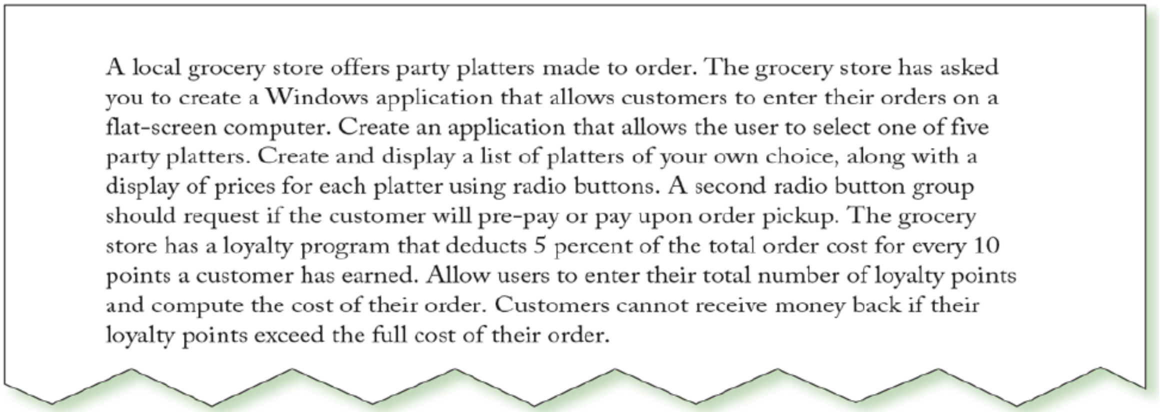
Assignment P3: Catering Order GUI Development Project – 80 Points for this assignment (possible 10 point bonus)

Due: Tuesday 4/2 by midnight

Project Overview

This assignment will be the creation of an event planning document, 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.)

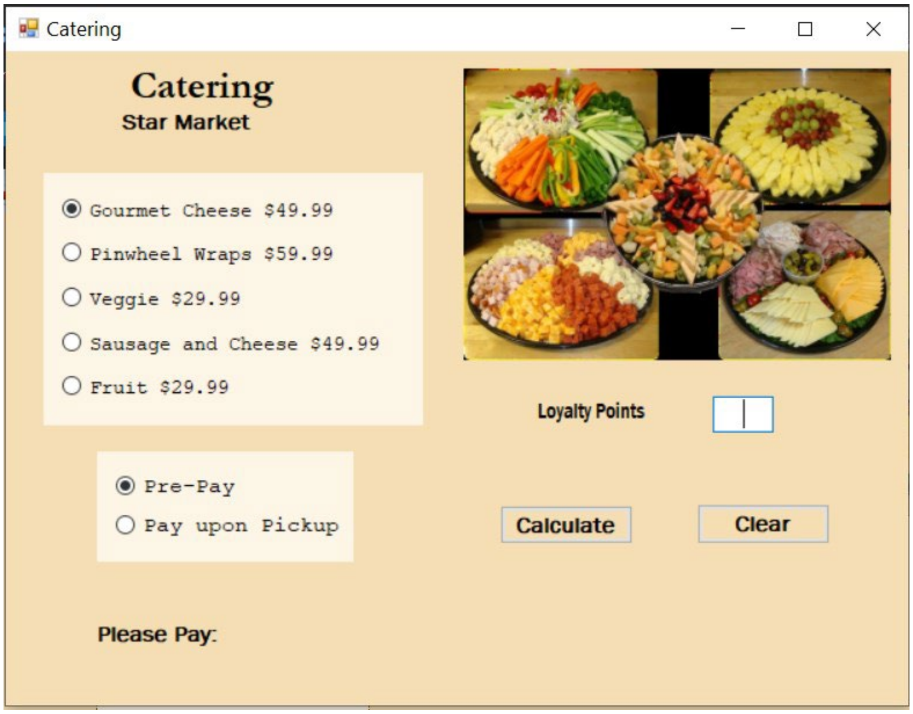
You may choose whether to develop your application in VS/VB or in Python/Tkinter. Tkinter users can optionally use PAGE to help with layout/development. The requirements for your application are as follows:



A local grocery store offers party platters made to order. The grocery store has asked you to create a Windows application that allows customers to enter their orders on a flat-screen computer. Create an application that allows the user to select one of five party platters. Create and display a list of platters of your own choice, along with a display of prices for each platter using radio buttons. A second radio button group should request if the customer will pre-pay or pay upon order pickup. The grocery store has a loyalty program that deducts 5 percent of the total order cost for every 10 points a customer has earned. Allow users to enter their total number of loyalty points and compute the cost of their order. Customers cannot receive money back if their loyalty points exceed the full cost of their order.

FIGURE 5-101

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



● Gourmet Cheese $49.99
○ Pinwheel Wraps $59.99
○ Veggie $29.99
○ Sausage and Cheese $49.99
○ Fruit $29.99

● Pre-Pay
○ Pay upon Pickup

First Deliverable: Create an Event Planning Document – it should include what will need to happen for each interaction with the interface per the requirements provided. Use the following template (or something like it) for your Event Plan:

Object	**Event Trigger**	**Event Processing**

Second Deliverable: Create a working GUI that performs the computations as laid out in the requirements document and updates the form accordingly.

Third 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).

GUI Development Details

Rename all controls using standard naming conventions. Note the two radio button groups. Please have the form pop up in the center of the screen.

Form Load event:
1. Run btnClear code

btnClear click event:
1. Points textbox is cleared and has focus
2. Payment display label cleared
3. Return state of seven (7) radio buttons to default (see screenshot)

btnCalculate click event:
1. Determine the cost of the platter selected.
2. Get the loyalty points value.
3. Calculate the discount.
4. Based on which platter was chosen, the radio button selections, and the loyalty points discount, format a string that presents the final price.
5. Display the payment information in a label using this format:

    Your order Veggie Platter costs $28.49 using Pre-Pay after discount of 10 loyalty points.

Possible 10 point bonus: Input Validation and Message Box use

Have your code check the input for loyalty points to see if it is a valid number before converting it to a float or decimal value. If it is not a valid number, display a message box alerting the user that the entry is not valid. When the message box has been closed, clear the loyalty points field and give it focus.

Also check to see that the discount from loyalty points does not make the order a 0 or negative price. If so, tell the user they cannot use that many points for the order in a message box, and clear the field and give it focus.

It is suggested that you do not add the bonus functionality until all other functions are working as you expect.

Project Delivery and Rubric

Submit your VB project files or Python files for your application, along with your Event Planning document, and 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
- 20 points – A thorough Event Plan document identifying actions needed and controls involved for all possible program events
- 20 points – All objects requested represented in code and visually on GUI
- 20 points – GUI should run as requested in development environment (VB or Python) – all events should occur as requested
- 15 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.
- 10 point bonus – added input validation and message box use – this bonus is all or nothing, both input validation and message box behaviors must work to be awarded.

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.