

Chapter 6 Assignment

Objective	Write a program that requires an array to store and access data.
Requirements	A local business has decided to install a rooftop garden on their facility hoping to save money and promote energy efficiency. They would like to see if actually saved what they had anticipated. Your objective is to help them find the answer to their question. Write a program that asks the user for the name of the company, the monthly energy bills before and after the garden was installed, and the amount the company had hoped to save over a given year. After obtaining these values from the user, the program should calculate the savings per month, add them together to get the actual savings for the year, and compare that value to the projected savings to see if the goal was met. The program should display a report showing the monthly bills before and after the garden was installed, the savings amounts per month, the actual savings, the projected savings, whether or not the goal was achieved, and by how much. Your program should meet the technical requirements listed below: 1. Use three arrays in your program — one to store the monthly bill amounts without the garden, another for the monthly bill amounts with the garden, and one for the differences between the two per month. 2. Make sure the user enters numeric values of zero or greater when prompted. If the user enters invalid data, he or she must be alerted and asked again repeatedly until valid data is supplied.

3. When the analysis is complete, ask the user if he or she wants to run it again.
4. Make sure your program is adequately commented, uses consistent naming conventions for variable and module names, and uses appropriate indentation and line spacing to enhance the readability of the code.

To get started, open RubyMine and create a new Ruby file named Asg6.rb. Add a comment block at the top that contains the program's name, your name, the date, the course title, your instructor's name, the assignment number, the exercise number, and a brief description of the program's purpose.

Here's what your program should look like when run and the user types in the data in green. Please note that this is just sample data; do not "hard code" this into your program. This is here just so you can use to verify that your program is working properly. If you enter the values below, you should get the results displayed.

What is the name of your business? **Evergreen Florist**
What do you project the annual savings to be? **2500**

Enter the energy bills WITHOUT the rooftop garden

January: **349**
February: **347**
March: **348**
April: **344**
May: **392**
June: **390**
July: **323**
August: **434**
September: **323**
October: **324**
November: **434**
December: **432**

Enter the energy bills WITH the rooftop garden

January: 213
February: 211
March: 321
April: 123
May: 212
June: 213
July: 213
August: 112
September: 134
October: 192
November: 123
December: 128

Rooftop Garden Analysis for Evergreen Florist

Month	Without	With	Savings
January	\$ 349.00	\$ 213.00	\$ 136.00
February	\$ 347.00	\$ 211.00	\$ 136.00
March	\$ 348.00	\$ 321.00	\$ 27.00
April	\$ 344.00	\$ 123.00	\$ 221.00
May	\$ 392.00	\$ 212.00	\$ 180.00
June	\$ 390.00	\$ 213.00	\$ 177.00
July	\$ 323.00	\$ 213.00	\$ 110.00
August	\$ 434.00	\$ 112.00	\$ 322.00
September	\$ 323.00	\$ 134.00	\$ 189.00
October	\$ 324.00	\$ 192.00	\$ 132.00
November	\$ 434.00	\$ 123.00	\$ 311.00
December	\$ 432.00	\$ 128.00	\$ 304.00
Totals	\$4440.00	\$2195.00	\$2245.00

Savings Analysis

Actual Savings	\$2245.00
Projected Savings	\$2500.00
Difference	- \$ 255.00

	You DID NOT save what you had projected. Would you like to run the program again (enter "yes" or "no") ? no
Submission	Open Windows Explorer and find the folder that contains your Asg6.rb program file. Click the Attach Files button and select the Asg6.rb file. Attach the file within the Blackboard assignment submission page where appropriate.