Computer Graphics Lab
April 2009

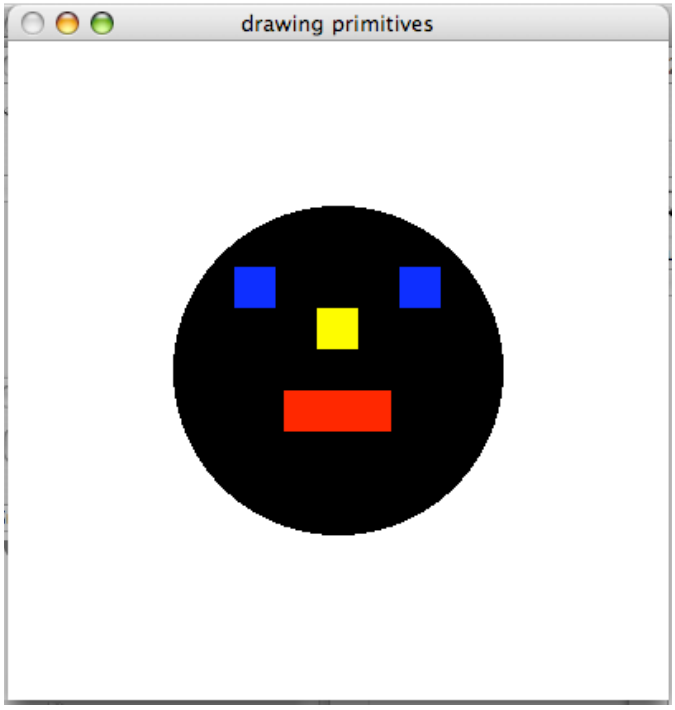
Playing with shapes and transforms using a simple openGL program.

Download the provided code (DrawPrim.cpp). Make sure that you can compile and run the program. You will need to do this with your lab-partner.

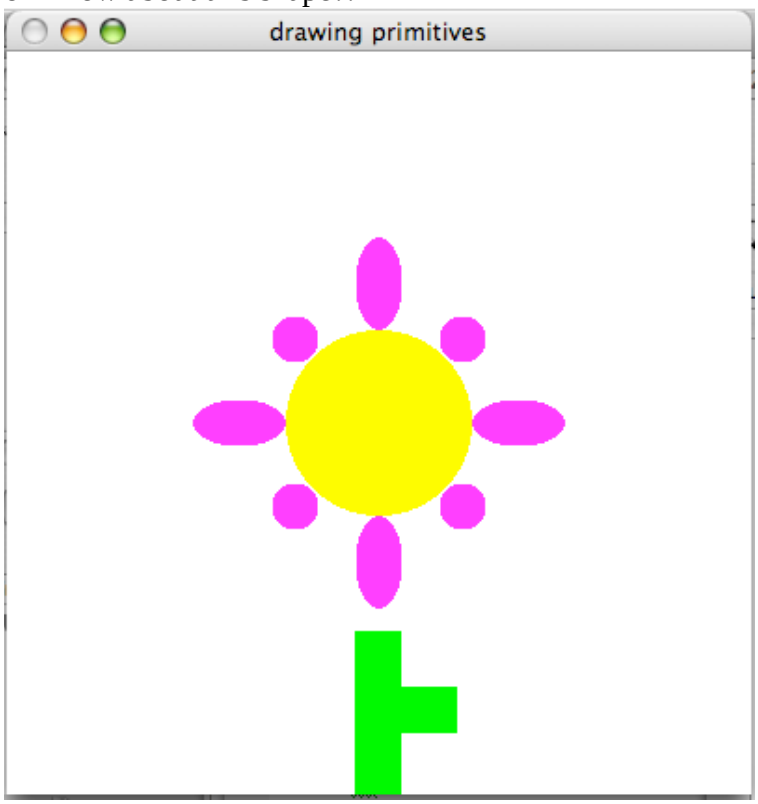
Run the program and notice what it does. Now take a look at the code written to generate this program. Please look at the provided functions, "display", "DrawCircle" and "DrawSquare". Do they make sense?
In addition to the code that just draws the simple primitives, the program provides a way to move the shapes around the screen to make some compound figures.

Make sure you understand how the transform functions work. For example, what happens when you set the size of an object to be zero?
What happens when you set the size of an object to be non-uniform (not the same for both parameters?)

Using these functions, can you make an interesting shape. For example can you make:



or – how about this shape?:



Can you figure out how to make a new “color”?

Can you figure out how to make a new primitive?

Feel free to play with the program with your lab partner to figure out how to tansform the primitives to make the above shapes and any others you’d like.

Now to have a realistic experience with computer science you need to try “debugging”. Please download the modified example program (DrawPrimBug.cpp) and see if you can find the “bug” - try experimenting with the program to find out what is wrong and see if you and your lab partner can fix the bug!

Have fun!