Program Prompt Overview

You will be writing <u>one</u> Python file for this project - it is a program that determines whether a meeting room is in violation of fire regulations regarding the maximum room capacity. The program will accept the maximum room capacity and the number of people attending the meeting. If the number of people is less than or equal to the maximum room capacity, the program announces that it is legal to hold the meeting and tells how many additional people may legally attend. If the number of people exceeds the maximum room capacity, the program announces that the meeting cannot be held as planned due to the fire regulation and tells how many people must be excluded in order to meet the fire regulations. The user should be allowed to enter and check as many rooms as they would like without exiting the program.

Part 1:
Build a function that is passed both the number of people attending the meeting, as well as the maximum room capacity. This function should determine the number of people over/under the capacity based on these two values, and return the difference value.

FUNCTION HEADER: def difference(people, max_cap):

NOTE: when this returned value is positive number, this indicates there are still seats available; when this returned value is a negative number, this indicates there are people who need to be removed from the meeting

Test this function and ensure it works before moving to Part 2.

Part 2:
Build a function that is passed a value that represents 'response': the user's response to whether or not they would like to continue in the program and enter another meeting's attendance information.

Build the function to check this value and ensure it is either a lowercase 'y' or 'n'. When the value is not either of these appropriate valid values, trap the user in a loop and repeatedly ask them to re-enter a valid value ('y' or 'n') until they have. Once the user has supplied one of the two valid values, return said value from the function.

FUNCTION HEADER: def decision(response):

Test this function and ensure it works before moving to Part 3.

Part 3:

Once the required two functions are written, build a main program that does the following:

- asks a user for the meeting name, room capacity, and people attending the meeting
- passes the room capacity and people attending to the *difference*() you wrote in Part 1
- displays to the user whether the meeting meets fire safety or not (legal/illegal)
- also display how many people can be added or removed (**remember**: if different returns a negative number, this is how many people should be removed)
  - <u>NOTE</u>: all values related to people (adding/removing) should be displayed as positive values - example: If the room capacity is 25 and 30 people are signed up for the meeting, the program should tell the user that "5 people must be removed from the meeting to meet fire regulations"; If the room capacity is 25 and 17 people are signed up for the meeting, the program should tell the user that "8 people can be added to the meeting and still meet fire regulations"
- ask the user if they have another number to check; pass the value to the *decision*() you wrote in Part 2 and continue the program based on that function's return
- Once the user is done checking meeting attendance, display a goodbye message

Lab #1 Grading Rubric

	Points

Required Documentation:
       -Name, Lab #, Date
       -Program Prompt and any necessary starting notes
       -Internal documentation
	15

Variables have meaningful names	5
Program uses a while loop	5
Program prompts the user for the maximum number of people the room can hold	5
Program prompts the user for the number of people who want to attend	5
Program informs the user if the meeting can be held and how many more people can register OR Program informs the user if the meeting cannot be held and how many people will have to be told they cannot attend based on values supplied by user	10
All values related to "numbers of people" are displayed as positive values	10
Program will only accept a lower or uppercase y or n.	10

Program includes both required functions, which are written as specified in their respective Parts 1 & Parts 2 of the lab prompt
       -difference()
       -decision()
	20

Program runs without errors	15
Total	**100**