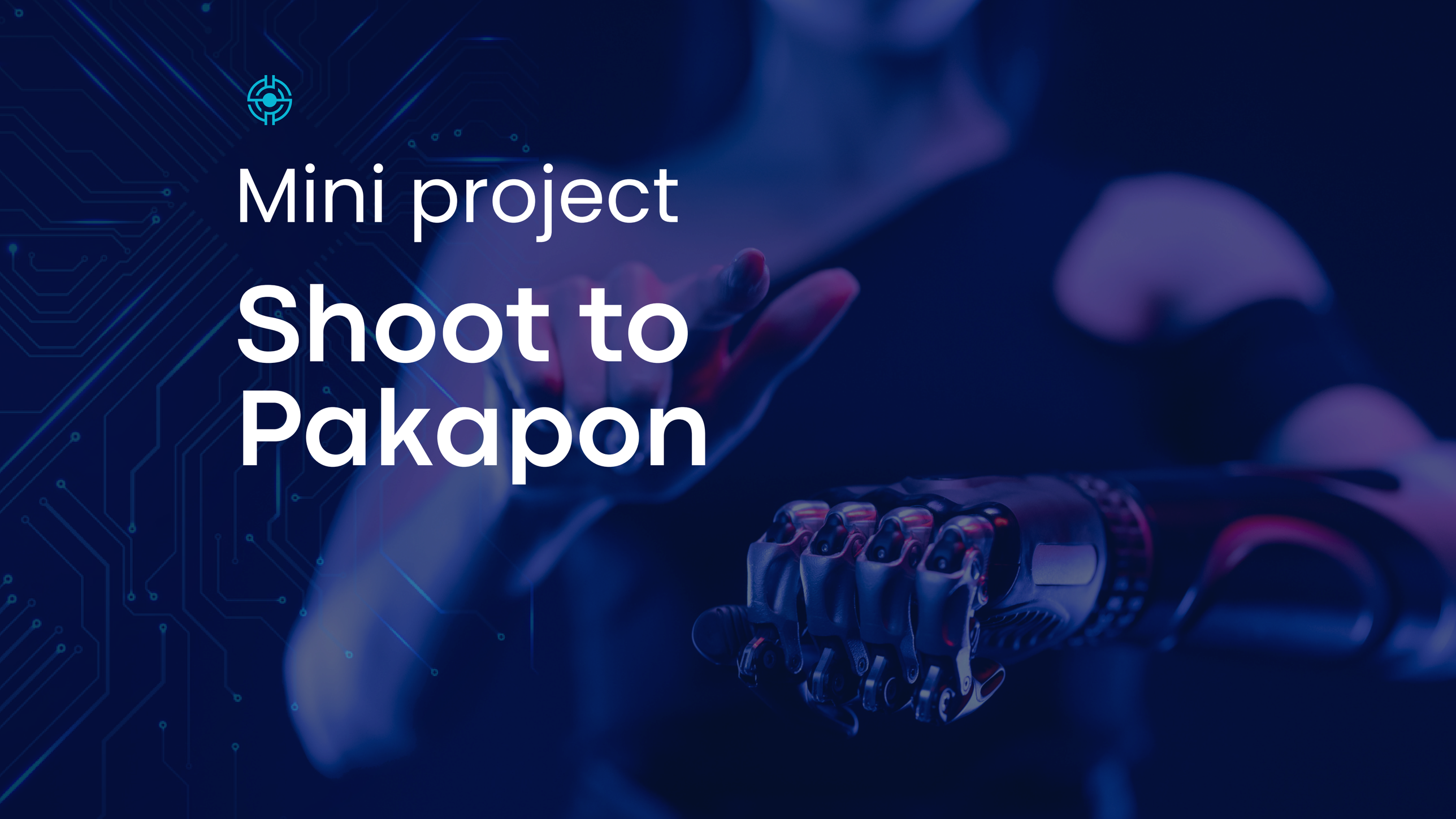
Mini project

Shoot to Pakapon



สมาชิก

นายคมชาญ ยิ่งเจริญ 65120501042

นายธัชกร เจนธรรมคุณ 65120501043

Score: 0

Time: 00:42

Code

code beam | start

```
boolean startGame = false;
boolean gameOver = false;
int playerX, playerY;
int score = 0;
int globalX = 300;
int globalY = 200;
int speed = 1;
PImage img;
int targetSize = 30;
int gameDuration = 45 * 1000; // 45 seconds
int startTime;
boolean canShoot = true; // Variable to check if the player can shoot
ArrayList<Projectile> projectiles = new ArrayList<Projectile>();

void setup() {
  size(600, 700);
  playerX = width / 2;
  playerY = height - 50;
  img = loadImage("Pakkapon.jpg");
}

