

cs171: Introduction to Programming
Programming Assignment 4

Due Date: Monday, February 20

Points: 50

The purpose of this program is to practice looping mechanisms.

- This keeps track of a person moving around New York City and reports how far away they are from their starting point.
- The person is in the midst of New York City with many many blocks in every direction.
- The user enters a series of characters as direction codes. The codes of N, S, E, and W indicate how the person should move, one block at a time. The computer must keep track of the person's location as the input is read.
- Keep prompting the user for more direction commands until they enter a 'Q' indicating end of input.
- At the end, report how far the user is from their starting location. Use the following message formats:
 1. If the user is back at the start report `You are back at the starting point.`
 2. Otherwise report `You are 5 blocks North and 2 blocks West of your starting point - of course change the 5 and 2 to the appropriate values based on the user's input.`
 3. Be sure to change North/South and East/West as appropriate. Do not report `You are -3 blocks East...`, instead report `You are 3 blocks West...`
 4. If exactly one of the N/S or E/W directions is 0 but the other is not, then report `You are 3 blocks West of your starting point where you have omitted the direction that is 0.`

Name your program `NYC.java` and email me the source code before the start of class on Monday, February 20.