## **Project 3 Test Data**

You had to implement the functions with the specified signatures. In particular, you could not change the number or types of the parameters (e.g., changing int to int&).

There were 46 test cases, worth 75 points in all:

### **performCommands, error cases**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test #** | **Points** | **Command** | **Return**  **value** | **Resulting**  **bad position** |
| 1 | 2 | HCCC | 1 | 1 |
| 2 | 2 | H-CCC | 1 | 2 |
| 3 | 2 | H123 | 1 | 3 |
| 4 | 2 | F\tC | 1 | 1 |
| 5 | 2 | @CCC | 1 | 0 |
| 6 | 2 | CCCV | 1 | 4 |
| 7 | 2 | CCCV- | 1 | 5 |
| 8 | 2 | CCCB | 1 | 4 |
| 16 | 2 | H9H9H9H3 | 2 | 6 |
| 17 | 2 | V18V02 | 2 | 3 |
| 18 | 2 | H03H-04 | 2 | 3 |
| 19 | 2 | V3V-4 | 2 | 2 |

#### **Notes**

In all cases, performCommands was called with the plot character being \* and the mode being 0 (FG).

Except for tests 3 and 16 though 19, your code must not plot any nonblank characters.

For test 4, note that isprint('\t') is false.

For tests 6 through 8, we arranged so that the characters in the undefined positions just past the end of the command string would be digit characters in order to test that your code didn't try to access a character past the end of the string.

### **performCommands, valid cases**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Test #** | **Points** | **Command** | **Return**  **value** | **Resulting**  **bad position** | **Resulting**  **plot char** | **Resulting**  **fgbg** | **Points plotted** |
| 9 | 2 | FBCBFH1 | 0 | unchanged | \* | 0 (FG) | F at (1,1), (1,2) |
| 10 | 2 | H3V2 | 0 | unchanged | \* | 0 (FG) | \* at (1,1), (1,2), (1,3), (1,4), (2,4), (3,4) |
| 11 | 2 | H3V2CV1 | 0 | unchanged | \* | 0 (FG) | \* at (1,1), (2,1) |
| 12 | 2 | H3F%V2 | 0 | unchanged | \* | 0 (FG) | \* at (1,1), (1,2), (1,3);  % at (1,4), (2,4), (3,4) |
| 13 | 2 | V3B%H2 | 0 | unchanged | \* | 0 (FG) | \* at (1,1), (2,1), (3,1), (4,1);  % at (4,2), (4,3) |
| 14 | 2 | H3F%V2B$H1 | 0 | unchanged | \* | 0 (FG) | \* at (1,1), (1,2), (1,3);  % at (1,4), (2,4), (3,4);  $ at (3,5) |
| 15 | 2 | H3B%V2CH1 | 0 | unchanged | \* | 0 (FG) | \* at (1,1), (1,2) |
| 20 | 1 | H1 | 0 | unchanged | \* | 0 (FG) | \* at (1,1), (1,2) |
| 21 | 1 | F# | 0 | unchanged | # | 0 (FG) | none |
| 22 | 1 | B$ | 0 | unchanged | $ | 1 (BG) | none |
| 23 | 1 | H0 | 0 | unchanged | \* | 0 (FG) | \* at (1,1) |
| 24 | 1 | v02 | 0 | unchanged | \* | 0 (FG) | \* at (1,1), (2,1), (3,1) |
| 25 | 1 | F (blank after the F) | 0 | unchanged | (blank) | 0 (FG) | none |

#### **Notes**

In all cases, performCommands was called with the plot character being \* and the mode being 0 (FG).

### **plotLine**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Test #** | **Points** | **Row** | **Column** | **Distance** | **Direction** | **Plot char** | **fgbg** | **Return**  **value** | **Points plotted** |
| 26 | 1 | 0 | 1 | 1 | 1 (VERT) | # | 0 (FG) | false | none |
| 27 | 1 | -1 | 1 | 1 | 1 (VERT) | # | 0 (FG) | false | none |
| 28 | 1 | 1 | 0 | 1 | 0 (HORIZ) | # | 0 (FG) | false | none |
| 29 | 1 | 1 | -1 | 1 | 1 (HORIZ) | # | 0 (FG) | false | none |
| 30 | 1 | 20 | 1 | -1 | 1 (VERT) | # | 0 (FG) | true | # at (20,1), (19,1) |
| 31 | 1 | 21 | 1 | -1 | 1 (VERT) | # | 0 (FG) | false | none |
| 32 | 1 | 1 | 30 | -1 | 0 (HORIZ) | # | 0 (FG) | true | # at (1,30), (1,29) |
| 33 | 1 | 1 | 31 | -1 | 0 (HORIZ) | # | 0 (FG) | false | none |
| 34 | 1 | 1 | 1 | 1 | 2 | # | 0 (FG) | false | none |
| 35 | 1 | 1 | 1 | 1 | 0 (HORIZ) | \t | 0 (FG) | false | none |
| 36 | 1 | 1 | 1 | 1 | 0 (HORIZ) | # | 2 | false | none |
| 37 | 2 | 10 | 15 | 2 | 0 (HORIZ) | # | 0 (FG) | true | # at (10,15), (10,16), (10,17) |
| 38 | 2 | 10 | 15 | -2 | 0 (HORIZ) | $ | 0 (FG) | true | $ at (10,15), (10,14), (10,13) |
| 39 | 2 | 10 | 15 | 2 | 1 (VERT) | # | 0 (FG) | true | # at (10,15), (11,15), (12,15) |
| 40 | 2 | 10 | 15 | -2 | 1 (VERT) | $ | 0 (FG) | true | $ at (10,15), (9,15), (8,15) |
| 41 | 2 | 10 | 15 | 0 | 0 (HORIZ) | # | 0 (FG) | true | # at (10,15) |
| 42 | 2 | 10 | 15 | 0 | 1 (VERT) | # | 0 (FG) | true | # at (10,15) |
| 43 | 2 | 10 | 15 | 1 | 1 (VERT) | A | 0 (FG) | true | A at (10,15), (11,15) |
| 44 | 2 | 10 | 15 | 2 | 0 (HORIZ) | (blank) | 0 (FG) | true | none (see note) |
| 45 | 2 | 10 | 15 | 2 | 0 (HORIZ) | (blank) | 1 (BG) | true | none |
| 46 | 2 | 10 | 15 | 2 | 0 (HORIZ) | (blank) | 1 (BG) | true | X at (10,16) (see note) |

#### **Notes**

For test 35, note that isprint('\t') is false.

For tests 44 and 46, an X was placed at (10,16) before plotLine was called.