

Tyler Hinrichs  
Project2 Part2

### **To Compile:**

```
g++ ECGraphicViewImp.cpp test-gv.cpp Command.cpp ShapesModel.cpp Shape.cpp  
ECRealObserver.cpp MouseFunction.cpp -lallegro -lallegro_font -lallegro_primitives  
-lallegro_main -lallegro_image -lallegro_main -o editor
```

### **To Run:**

```
./editor [filename.dat/.txt]
```

The above filename is optional. If included, it will attempt to load from the file. When the editor is closed, it will save to the filename that was provided.

### **Features Implemented:**

All features from part 1 and part 2 are implemented. The added functionality builds on the functionality from part 1. Only new features that have been added after part 1 are described below.

### **Edit Mode:**

By holding ctrl, multiple shapes can be selected at the same time. As with individual shapes, clicking outside of any shape will unselect all shapes. All selected shapes will be colored blue. When multiple (or individual) shapes are selected, any amount of shapes can be moved by holding the mouse down and dragging the shape to a new location, or using the arrow keys to move the selected shapes.

When multiple shapes are selected, by pressing G, the shapes will become grouped. If only a single shape is selected, if it is a composite shape, pressing G will ungroup the shape. There can be multiple levels of composition.

**File I/O:** By running the executable with a file as the first argument, the editor will attempt to load from the file, putting all of the shapes in the model and on screen if the file can be parsed. After the editor is closed, every shape in the model will be saved to the file, and can be loaded at a later time. The file will be created if it does not exist. Also, the shape scheme is as specified in the Project2 Part2 assignment sheet.

### **Insert Mode:**

Unfilled Rectangle: default option

Filled Rectangle: press F to insert a filled rectangle

Ellipse: press G to insert an Ellipse

Filled Ellipse: press F and G to insert a filled ellipse (if already in filled rectangle mode, only need to press G to get to filled ellipse)

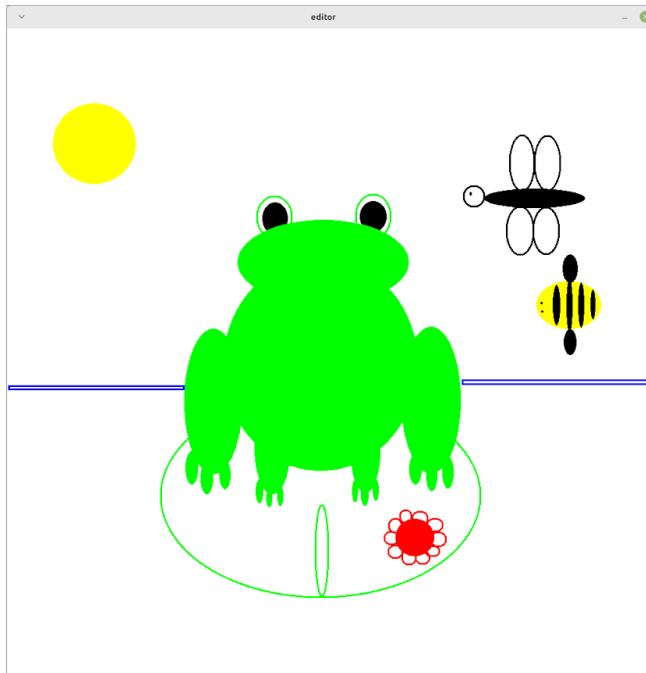
**Bugs:** There are no known bugs at this time.

Created File:  
frog.txt

**To run:**

```
./editor frog.txt
```

Running this will show an image of a frog sitting on a lilypad with a dragonfly and a bee.



There is a video showing usage of the editor in the gradescope submission.