

Keyboard and Mouse Interaction

+ Mouse Input

Global Variables

Mouse

- mouseButton
- void mouseClicked() ←
- void mouseDragged() ←
- void mouseMoved() ←
- void mousePressed() ←
- mousePressed
- void mouseReleased() ←
- void mouseWheel() ←
- mouseX
- mouseY
- pmouseX
- pmouseY

Functions to override

+ Mouse Global variables

mousePressed

```
// Click within the image to change
// the value of the rectangle
void draw() {
  if (mousePressed == true) {
    fill(0);
  } else {
    fill(255);
  }
  rect(25, 25, 50, 50);
}
```

+ Mouse Global variables

mouseButton

```
// Click within the image and press
// the left and right mouse buttons to
// change the value of the rectangle
void draw() {
  if (mousePressed && (mouseButton == LEFT)) {
    fill(0);
  } else if (mousePressed && (mouseButton == RIGHT)) {
    fill(255);
  } else {
    fill(126);
  }
  rect(25, 25, 50, 50);
}
```

+ Mouse Global variables

mouseX, mouseY, pmouseX, and pmouseY

```
// Move the mouse quickly to see the difference
// between the current and previous position
void draw() {
  background(204);
  line(mouseX, 20, pmouseX, 80);
  println(mouseX + " : " + pmouseX);
  line(20, mouseY, 80, pmouseY);
  println(mouseY + " : " + pmouseY);
}
```

+ Mouse functions to override

mousePressed()

```
// Click within the image to change
// the value of the rectangle
int value = 0;

void draw() {
  fill(value);
  rect(25, 25, 50, 50);
}

void mousePressed() {
  if (value == 0) {
    value = 255;
  } else {
    value = 0;
  }
}
```

+ Mouse functions to override

mouseReleased()

```
// Click within the image to change
// the value of the rectangle

int value = 0;

void draw() {
  fill(value);
  rect(25, 25, 50, 50);
}

void mouseReleased() {
  if (value == 0) {
    value = 255;
  } else {
    value = 0;
  }
}
```

+ Mouse functions to override

mouseClicked()

```
// Click within the image to change
// the value of the rectangle

int value = 0;

void draw() {
  fill(value);
  rect(25, 25, 50, 50);
}

void mouseClicked() {
  if (value == 0) {
    value = 255;
  } else {
    value = 0;
  }
}
```

+ Mouse functions to override

mouseDragged()

```
// Drag (click and hold) your mouse across the
// image to change the value of the rectangle

int value = 0;

void draw() {
  fill(value);
  rect(25, 25, 50, 50);
}

void mouseDragged()
{
  value = value + 5;
  if (value > 255) {
    value = 0;
  }
}
```

+ Mouse functions to override

mouseMoved()

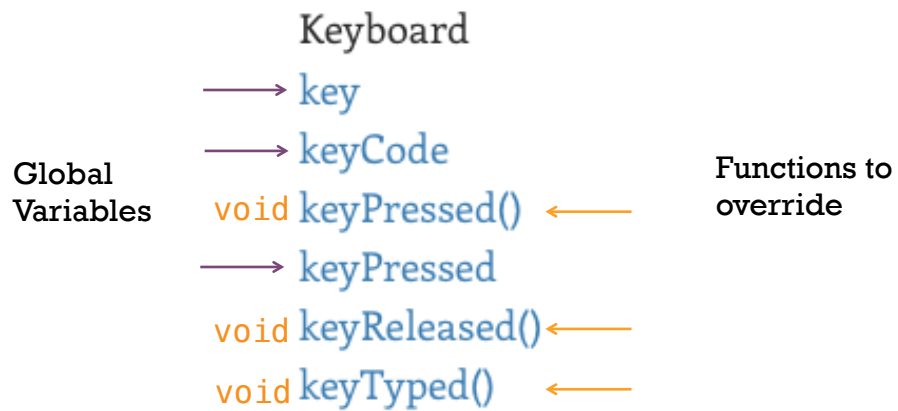
```
// Move your mouse across the
// image to change the value of the rectangle

int value = 0;

void draw() {
  fill(value);
  rect(25, 25, 50, 50);
}

void mouseMoved()
{
  value = value + 5;
  if (value > 255) {
    value = 0;
  }
}
```

+ Keyboard Input



+ Keyboard Global variables

key and keyPressed

```
// Click on the window to give it focus,
// and press the 'B' key.
```

```
void draw() {
  if (keyPressed) {
    if (key == 'b' || key == 'B') {
      fill(0);
    }
  } else {
    fill(255);
  }
  rect(25, 25, 50, 50);
}
```

+ Keyboard Global variables

keyCode and overriding keyPressed()

```
color fillVal = color(126);

void draw() {
  fill(fillVal);
  rect(25, 25, 50, 50);
}

void keyPressed() {
  if (key == CODED) {
    if (keyCode == UP) {
      fillVal = 255;
    } else if (keyCode == DOWN) {
      fillVal = 0;
    }
  } else {
    fillVal = 126;
  }
}
```