Introduction To Computer Programming
Mr. Clausen
LOGO Program L6

Program L6 Animation3   (20 points)

Here is the overview of this program. This program is due at the end of one block period. You do not need to draw a background scene, you can use a background color if you wish. You can use any of the commands that we have learned to date. We will still have a MAIN procedure that we will use to "start" the animation. You could change the shape of the turtle(s), but that is not necessary, but you will need to move multiple turtles (6 or more) across the graphics window to create a syncronized movement of turtles. The details will be described below. See the L6Demo movie on my website just below this program description.

1) In your "S:" directory, you will need to create a new folder for this project. Name the folder: **LastNameFirstNameL6, and be careful to save all of your work to this folder.**

2) If you have been working on any procedures prior to beginning this program, save them. To make sure that we are starting with a clean workspace, type ER ALL. This erases everything from the workspace.

3) Type CT to clear all of the text from the "Listener Window" to make it easier to create your program.

4) Load program LastNameFirstNameL1.lgo into the workspace.

5) Edit the procedure called COMMENTS, by typing TO COMMENTS. Inside this procedure, **update your comments to include the new program number, name, starting and due dates, and program description**. Remember that comments begin with a **;** (semicolon). Your comments should still include all of the astericks and blank lines.

6) Edit the procedure called DISPLAY_MY_OUTPUT, by typing TO DISPLAY_MY_OUTPUT. The first line of code should be CT to clear the text in the "Listener Window". Inside this procedure, **update your PRINT statements to include the new program number, name, starting and due dates**.

7) In the MAIN procedure type DRAW and then after the call to COMMENTS and DISPLAY_MY_OUTPUT include the following command: **SETWINSIZE "graphics [800 400]** This way, we will all have the same size graphics window.

8) Save the **workspace** for this program in your "S:" directory using the filename: LastNameFirstNameL6.lgo.

9) Now for the fun part. You will need to move 6 or more "turtles" at the same time in a synchronized movement.

10) For some guidelines as what to include in your drawing, use color in your drawing making sure that you are using the color name and not the color number. If you use any custom colors based upon RGB ratios, you must include a comment after the color to tell me what color it is. If you use random colors you do not need any comments to describe the colors since you won't know what random color was selected.

11) Your Animate1 procedure may call other shape procedures that you have created. For instance, if you choose to use a round shape somewhere in your drawing, you may call a CIRCLE or ARC procedure. If you do this, make sure that your CIRCLE procedure is included in your WORKSPACE.

12) **Save your work frequently so that you don't lose any of your hard work. Save different versions of your program using v2, v3, etc.** This is the safest way to ensure that we don't lose your work.

13) Your program should only include procedures that are used to create your animation. For instance, you might not use a PENTASTAR so you will lose points from your program if this procedure is included in your workspace. Therefore, do not include any unnecessary procedures, and you must include all procedures used!

14) Remember, that you can type ER followed by the name of a procedure to erase it from your workspace. If you do this, save your program again so that this procedure is not included in your file either.

15) Now it's time to change the turtle's shape if you wish, remember that you don't have to change the turtle shape, but you can if you wish.

16) **If you choose to edit each turtle's shape DO NOT change the name in the "Turtle Name" Box. Leave the names Turtle.0 and Turtle.1, etc**. It is easier to work with multiple turtles if you don't change the name in the Turtle Name Box. Define the shape by clicking OK. **You still must save each shape by typing SAVESHAPE "CAR2 in the Listener Window for example where the number at the end of the name corresponds to the turtle number in the turtle editor window. As you save each shape, be careful, LOGO will probably save this shape on the local hard drive instead of your network folder. It will actually save the shape in the current active directory, so save your ".lgo" file into your "S:" directory first and this will become the active directory. Make sure that you manually copy all of these turtle shapes if they don't make it into your network folder (they are bitmap files - .bmp) to your "S:" directory.**

17) Create a procedure named ANIMATE1 that loads the turtle shapes that you wish to use (if you created any) and moves the "turtles" around the Graphics Window for your syncronized movement. You will need to use the command LOADSHAPE "SKIRIGHT (for example) to load the shapes into your workspace and SETSHAPE to assign any shapes you may have created to a turtle number (if you created any turtle shapes).

18) When I grade your program, I will type ER ALL to clear my workspace, then I will load your file into my workspace and type DRAW MAIN. I should be able to see your animation exactly as you intended it to look. This would be a good way for you to test your program as you are writing it to make sure that you are writing your program correctly.

19) If you use variables in any of your procedures, be sure to begin the variable name with a colon (**:**), and choose a variable name that describes the purpose of that variable in your program.

20) **When you are finished, make sure that everything is saved in the folder named LastNameFirstNameL6 and a file named LastNameFirstNameL6.lgo with the highest version number. We still need all of the bitmap pictures for the new turtle shapes that you created (if you created any).**

When you are finished with your program, have tested it thoroughly to make sure that everything is correct, and are sure that you don't need to make any changes, then **copy the folder LastNameFirstNameL5,** into the "T" network mapping, the LOGO Folder, and the Program L6 folder. This means that your program is ready to be graded.