

USER MANUAL

Program 1:

Enter a positive number as your input when the program prompts you for a year. Type in the year and hit enter. If you do not, the program will not work the way it was intended to.

Program 2:

When prompted, enter a 5 digit zipcode and hit enter. If you do not enter a positive zipcode, the program will reject your input and will end. If you do not enter a 5 digit zipcode, the program will not work the way it is intended to. The “|” represent bold lines in the barcode and the “:” represents the thin lines in the barcode.

SYSTEM MANUAL

Program 1:

This program will prompt the user to enter a year as an integer. Be warned though, the program does not take any precautions that the user enters a positive integer or not. That being said, the program simply checks if the input is divisible by 400, if it is then print out that the input is a leap year and terminate the execution. If it is not divisible by 400, then the program checks if the input is divisible by 100; if it is, then the input is not a leap year. Lastly if both those statements fail, the program will check if the input is divisible by 4, if it is then the input is a leap year. If all fails, then the input is not a leap year. It is worth noting that the order of these if statements is very crucial, a year could be divisible by 100, but if it is also divisible by 400, then it is considered a leap year. This is a very barebone program, and can be built upon fairly easily, such as making it so that the user can continuously ask for years until an exit command is executed.

Program 2:

Not including the main() method, there are 3 other methods this program utilizes. The makeDigitCheck(int zipcode) will calculate the digit check by adding up the digits in zipcode and return the distance that sum is away from the next multiple of 10 (returns 0 if the sum is a multiple 10). It is important to note that zipcode must be 5 digits long. The convertDigit(int value) will convert value into its barcode counterpart. See the constant strings to understand what value goes with what. It is important to note that value can only be 1 digit long. Lastly, barcode(int zipcode) will utilize the last two functions to create the final barcode for the postal service. It first starts off by converting every digit in zipcode from right to left, adding their barcode equivalents to the front of a return string. After that it will then calculate the digit check and convert it into its barcode equivalent and put that onto the end of the string. Lastly it then adds a full bar to the beginning and end of the return string. The main() will simply ask for a user input and return the output from barcode(int zipcode) using the input as the parameter for the method. If the user however tries to input a negative number, the program will refuse to run and print out an error message. This does not stop the user from entering any other positive number. As mentioned before, the program will not run as intended if the user does not input a 5 digit positive integer, be warned.