

# CS2453: Visual Basic

## VB 7: Phone Number Lookup

### Objectives

- Create single arrays.
- Dynamically resize arrays
- Search arrays.
- Utilize parallel arrays.

### Situation

The Phone Number Lookup program is an adaptation of the **“Question 13 : Phone Number Lookup”** program that is on page 540 of the text book. You will use only menu options to display the options. No buttons are to be used.

You are to include a menu option to Add New Contacts to the existing List. You are to accept Name and Phone Number for any new contact that needs to be added at run time to the existing contact list. You may accept the New Contact details and Search details on the same form or you may use 2 separate forms.

Include in the menu a menu option “About” which when clicked, displays an About form that displays the Application name, a brief description of the application and the programmer name.

### Specifications

1. Recurring Specifications that are required for all programs.
  1. The form must be renamed and the text changed to PhoneLookup by YourFirstName YourLastName. (If Pat Programmer was creating this program, it would be **PhoneLookup by Pat Programmer**)
  2. Code must be grouped and commented in compliance with this course's programming standards.

3. ALL files, forms, and controls MUST be renamed.
  4. Option Strict and Option Explicit must be ON
  5. An AcceptButton and a CancelButton must be assigned appropriately.
  6. ALL controls on the form must be in logical TabOrder.
  7. All buttons and labels (before TextBoxes) must have AccessKeys.
  8. Form's StartPosition property must be CenterScreen.
  9. Values from the input fields MUST be assigned to variables and the variables used in calculations.
  10. The text property of Labels must be changed so that Label1 (or similar name) does not appear at runtime.
  11. No class level variables unless specifically allowed.
  12. Data types for variables and constants must be the most efficient.
  13. Use With..End With if and when appropriate.
  14. ToolTips
  15. Various erroneous inputs will be tested during the grading process. If any of them result in the program halting or crashing, the **maximum** credit will be 50%. If submitted by the initial deadline, it may be resubmitted until the final deadline. Work that is late or resubmitted is subject to a 10% penalty, but that might be better than 50% or a 0.
2. Create 2 global arrays in the Main Module. They will be two single dimensional arrays to hold the names and phone numbers. These arrays will be parallel. In other words the name array element with an index of 0 will hold the name and the phoneNumber array element with an index of 0 will hold the phone number for the first contact.
  3. Use the names array to load a combo box (with names) when the form is loaded into memory.
  4. When retrieving the phone numbers of an item, the SelectedIndex property of the Combo Box can be used to retrieve parallel array items. In this way the

number of lines of code can be reduced.  
 Example Since this was not specifically in the text here is an sample where strNumbers() is the name of the array:

```
strPhoneNumber=
strNumbers(cboNames.SelectedIndex)
```

5. For the About menu option, include an About Box that was created using the AboutBox template. The fields on the form must be customized for this program to display the Application name ("Phone Number Lookup" ), a brief description of the application and the programmer name.
6. Coding must be EFFICIENT. It is suggested that you flowchart the validations and calculations to determine all of the possibilities before actually writing the code.

## Assignment Submission

Zip the entire Phone Number Lookup folder and submit it using the DropBox in Moodle

## Program Grading Criteria

### Grading Chart

Item	Possible Points	Points Off	Comments
Recurring Specifications (15 items listed above)	7		
2 arrays for items listed on p.538 (names and Phone numbers)- Seven items each	6		
Main Module included to hold arrays	3		
Main form with menu options	4		
Form that allows the user to enter contact information(maybe same form or separate form)	8		
Retrieve student names in Combo Box using the name array when the Search feature is selected	6		
Display names and Phone numbers when the name is selected. Editing of Phone Numbers	4		

should not be allowed.			
Display error message when the user tries to display a phone number without a name being selected	4		
Display the customized About Box using the template.	5		
Interface design, spelling and grammar	3		
Efficiency of code	5		
<b>Total</b>	55		
<b>Late/Resubmit (10%)</b>	-6		
<b>Final Total</b>	55		