Project 3 Report

1. A brief description of notable obstacles you overcame.
   1. Handling the character that comes after the ‘H’ /’V’ command: There are multiple situations: 1. One number and the string of commands ends. 2. One number followed by another command. 3. Two numbers followed by another command. 4. Previous situations, but with a ‘-’ sign. When I’m handling the first number, I must determine whether the string of commands have ended or not after that number. If so, I must not try to access the character (which does not appear) after the last number, or a runtime error will appear. To overcome this obstacle, I used if(i!=commandString.size()-1) to determine whether the number is the last character of the command string, and handle different situations differently.
   2. I realized that I must check for the syntax of the string of commands before running it, so I implemented a function bool checkCommands(string commandString, int& badPos) that looks for syntax errors before running the program.
   3. During Phase 2, I found my code that checks the input for fgbg/vertical or horizontal distance/characters became long and very hard to read. Therefore, I implemented