to the test supervisor at the end of each sitting.

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