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import processing.serial.*;
Serial port;
boolean odd = true;
boolean win = false;
boolean lose = false;
char input = ' ';
char read;
float i;
int x = 1;
int y = 0;
int[] xco = new int[7];
int[] yco = new int[7];
int[] ylen = new int[7];
int pos=0;
float xpos, ypos;
float xspeed = 5.6; // Speed of the shape
float yspeed = 4.4;//2.2;
int xdirection = 1; // Left or Right
int ydirection = 1; // Top to Bottom
int rad = 10;
color c;
PFont f;

void setup()
{
  port = new Serial(this, "COM10", 9600);
  size(640, 360);
  noStroke();
  frameRate(30);
  ellipseMode(RADIUS);
  // Set the starting position of the shape
  xpos = 30;
  ypos = height/2 - 100;
  c = color(random(125) + 130, random(255), random(255));

  for (int i = 80; i < (width-60); i+=75) {
    int r = int(random(height/2) + (height/2-40));
    if (odd){
      y = 0;
      rect(i,y,25,r);
      odd = false;
      xco[pos] = i;
      yco[pos] = y;
      ylen[pos] = r;
    }
    else{
      y = int(random(height/2)) + 50 ;
      rect(i,y,25,height-y);
      odd= true;
      xco[pos] = i;
      yco[pos] = y;
      ylen[pos] = (height-y);
    }
  }
}

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    }  
    pos++;  
  }  
}
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void draw(){  
  background(50);  
  xdirection = 0;  
  ydirection = 0;  
  fill(c);  
  for (int i = 0; i < 7; i++) {  
    rect(xco[i],yco[i],25,ylen[i]);  
  }  
  rect(width-25, height/2-30, 25,60);  
  if (input == 'w') {  
    ydirection += -1;  
  } else if (input == 's') {  
    ydirection += 1;  
  }  
  if (input == 'a') {  
    xdirection += -1;  
  } else if (input == 'd') {  
    xdirection += 1;  
  }  
  
  if (xpos > width-rad) {  
    xdirection = -1;  
  }  
  if(xpos < rad){  
    xdirection = 1;  
  }  
  if (ypos > height-rad) {  
    ydirection = -1;  
  }  
  if (ypos < rad){  
    ydirection = 1;  
  }  
  // Update the position of the shape  
  xpos = xpos + ( xspeed * xdirection );  
  ypos = ypos + ( yspeed * ydirection );  
  
  if (check(xpos, ypos))  
  {  
    ellipse(xpos, ypos, rad, rad);  
  }  
  else{  
    xpos = 30;  
    ypos = height/2 -100;  
    xdirection = 1;  
    ydirection = 1;  
    ellipse(xpos, ypos, rad, rad);  
    key = ' ';
```

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}

if( input =='p'){
  win = false;
  lose = false;
  println(input);
}

if(win){
  background(255);
  fill(0, 127, 0);
  textSize(40);
  textAlign(CENTER);
  text("You Win!", width/2, height/2);
}

if(lose){
  background(255);
  fill(127,0, 0);
  textSize(40);
  textAlign(CENTER);
  text("You Lose!", width/2, height/2);
}
delay(10);
}

void serialEvent (Serial port)
{
  input = port.readChar();
}

boolean check(float x, float y){
  int xc, yc,yl;
  for(int i=0;i<7;i++)
  {
    xc=xco[i];
    yc=yco[i];
    yl= ylen[i];
    if(x+rad>=xc && x-rad< xc+25 && y+rad>=yc && y-rad< yc + yl){
      lose = true;
      return false;
    }
  }
  if(x+rad>=width-25 && x-rad< width && y+rad>=height/2-30 && y-rad< height/2+30){
    win = true;
  }

  return true;
}

```