

Drawing Program

Objective

Practice `setup()` and `draw()`. Using `mouseX`, `mouseY`, `pmouseX`, `pmouseY` and interactive methods `keyPressed()` and `mousePressed()`.

Instructions

1. What goes at the top of all programs you write?
2. Write a program that draws a line. You can choose things like the size of the background, the background color, the color of the line and where the line is drawn. From now on, we use `setup()` and `draw()` to write programs.
3. Modify the program to draw a line wherever the mouse's location is.
4. Do you get like a dotted line? Use `pmouseX` and `pmouseY` to draw the line from the previous mouse position to the current mouse position. You should have a continuous line.
5. Let's add a cool effect. As the mouse speeds up, let's make the line get a wider stroke. To calculate the speed of the mouse's horizontal motion it is the absolute value of the difference between the mouse's current x position and its previous x position. `abs()` is the method to use for absolute value. Ex. `abs(3-5);` //gives you 2 which can be passed to another method! Call a method inside another method! It's 1 line of code to add this effect...try to figure this out.
6. Ok. Now, let's add a new type of interaction. You already know how to add a method, cough cough, `setup()` and `draw()`. Add another method called `mousePressed()`. Inside the method, have the color of your line change to white. Why? So you can erase anything you drew when you want to. This is called an event. Every time the `draw()` is called, it listens for `mousePressed()` to see if it happens.
7. Finally, add another method called `keyPressed()`. This is another event that `draw()` listens for. Have `keyPressed()` change the background color to something of your choosing. When a key is pressed, you should see your new background color.
8. Add an if statement inside the `keyPressed` method that checks for a key, such as 's'. This needs to be the first statement in this method so it saves your drawing before clearing the screen.

```
if(key == 's')
  save("mydrawing.jpg"); //saves in your processing folder for this project.
```

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Examples

▶ Drawing_Program

