Sand Art: 2-D and color array manipulation

Sand Art is a program where snow or sand like particles rain from the top and builds up on platforms that the client can draw or erase. There are four methods that need to be completed to allow the client to alter their canvas in interesting ways. They are found in SandUtilites.java:

//pre: m!= null  
 //post: for each non-null element of m, changes it to its inverted color  
 // skips any color with the value skip1 and skip2, leaving them unchanged  
 public static void invertColors(Color[][]m, Color skip1, Color skip2)

//pre: m is a square 2-D array (m.length==m[0].length)  
 //post: flips the array upside down  
 public static void flipUpsideDown(Object[][]m)

//pre: m is a square 2-D array (m.length==m[0].length)  
 //post: rotates the array 90 degrees to the left  
 public static void rotateLeft(Object[][] m)

//pre: m is a square 2-D array (m.length==m[0].length)  
 //post: rotates the array 90 degrees to the right  
 public static void rotateRight(Object[][] m)

After completing each method, test them by running SandArtDriver.java.

<, > change the speed that the particles drop

+, - change the brush size for drawing or erasing platforms

INSERT toggle between paint, erase and faucet cursor

SPACE start or stop the particles from falling

P pause the pull of gravity

0 – 9 change the frequency of particles, from none (0) to full (9)

F toggle the frequency forecast between STEADY, VARIABLE and RANDOM

UP ARROW toggle the wind forecast between STEADY, VARIABLE and RANDOM

DOWN ARROW disable the wind

LEFT, RIGHT decrease or increase the wind

W toggle the weight of the particles between LIGHT, MEDIUM and HEAVY

V remove all drawn platforms

**F1, F2, F3 flip the platform 90, 180 or 270 degrees**

A toggle how the particle colors change between NONE, SUBTLE and RANDOM

ENTER do a random particle color change

r/R, g/G, b/B add or remove red, green or blue from the current color

**I Invert the particle colors**

Z change to random background color

X clear the background color

MOUSE WHEEL change the brush size for drawing and erasing platforms

LEFT BUTTON hold to paint or erase platforms, click to turn on/off faucet

RIGHT BUTTON toggle between paint, erase and faucet cursor