Contestant Number: _____

Time: _____

Rank: _____

VISUAL BASIC PROGRAMMING
(330)

REGIONAL – 2014

TOTAL POINTS   _____ *(350 points)*

Failure to adhere to any of the following rules will result in disqualification:

1. **Contestant must hand in this test booklet and all printouts. Failure to do so will result in disqualification.**
2. **No equipment, supplies, or materials other than those specified for this event are allowed in the testing area. No previous BPA tests and/or sample tests or facsimile (handwritten, photocopied, or keyed) are allowed in the testing area.**
3. **Electronic devices will be monitored according to ACT standards.**

No more than 90 minutes testing time

Note to Contestant:

The rubric for this event grants points for each minor task completed. That being the case, the contestant should strive to complete as many of the rubric items as possible. The contestant should have received a flash drive from the proctor.

Create a folder named with your contestant ID number (ex. xx-xxxx-xxxx).

Make certain all of the files associated with your program are contained in the folder and that the program will compile/run from the folder. Failure to do so will result in the loss of points under the "Application/Execution" rubric section.

The Business Professionals of America National Office has asked you to write an application that will let registered participants estimate the cost of their tours in Indianapolis, Indiana. The application should allow the user to do the following:
- Select multiple tours.
- Select the number of sets of tickets to purchase (assume that at least one (1) and no more than ten (10) sets will be available for purchase).
- Select refundable trip insurance.
- Select a no expiration date voucher.
- The application should let the user input the deposit amount. A minimum deposit of ten dollars ($10) of the total is required.
- Upon click of the Calculate button, the application should calculate the subtotal, tax, and balance due.
- The application should also be set up for future development of a weather component. On click of the Link Label for Indianapolis Weather Forecast, the user should be prompted with a message that states "Weather is currently unavailable; this will be in the next version build."
- The application should provide the user with the current date and time on load of the application.

The figure (Figure 1) below shows the design for the application, after the user has selected all items and clicked on the Calculate button.
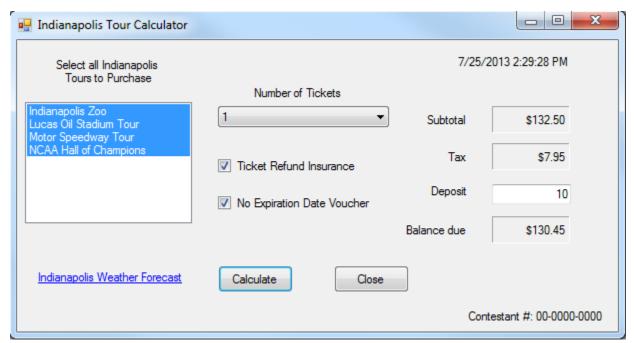

Figure 1

Error Checking: When the user clicks the *Calculate* button, the following conditions must be checked and properly handled:
- At least one item has been selected from the tour list box
- The number of tickets must have been selected
- The deposit amount must be at least ten dollars ($10)

A message box must be shown to the user if any of the above conditions are not met.

Calculations: Each tour item has a tour price based on the number of tickets purchased. Below is a pricing table for each of the tours.

	Tour Cost Table	
Tour	1-5 Tickets	6-10 Tickets
Indianapolis Zoo	$25	$23
Lucas Oil Stadium Tour	$20	$18
Motor Speedway Tour	$15	$14
NCAA Hall of Champions	$15	$14

Trip refund insurance costs 10% of the total tour charges, including Ticket Refund Insurance and the No Expiration Date voucher, before taxes.

The No Expiration Date voucher is a one-time fee of $50.

The tax rate for all tours is 6%. Assume that all tours, Ticket Refund Insurance, and the No Expiration Date voucher are all taxable.

Additional Requirements
- The application must include a function called *CalculateBalance*. The function, *CalculateBalance*, will receive three parameters:
  - the Subtotal amount
  - the amount of Tax
  - the Deposit amount

  CalculateBalance will calculate and return the remaining balance.
- You must include your Contestant # on the bottom right of the application.
- You must include your Contestant # in your source code
  - example: "Author: Contestant #: 00-0000-0000"

***Remember to save your source files and application to the flash drive that is provided to you. Your application must run from the flash drive, or you will be disqualified.

Graders Scoring Rubric
You will be scored on the following items, remember that this is not an all or nothing event.
You will receive points for each item that you complete.

Application / GUI Design

The form looks identical to the *Figure 1* provided   _____ / 100 points

Application / Runtime

Current date is populated at Form Load   _____ / 20 points

User is notified upon not selecting a tour   _____ / 10 points

User is notified upon not selecting the number of tickets   _____ / 10 points

User is notified upon not entering a deposit of at least $10   _____ / 10 points

User is notified of impending weather feature on click of link label   _____ / 10 points

User is able to select multiple tours   _____ / 10 points

User is able to check Ticket Refund Insurance   _____ / 10 points

User is able to check No Expiration Date Voucher   _____ / 10 points

Calculate button properly calculates Subtotal, Tax, and Balance Due   _____ / 50 points

Close button properly closes the application   _____ / 10 points

_____ / 150 points

Application / Code

Weather Link Label is properly coded   _____ / 20 points

Current date/time is coded within Form1_Load()   _____ / 20 points

CalculateBalance Function is utilized   _____ / 40 points

Code is well-documented   _____ / 10 points

Proper naming conventions are used   _____ / 10 points

_____ / 100 points

Total Points   _____ / 350 points