

Programming In Processing
Class #5: 3/5/08
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Processing: www.processing.org -- email the teacher: mish@mit.edu

How do we create text on the screen?

We will use three commands to add text to the screen.

(Strings are underlined, numbers are in bold, names are in italics.)

```
PFont newFont = createFont(fontName);  
textFont(newFont, fontSize);  
text(screenText, xStart, yStart);
```

So, for example, you might have this:

```
PFont newFont = createFont("Times New Roman");  
textFont(newFont, 16);  
fill(255, 0, 0); // sets text to red  
text("hello world!", 150, 100); // one line  
text("how are you?", 150, 150); // another line
```

Here are some fonts that you can use with createFont:

Arial, Book Antiqua, Century Gothic, Century Schoolbook, Curlz MT,
Georgia, Gill Sans MT, Goudy Stout, Impact, Papyrus, Perpetua,
Tahoma, Times New Roman, Tw Cen MT

How do we use the "fade" effect?

Use fill with a certain color and an opacity less than 255, the maximum. Then create a rectangle that is the size of the window (same width and height.)

```
color myColor = color(redValue, greenValue, blueValue);  
fill(myColor, opacityLevel);  
rect(0, 0, width, height);
```

How do we get information from the mouse?

You can use `mouseX` and `mouseY` to get the x and y coordinates of the mouse relative to the top left corner of the window.

Here are some ways you could use `mouseX` and `mouseY`:

```
ellipse(mouseX, mouseY, 50, 70);
fill(mouseX, mouseY, mouseX, mouseY);
background(50, 50, mouseX + mouseY);
```

We can also use the `mousePressed` method (which is triggered once for every mouse click) to signal events that happen when the mouse is clicked. The `mousePressed` method looks like this:

```
void mousePressed(){
    // code goes in here
}
```

Here are some ways you can use the `mousePressed` method:

```
foo = 10; // from last week's project
change = -1; // from last week's project
ellipse(50, 50, 10, 10); // will work with 'fade' effect
ellipse(mouseX, mouseY, 10, 10); // will work with 'fade' effect
```

How do we create a random number?

To get a random number between 0 and **end**:

```
random(end);
```

To get a random number between **begin** and **end**:

```
random(begin, end);
```

Here are some ways that you can use random numbers:

```
fill(255, 0, random(255));
stroke(random(200, 255), 0, 0);
strokeWeight(random(5));
ellipse(random(width), 100, random(50), random(50));
```