

Assignment A5: Comic Convention Registration – 40 Points for this assignment

Due: Tuesday 3/5 by midnight

Project Overview

This assignment will be the creation of a standalone functional GUI-based app and a README markdown file. (The assignment is taken from Hoisington Chapter 5, but you do not need the book for the work.)

You may choose whether to develop your application in VS/VB or in Python/Tkinter. Tkinter users can optionally use PAGE to help with layout/development. The requirements for your application are as follows:

Requirements Document

REQUIREMENTS DOCUMENT	
Date:	May 11, 2019
Date Submitted:	
Application Title:	Comic Convention
Purpose:	This Windows Classic Desktop application computes the registration cost of attending a Comic Convention.
Program Procedures:	The user enters the size of the group attending the Comic Convention. The application computes the registration cost for the group based on badge type.
Algorithms, Processing, and Conditions:	<ol style="list-style-type: none">1. A user must be able to enter the size of the group and select the desired badge type. The user can select the following badge types:<ul style="list-style-type: none">• Convention + Superhero Experience (\$380)• Convention + Autographs (\$275)• Convention (\$209)2. The user must be able to initiate the registration calculation and the display of the registration cost.3. The user must be able to clear the entries and results.
Notes and Restrictions:	<ol style="list-style-type: none">1. If the user enters a nonnumeric value for the group size or does not enter a group size, the user should be advised and asked for a valid entry.2. If the user enters a negative group size, the user should be advised and asked for a valid entry.3. If the value entered is greater than 20, the user should be advised and asked for a valid entry.4. The registration cost should be displayed in currency format.
Comments:	Obtain an image for this program from CengageBrain.com. The name of the image file is comic.

FIGURE 5-95

The following Use Case Document is also provided:

Use Cases

Comic Convention

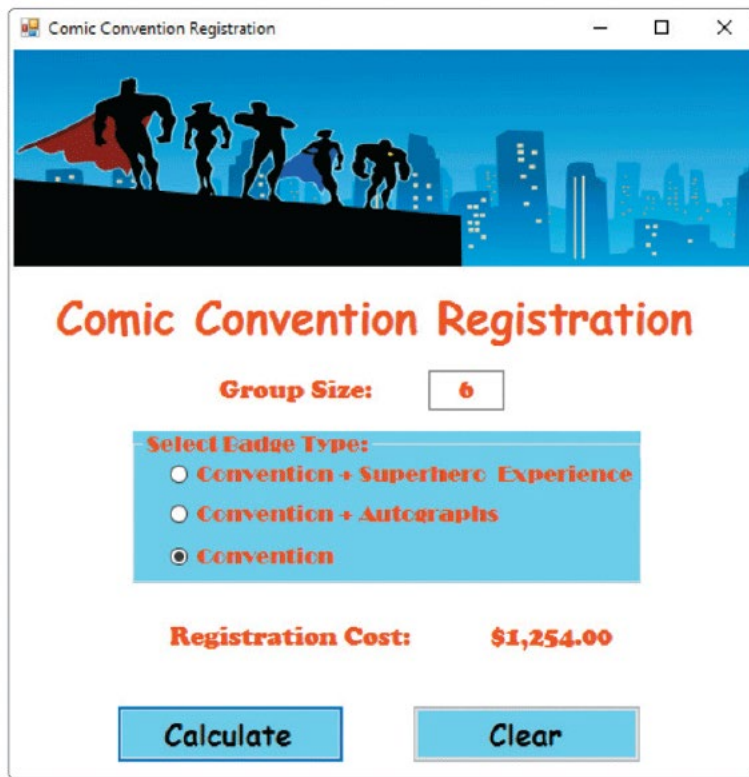
USE CASE DEFINITION

1. The Windows Classic Desktop application window opens.
2. The user enters the group size and selects the type of convention badge.
3. The user clicks the Calculate button.
4. The program displays the cost of the convention tickets using currency format.
5. A MsgBox appears and displays a warning if the user enters a negative number for the group size.
6. A MsgBox appears and displays a warning if the user enters a value for the group size that exceeds 20.
7. The user can clear the input and the results by clicking the Clear button.

FIGURE 5-96

A mockup of the application has been provided (along with the comics JPG image):

Screenshot of GUI



iStockphoto.com/yogysic

FIGURE 5-97

Finally, the following operations instructions are provided to support your definition of events:

GUI Development Details

Rename all controls using standard naming conventions for your environment.

Form Load event

1. Label control cleared.
2. The textbox is cleared and has focus.
3. One of the radio button options is preselected.

btnClear click event:

1. Label control is cleared.
2. The textbox is cleared and has focus.
3. First radio button option is preselected as at Form Load

btnCalculate click event:

1. Declare then variables and initialize the three cost levels.
2. Use 3 if statements to determine if
 - a. group number entered is numeric
 - b. group number entered is between 1 and 20
 - c. which cost level is selected
3. Calculate the total cost amount and display the results on the form by converting the total cost amount to String, formatted as currency
4. If the group size is not between 1 and 20, display an error message box
5. If the group size is not numeric, display an error message box

Main Deliverable: Create a working GUI that performs the computations as laid out in the requirements document and details above, and updates the form from events accordingly.

Documentation Deliverable: Create a README Markdown file for Assignment P1, including Project name and student name, development tools used, and any issues you encountered in development (none is a possible answer).

Project Delivery and Rubric

Submit your VB project files or Python files for your application, along with your README in a GitHub repo. Provide the GitHub repo link as a comment or as content in a text file.

Project grading rubric:

- 5 points – README as requested above
- 15 points – All objects requested represented in code and visually on GUI
- 10 points – GUI should run as requested in development environment (VB or Python) – all events should occur as requested
- 10 points – Cleanly formatted code with comments. This should include a header block containing student, project, and class names. Comments for functions/methods/classes, comments for key actions or any statements that may not be obvious in their function. Use descriptive variable names.

Note: Always cite what you write! If you get code or content from somewhere you must include at least a URL or other source identification. You must understand all the code you turn in. It is plagiarism (academic dishonesty) to use code or content, in part or in whole, written by other people without proper attribution. Failure to do so will result in a 0 on the assignment and may result in an academic misconduct report.

See Bruce for questions.