

Laboratory 13 Activity Instructions

1. Download the **Lab13Activity.cpp** file from WebCampus. This program is mostly complete, but needs a few lines of code filled in. This will be your opportunity to work with some simple animation activities.
2. First run the program. You will notice a filled box displayed. Close the program and change **boxWidth** and/or **boxHeight** to observe the differences.
3. Now review the **displaySquare** implementation and make sure you understand the use of the special character, which is the wall character in this case. You can try other extended ASCII values by looking at the ASCII table online and trying out the extended (i.e., above value 128) ASCII set.
4. After you have looked over the box-making function, run the function again. Now, you should be able to move the marker left and right using the keyboard arrows but you will have to mouse click on the 'x' in the upper right corner of the screen to stop the program
5. Then follow the instructions in the code . . .
 - a. for the up and down keys, you can just follow the pattern demonstrated by the left and right keys
 - b. for ending the program with the ESC key, use the keyboard ESC constant and set the **continueProgram** flag to **false**; remember that all needed keyboard constants can be found in the formatted console header file
6. The program presently works by moving one step for every user keyboard entry; create a **waitTime** variable and set it to 5; then change the **FIXED_WAIT** constant in the **waitForInput** function to your **waitTime** variable and run the program. What happens? Why?
7. If you complete the above activities, see if you can figure out how to leave a trail behind the marker, and try to do this
8. This activity is important for you to prepare for the final project assignment. Take your time and play with the program so you are sure you understand how it works. If you have any questions, ask your TA.

If you do not complete this in class, it is worth your effort to finish this program on your own.