

Assignment 1: Fran's Virtual Fruit Stand, Part 1

Due Week 6 and worth 190 points

Fran's Virtual Fruit Stand is an online store that sells several types of dried fruit. Based on the needs of Fran's Virtual Fruit stand, you must design a flowchart using Visual Logic. The flowchart must also be a fully functional program, which follows the design requirements below.

Note: This program does not require the use of arrays. The program will prompt for data on a single item, process that data, display any relevant messages as described below, and then move on to the next item. Use the "console" option in the output command to display the output in a single window. Displaying the output can be accomplished with as few as three (3) variables that simply get overwritten each time the loop repeats.

Using Visual Logic, design a flowchart that is also a fully functional program. According to your design, the program must:

1. Continually accept data regarding the purchase of fruit until a sentinel value is entered.
2. Prompt the user for each item, and accept the name of the fruit (e.g., "dried apples"), the price per pound, and the number of pounds sold in a month.
3. Display a clear message for items that are considered:
 - a. Best-selling items
Note: Best-selling items are identified as those that sell 5,000 or more pounds per month on average. For example, an acceptable message may read, "Yellow raisins are a best-selling item."
 - b. Big-ticket items
Note: Big-ticket items are identified as those that are best-selling items and also cost \$4 per pound or more. For example, an acceptable message may read, "Freeze-dried blueberries are a big-ticket item."
 - c. High-priced items
Note: High-priced items are identified as those that sell for \$7 per pound or more. For example, an acceptable message may read, "Dried mangos are a high-priced item."
 - d. Lowest-selling items
Note: Lowest-selling items are identified as those that sell 500 pounds or less per month on average. For example, an acceptable message may read, "Dried Ugli Fruit is a lowest-selling item."
 - e. High-income generating items
Note: High-income generating items are identified as those that generate \$7,000 or more per month on average. To determine the income generated per item, multiply the price per pound by the number of pounds sold per month. If the item generates \$7,000 or more per month, an acceptable message may read, "Dried pineapple chunks are a high-income generating item."
4. Loop through all of the above steps until the user types the sentinel value when prompted. Display the sentinel value so that the user may ultimately be able to demonstrate an understanding of the way in which to end the program. **Note:** An acceptable message may read "Type *n* to end the program.", where "*n*" is the sentinel value.

Your Visual Logic program must follow these formatting requirements:

- Be accomplished in a single Visual Logic program.
- Be submitted as a single file with the ".vls" file extension.
- Be fully functional in order to receive full credit.

The specific course learning outcomes associated with this assignment are:

- Demonstrate the use of algorithms and pseudocoding to the problem-solving process.
- Distinguish among the basic types, steps, and properties of programming.
- Apply the techniques of functional decomposition, modularization techniques, and debugging strategies into program design.
- Describe the features and fundamental data structures of programming design.
- Select and create the appropriate conditional and iteration constructs for a given programming task.

Grading for this assignment will be based on answer quality, logic / organization of the paper, and language and writing skills, using the following rubric.

