Lab 04 – Conditions and Loops (40pts)

This program will take an integer and a char as input and draw the number entered by the user graphically using the character the user provides. For instance, if the user types in the number 42 and the character #, the output of the program will be something like:

```
##   ##
##   ##
#####
     ##
     ##

#####
     ##
#####
##
#####
```

The program will first ask the user for their full name and greet them. After this the program will ask the user to enter a positive integer to be drawn. The program will also at this time inform the user that they can type the letter 'q' or the word 'quit' to exit the program. If the user has entered something that is not a positive integer or the letter 'q' or 'quit' the program should inform the user that it does not understand their request and ask them again for a positive integer. If the user does type 'q' or 'quit' your program should say goodbye, addressing the user by their first name only and exit; otherwise, the program should ask the user for a character to draw the positive integer with.

When asking the user for a character to draw with, the program should only allow the user to enter a single character and that character should be one of the characters in the ASCII table between decimal 33 and 126 (inclusive). If the criteria for the character the user chooses to draw with is met, the program should output the integer drawn with the character the user has chosen; otherwise, the program should instruct the user to choose a single character between ASCII 33 and 126 and ask them again and again for a character to draw with until they choose correctly. Once the user has entered an acceptable character, the program should draw the integer on the screen as described above.

After the integer is successfully drawn, the program should again ask the user to enter another number or type 'q' or 'quit' to exit. If the user enters another number, the program sequence for drawing an integer should repeat (start over) (including allowing the user to select a new character to draw the integer with). The program should continue operating and asking the user for integers and characters and printing to the screen until the user decides to type 'q' or 'quit' at the appropriate time. (In other words, the program should stop only if the user types 'q' or 'quit'.) The user should only be able to type 'q' or 'quit' when being prompted for the integer to draw, not when they are being prompted for what character to draw with.

Once you are satisfied with your work you should hand it in on Blackboard. You should submit your source code file and a text file with sample output from your program. Make sure you illustrate successful error handling and multiple integer drawings in your program run's output.