Level 2 Create software components using Visual Basic.NET (7266/7267-207)

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Assignment guide for Candidates
Assignment A

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Level 2 Create software components using Visual Basic.NET (7266/7267-207) Assignment A

Introduction – Information for Candidates

About this document

This assignment comprises part of the assessment for Level 2 Create software components using Visual Basic.NET (7266/7267-207).

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.

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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: A scenario is provided below for this assignment.

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

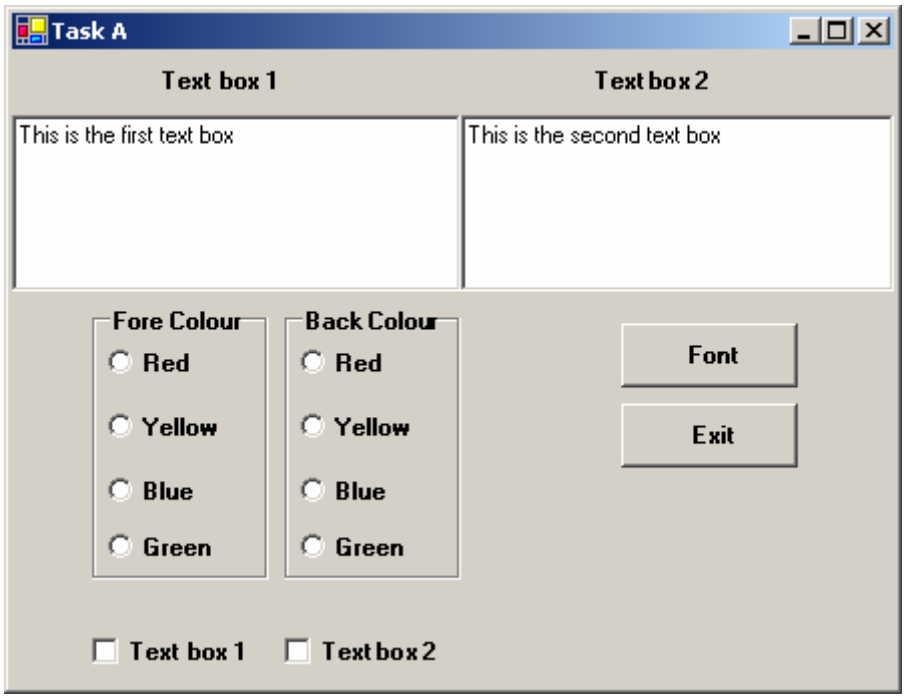
- **Task A** - provides a detailed design specification for software to demonstrate a user friendly graphical interface.
- **Task B** - requires the candidate to make amendments to the graphical user interface software
- **Task C** - provides presentation criteria that should be followed by candidates when producing their work.

Scenario

A software development company, TechMark, is developing a program for use as demonstration software for clients. As a contracted employee of TechMark, you have been asked to create and test the software.

Task A

In this task you are required to create and test a demonstration of a user interface consisting of group boxes, radio buttons, check boxes, labels, command buttons and text boxes. Your completed form should appear similar to the screen image shown below.



The controls must then be coded so that when a control for colour or font is clicked the appearance of the text in the text boxes is altered according to the following rules:

- if the check box Text box 1 is checked the appearance of the text in the first text box must be altered
- if the check box Text box 2 is checked the appearance of the text in the second text box must be altered
- if the check boxes Text box 1 and Text box 2 are both checked then the appearance of the text in both text boxes must be altered
- if neither check box Text box 1 nor Text box 2 is checked then no action is taken.

1 Save the project at regular intervals as you work through the task. Save the **form file** as frmTaskA and the **project** as Assignment1.

2 Set the title (Text property) of the form to: Task A *your name* and the date.

3 Draw a text box control on the form, size and position it.
Set the MultiLine property to True.
Name the text box txtText1 and set its Text property to: This is the first text box.

4 Draw a label control on the form, size and position it.
Name the label lblText1 and set its Text property to: Text box 1

5 Draw a text box control on the form, size and position it.
Set the MultiLine property to True.
Name the text box txtText2 and set its Text property to: This is the second text box.

6 Draw a label control on the form, size and position it.
Name the label lblText2 and set its Text property to: Text box 2.

7 Draw **two** group box controls on the form, size and position them. Name the group boxes grbForeColour and grbBackColour.

