

NT Lab 5: While Loops, Input Validation, Sentinels (30 points)

Starting with the provided file **gemstone.py**, write code that shows a menu:

Welcome to the CS 110 Gemstone Shop!

Which gemstone would you like to collect?

- 1. diamond**
- 2. ruby**
- 3. emerald**
- 4. sapphire**
- 5. Exit**

Please enter your choice (1-5):

After your code gets the user's choice, it should *perform input validation to make sure the user entered a valid option (1-5)*. If the user entered an *invalid* value, your program should tell the user the value is invalid, redisplay the menu, and ask again for input.

For every valid entry (1-4), ask how many of that gemstone the user would like to collect. For example, if the user enters 2, ask “How many rubies would you like to collect?” and then get a number from the user. ***You do not need to do input validation on this second number.*** Just add the number to the total for that gemstone, redisplay the main menu, and wait for another menu-choice.

If the user enters 5 to the main menu prompt, display the names and total number of each of types of gemstones collected and end the program.

Submitting

Test and run the program in the terminal on your laptop computer before submitting.

Upload **gemstone.py** to **NT Lab 5** on Canvas. You can also show your working programs and the submitted files to your TA to get it checked-off.

Ask a TA, Tutor, or Professor for help if you need it.