

Basic Processing

```
size(width,height); // open window with specified dimensions
```

- “other aspects” - set modes that affect subsequent drawing commands

- set line-drawing color

```
stroke(gray); // grayscale; value is 0-255
stroke(r,g,b); // RGB color; values are 0-255
stroke(r,g,b,a); // RGB color with transparency (a);
// values are 0-255
```

- set fill color

```
fill(gray); // grayscale; value is 0-255
fill(r,g,b); // RGB color; values are 0-255
fill(r,g,b,a); // RGB color with transparency (a);
// values are 0-255
noFill(); // do not fill area
```

- shape modes

```
rectMode(CORNER); // interpret values as left,top,width,height
ellipseMode(CORNER); // interpret values as left,top,width,height
rectMode(CENTER); // interpret values as centerx,centery,width,height
ellipseMode(CENTER); // interpret values as centerx,centery,width,height
```

- drawing commands – draw something on the screen

- clear the background to the specified color

```
background(gray); // grayscale; value is 0-255
background(r,g,b); // RGB color; values are 0-255
background(r,g,b,a); // RGB color with transparency (a);
// values are 0-255
```

- draw shapes

```
line(x1,y1,x2,y2); // draw a line from (x1,y1) to (x2,y2)
point(x,y); // draw a point at (x,y)
rect(x,y,w,h); // draw rectangle (*)
ellipse(x,y,w,h); // draw ellipse (*)
```

(*) The meaning of (x,y) depends on the mode (CENTER or CORNER).

At the End of Class

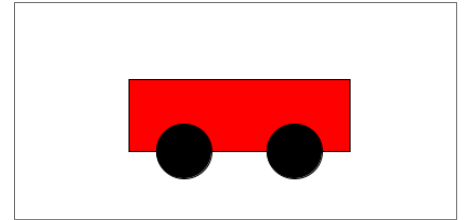
Hand in whatever you have done during class, even if a sketch is incomplete.

- Make sure each sketch is named as directed and has a comment with the names of your group. Also be sure to save your sketches! (in Linux, this should be in your sketchbook **~/cs120/sketchbook**)
- Copy the entire directory for each sketch (not only the .pde file) into your handin directory (**/classes/cs120/handin/username**). You only need to hand in one copy for the group. (If you are running Processing on your computer instead of using the Linux virtual desktop, you will need to use FileZilla to copy the sketches.)

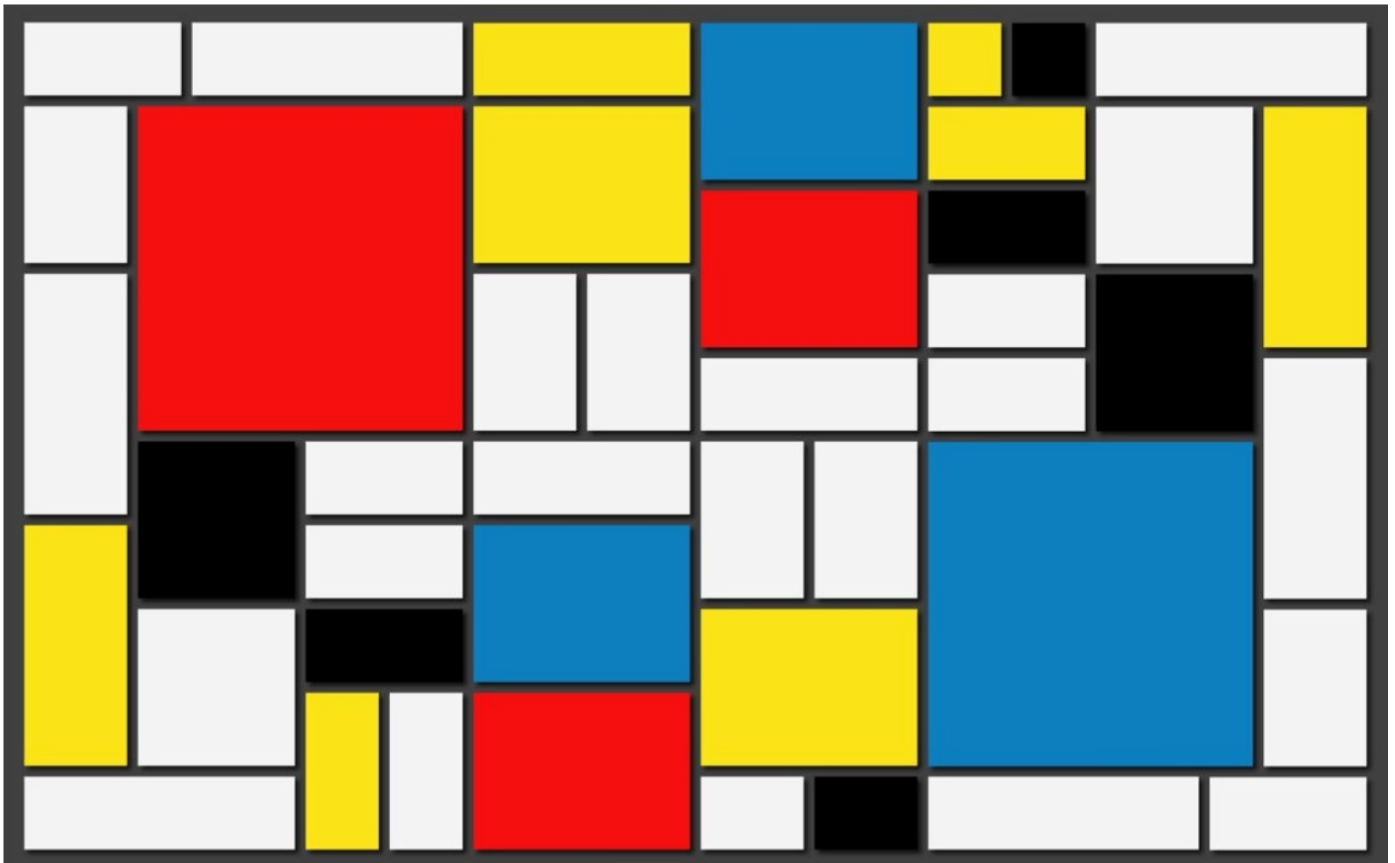
Exercises

Use the strategy discussed in class to work out the size and position of all shapes being drawn – identify what you need to know, label what you do know, and compute what you need from what you know. Write on the picture! (or draw your own copy on another page)

1. Finish the car sketch started in class last week: create a new sketch and paste in the code posted on the schedule page to get started. The result should look like the picture shown – note that you do *not* need to draw the box around the edge. (That's just to show you where the drawing window is.) Save your sketch with the name **sketch_240902a**.



2. Dutch painter Piet Mondrian (1872-1944) is well-known for the style of artwork shown below. Create a sketch which replicates the picture as accurately as you can. Make the drawing window 1000x600. Save your sketch with the name **sketch_240902b**.



If you have time –

- Create a new sketch of your own design named **sketch_240904c**. Experiment with new elements – use the Processing API (<https://processing.org/reference/>) to learn how to draw other kinds of shapes (arcs, quads, and triangles) and make thicker lines (strokeWeight).