

Gamepad

Arduino Code:

```
void setup() {
  Serial.begin(9600);
  pinMode(2, INPUT_PULLUP);
  pinMode(3, INPUT_PULLUP);
  pinMode(4, INPUT_PULLUP);
  pinMode(5, INPUT_PULLUP);
}

void loop() {
  int NegxPot = digitalRead(2);
  int NegyPot = digitalRead(3);
  int PosxPot = digitalRead(4);
  int PosyPot = digitalRead(5);

  String xyString = String(NegxPot) + "\t" + String(NegyPot) + "\t" + String(PosxPot) +
    "\t" + String(PosyPot);
  Serial.println(xyString); // observe "x,y" via serial monitor
  delay(50); // add delay to avoid over-filling serial buffer
}
```

Processing Code:

```
import processing.serial.*; // add the serial library
Serial myPort; // the serial port to monitor
int x = 300;
int y = 300;
float Redx;
float Redy;
PImage img;

void setup() {
  size(600, 600); // set the window size, size() also sets width and height variables
  background(255, 255, 255);
  textSize(30);
  fill(255, 0, 0);
  text("UID: 119005378", 40, 40);
  // first argument = width, second argument = height
  printArray(Serial.list()); // list all available serial ports
  myPort = new Serial(this, Serial.list()[1], 9600); // define input port
  myPort.clear(); // clear the port of any initial junk
  Redx = random(10, 561);
  Redy = random(10, 561);
  fill(255, 0, 0);
}
```

```

img =
loadImage("https://upload.wikimedia.org/wikipedia/commons/thumb/9/98/International_Pok%C3%A9mon_logo.svg/640px-International_Pok%C3%A9mon_logo.svg.png");
}
void draw () {
float distance = dist(Redx, Redy, x, y);

if(distance < 80) {
  fill(0, 255, 0);
  image(img, 100, 100, 250, 100);
}
else {
  fill(255, 255, 255);
  noStroke();
  rect(100, 100, 250, 100);
  fill(255, 0, 0);
}
stroke(0);
ellipse(int(Redx), int(Redy), 80, 80);

if (myPort.available () > 0) { // make sure port is open
String inString = myPort.readStringUntil('\n'); // read input string
if (inString != null) { // ignore null strings
inString = trim(inString); // trim off any whitespace
String[] xyRaw = splitTokens(inString, "\t"); // extract x & y into an array
// proceed only if correct # of values extracted from the string:
if (xyRaw.length == 4) {
int negx = int(xyRaw[0]);
int posy = int(xyRaw[1]);
int posX = int(xyRaw[2]);
int negy = int(xyRaw[3]);
println(posy);
if(negx == 1) {
x = x - 10;
}
if(posy == 1) {
y = y - 10;
}
if(posx == 1) {
x = x + 10;
}
if(negy == 1) {
y = y + 10;
}
}
}

```

```
if (y > 560){  
  y = 560;  
}  
if (y < 40){  
  y = 40;  
}  
if (x > 560){  
  x = 560;  
}  
if (x < 40){  
  x = 40;  
}  
fill(0, 0, 255);  
stroke(0);  
ellipse(x, y, 80, 80); // draw a circle  
}  
}  
}  
}
```