Points: 190		Assignment 1: Fran's Virtual Fruit Stand, Part 1			
Criteria	Unacceptable Below 60% F	Meets Minimum Expectations 60-69% D	Fair 70-79% C	Proficient 80-89% B	Exemplary 90-100% A
1. Design a program that continually accepts data regarding the purchase of fruit until a sentinel value is entered. Weight: 25%	Did not submit or incompletely designed a program that continually accepts data regarding the purchase of fruit until a sentinel value is entered.	Insufficiently designed a program that continually accepts data regarding the purchase of fruit until a sentinel value is entered.	Partially designed a program that continually accepts data regarding the purchase of fruit until a sentinel value is entered.	Satisfactorily designed a program that continually accepts data regarding the purchase of fruit until a sentinel value is entered.	Thoroughly designed a program that continually accepts data regarding the purchase of fruit until a sentinel value is entered.
2. Design a program that prompts the user for each item, and accepts the name of the fruit (e.g., "dried apples"), the price per pound, and the number of pounds sold in a month. Weight: 25%	Did not submit or incompletely designed a program that prompts the user for each item, and accepts the name of the fruit (e.g., "dried apples"), the price per pound, and the number of pounds sold in a month.	Insufficiently designed a program that prompts the user for each item, and accepts the name of the fruit (e.g., "dried apples"), the price per pound, and the number of pounds sold in a month.	Partially designed a program that prompts the user for each item, and accepts the name of the fruit (e.g., "dried apples"), the price per pound, and the number of pounds sold in a month.	Satisfactorily designed a program that prompts the user for each item, and accepts the name of the fruit (e.g., "dried apples"), the price per pound, and the number of pounds sold in a month.	Thoroughly designed a program that prompts the user for each item, and accepts the name of the fruit (e.g., "dried apples"), the price per pound, and the number of pounds sold in a month.
3a. Design a program that displays a clear message for best-selling items. Weight: 4%	Did not submit or incompletely designed a program that displays a clear message for best-selling items.	Insufficiently designed a program that displays a clear message for best-selling items.	Partially designed a program that displays a clear message for best-selling items.	Satisfactorily designed a program that displays a clear message for best-selling items.	Thoroughly designed a program that displays a clear message for best-selling items.
3b. Design a program that displays a clear message for big-ticket items. Weight: 4%	Did not submit or incompletely designed a program that displays a clear message for big-	Insufficiently designed a program that displays a clear message for big-ticket	Partially designed a program that displays a clear message for big-ticket items.	Satisfactorily designed a program that displays a clear message for big-ticket	Thoroughly designed a program that displays a clear message for big-ticket

	ticket items.	items.		items.	items.
3c. Design a program that displays a clear message for high-priced items. Weight: 4%	Did not submit or incompletely designed a program that displays a clear message for high-priced items.	Insufficiently designed a program that displays a clear message for high-priced items.	Partially designed a program that displays a clear message for high-priced items.	Satisfactorily designed a program that displays a clear message for high-priced items.	Thoroughly designed a program that displays a clear message for high-priced items.
3d. Design a program that displays a clear message for lowest-selling items. Weight: 4%	Did not submit or incompletely designed a program that displays a clear message for lowest-selling items.	Insufficiently designed a program that displays a clear message for lowest-selling items.	Partially designed a program that displays a clear message for lowest-selling items.	Satisfactorily designed a program that displays a clear message for lowest-selling items.	Thoroughly designed a program that displays a clear message for lowest-selling items.
3e. Design a program that displays a clear message for high-income generating items. Weight: 4%	Did not submit or incompletely designed a program that displays a clear message for high-income generating items.	Insufficiently designed a program that displays a clear message for high-income generating items.	Partially designed a program that displays a clear message for high-income generating items.	Satisfactorily designed a program that displays a clear message for high-income generating items.	Thoroughly designed a program that displays a clear message for high-income generating items.
4. Design a program that loops through all of the specified steps until the user types the sentinel value when prompted. Design a program that displays the sentinel value so that the user may ultimately be able to demonstrate an understanding of the way in which to end the program. Weight: 25%	Did not submit or incompletely designed a program that loops through all of the specified steps until the user types the sentinel value when prompted. Did not submit or incompletely designed a program that displays the sentinel value so that the user may ultimately be able to demonstrate an understanding of the way in which to end the program.	Insufficiently designed a program that loops through all of the specified steps until the user types the sentinel value when prompted. Insufficiently designed a program that displays the sentinel value so that the user may ultimately be able to demonstrate an understanding of the way in which to end the program.	Partially designed a program that loops through all of the specified steps until the user types the sentinel value when prompted. Partially designed a program that displays the sentinel value so that the user may ultimately be able to demonstrate an understanding of the way in which to end the program.	Satisfactorily designed a program that loops through all of the specified steps until the user types the sentinel value when prompted. Satisfactorily designed a program that displays the sentinel value so that the user may ultimately be able to demonstrate an understanding of the way in which to end the program.	Thoroughly designed a program that loops through all of the specified steps until the user types the sentinel value when prompted. Thoroughly designed a program that displays the sentinel value so that the user may ultimately be able to demonstrate an understanding of the way in which to end the program.
5. Submit the program according to the specified submission and formatting requirements. Weight: 5%	Did not submit or incompletely submitted the program according to the specified submission and formatting	Insufficiently submitted the program according to the specified submission and formatting requirements.	Partially submitted the program according to the specified submission and formatting requirements.	Satisfactorily submitted the program according to the specified submission and formatting requirements.	Thoroughly submitted the program according to the specified submission and formatting requirements.

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