

Programming Assignment #4A

An ATM-like Service Program

Your program should work like an ATM machine that will **repeatedly** display a menu of options, ask the user to enter a character to select one of the options, and serve the user according to the option the user has selected until the user says he/she wants to quit the program.

In the beginning of your main function, you should **(i) declare a variable of *char* type, for example *char option*, to store the character the user entered for the user's choice of options, (ii) declare a variable of *bool* type, for example *bool isInService*, to indicate whether the ATM-like program should still be actively in service, (iii) Initialize *isInService* to *true* in the beginning.**

Your main function should then set up a *while* loop that will do the things described below on each iteration of the loop and the loop will continue as long as the Boolean variable *isInService* is true.

- Display a menu of three options *L* (to tell whether a given year is a leap year), *D* (to convert a given distance in miles into one in kilometers), and *Q* (to quit).
- Prompt the user to choose one of the options by entering the corresponding character ('*L*', '*D*', or '*Q*'), and your program should then read the input character into the corresponding *char* variable *option*.
- If the user input is the character '*L*', ask the user to provide a year and then tell the user whether it is a leap year.
- If the user input is the character '*D*', ask the user to provide a distance in miles and then tell the user the corresponding distance in kilometers.
- If the user input is the character '*Q*', display a message to thank the user for using the program and say goodbye. **And then set the value of *isInService* to false to end the while loop.**
- If the user input is none of the three characters '*L*', '*D*', or '*Q*', display a message to tell the user it is an unknown option that the program cannot do anything to help.