8 Set the Text properties for the group boxes to Fore Colour and Back Colour.

9 Draw and position the controls in each group box as shown in the screen image.

10 Name each control in each group box and set the Text property according to the following list:

GroupBox Identity	Control Name	Text
Fore Colour	radForeRed	Red
	radForeYellow	Yellow
	radForeBlue	Blue
	radForeGreen	Green
Back Colour	radBackRed	Red
	radBackYellow	Yellow
	radBackBlue	Blue
	radBackGreen	Green

11 Draw a check box control, size and position it. Name it chkTextbox1 and set its Text property to Text box 1.

12 Draw a check box control, size and position it. Name it chkTextbox2 and set its Text property to Text box 2.

13 Draw a command button. Name it cmdFont and set its Text property to Font.

14 Draw a command button. Name it cmdExit and set its Text property to Exit

15 Code the program as follows:

a. *controlname*_Click sub procedure for each radio button to set the properties of the txtText1 and txtText2 text box controls to correspond to the state of the control that is clicked, according to the rules (i-iv) shown below.

b. Code the cmdFont_Click sub procedure so that a Font dialog is displayed for user selection and set the Font properties for the txtText1 and txtText2 text box controls according to the following rules:

   i. the properties for the text box control txtText1 should be changed if the check box for Text box 1 is checked
   ii. the properties for the text box control txtText2 should be changed if the check box for Text box 2 is checked
   iii. the properties for both text box controls txtText1 and txtText2 should be changed if both check boxes for Text box 1 and Text box 2 are checked
   iv. no action to be taken if neither check box Text box 1 nor Text box2 is checked.

c. Code the cmdExit_Click sub procedure so that the program will end when the button is clicked.

16 Test that the program works correctly and correct any errors found. Ensure the software conforms to the specification. Demonstrate that the program works correctly.

17 Produce a program listing of the code for the program.

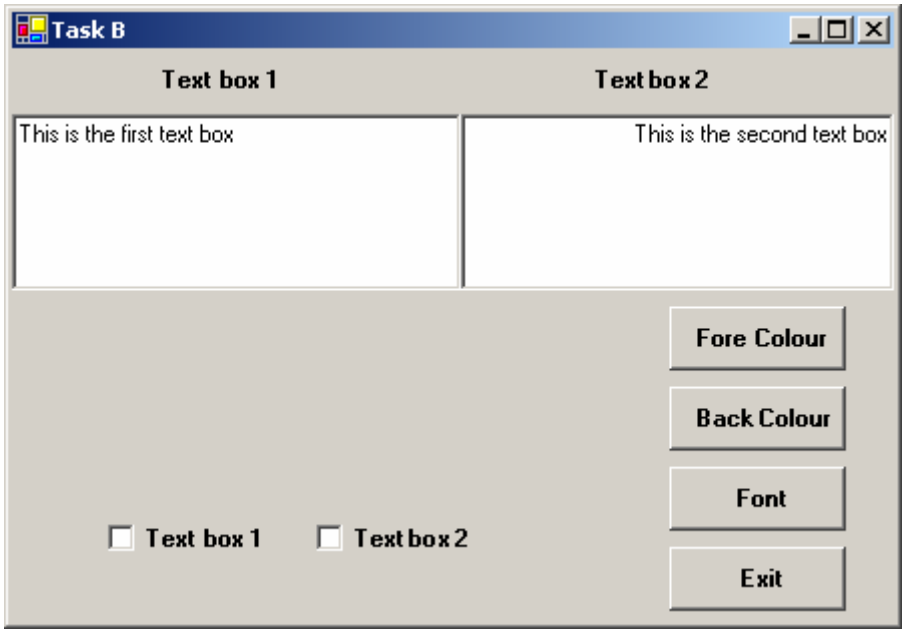
18 Produce a screen print of the form frmTaskA.

Task B

In this task you are required to make amendments to the software and test the new user interface.

1 **Save the** form file **as frmTaskB.**

2 Change the title of the form to Task B *your name* and the date.
The user interface is to be changed to appear as follows:



3 Delete the controls not required.

4 Change the TextAlign property for the text box named txtText2 to Right aligned.

5 Add a new command button and name it cmdForeColour and make the Text property Fore Colour.

6 Add a new command button and name it cmdBackColour and make the Text property Back Colour.

7 Write code for the cmdForeColor command button Click procedure to display the Color dialog so that the user can select the colour for the text in the text boxes. The colour must be changed according to the rules (i-iv) for the Text box 1 and Text box 2 check boxes in Task A.

8 Write code for the cmdBackColor command button Click procedure to display the Color dialog so that the user can select the background colour for the text boxes. The colour must be changed according to the rules (i-iv) for the Text box 1 and Text box 2 checkboxes in Task A.

9 Test that the program works correctly and correct any errors found and ensure the software conforms to the specification.

10 Locate the EXE file or create if not automatically generated.

11 Run the executable file and demonstrate that the program works correctly.

12 Produce a program listing of the code for the amended program.

13 Produce a screen print of the form frmTaskB.

Task C

Candidates should follow the below criteria when producing their work:

1 The program conforms to the design specification.

2 The program uses the most appropriate data type(s).

3 The program syntax is consistently indented to aid readability.

4 The program code is commented.

Note

- Candidates should produce the following for their assessor:
  - A printed program listing for TaskA .
  - A printed program listing for TaskB.
  - A printout of the frmTaskA form.
  - A printout of the frmTaskB form.
- At the conclusion of this assignment, hand all paperwork and removable media to the test supervisor.
- Ensure that your name is on the removable media and all documentation.
- If the assignment is taken over more than one period, all removable media and paperwork must be returned to the test supervisor at the end of each sitting.

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