```

Code

```
21
22 void draw() {
23   if (startGame) {
24     int elapsedTime = millis() - startTime;
25     int remainingTime = gameDuration - elapsedTime;
26
27     if (remainingTime <= 0) {
28       gameOver = true;
29       startGame = false;
30     }
31
32     if (gameOver) {
33       showGameOver();
34     } else {
35       playGame(remainingTime);
36     }
37   } else {
38     if (gameOver) {
39       showGameOver();
40     } else {
41       startScreen();
42     }
43   }
44 }
45
46 void startScreen() {
47   background(0);
48   fill(255);
49   textSize(32);
50   textAlign(CENTER, CENTER);
51   text("Welcome to shoot Pakkapon", width / 2, height / 2 - 40);
```

```
50   textAlign(CENTER, CENTER);
51   text("Welcome to shoot Pakkapon", width / 2,
52   rectMode(CENTER);
53   fill(100, 100, 250);
54   rect(width / 2, height / 2 + 20, 200, 60);
55   fill(255);
56   text("Start Game", width / 2, height / 2 + 2
57 }
```

Code

```
void playGame(int remainingTime) {
  background(220);

  // Draw the gun pointing towards the mouse
  drawGun(playerX, playerY, mouseX, mouseY);

  body(globalX, globalY);
  move();
  bounce();

  fill(0);
  textSize(24);
  textAlign(RIGHT, TOP);
  text("Time: " + nf(remainingTime / 1000 / 60, 2) + ":" + nf((remainingTime / 1000) % 60, 2), width - 10,

  // Update and draw projectiles
  for (int i = projectiles.size() - 1; i >= 0; i--) {
    Projectile projectile = projectiles.get(i);
    projectile.update(); // Update projectile position
    projectile.display(); // Display projectile

    // Check if the projectile reaches the top boundary
    if (projectile.position.y < 0) {
      projectiles.remove(i); // Remove the projectile
    } else {
      // Check collision with target head
      if (dist(projectile.position.x, projectile.position.y, globalX, globalY) < targetSize / 2) {
        // Check if the projectile hits the target head
        score++; // Increase score by 1
```

```

  if (mousePressed && mouseButton == LEFT
    shoot(mouseX, mouseY);
    canShoot = false;
  }

  fill(0);
  textSize(24);
  textAlign(LEFT, TOP);
  text("Score: " + score, 10, 10);
}
```

Code

```
 99 void mouseReleased() {
100   canShoot = true;
101 }
102
103 void mousePressed() {
104   if (!startGame && !gameOver && mouseX > width / 2 - 100 && mouseX < width / 2 + 100 && mouseY > height / 2 - 10 && mouseY < height / 2 + 50) {
105     startGame = true;
106     startTime = millis();
107     score = 0;
108   } else if (gameOver && mouseX > width / 2 - 100 && mouseX < width / 2 + 100 && mouseY > height / 2 + 20 && mouseY < height / 2 + 80) {
109     gameOver = false;
110   }
111 }
112
113 void shoot(int targetX, int targetY) {
114   PVector direction = new PVector(targetX - playerX, targetY - playerY);
115   direction.normalize(); // Normalize the vector to a unit vector
116
117   projectiles.add(new Projectile(new PVector(playerX, playerY), direction));
118 }
```

Code

```
113 void shoot(int targetX, int targetY) {
114   PVector direction = new PVector(targetX - playerX, targetY - playerY);
115   direction.normalize(); // Normalize the vector to a unit vector
116 
117   projectiles.add(new Projectile(new PVector(playerX, playerY), direction));
118 }
119 
120 void keyPressed() {
121   if (keyCode == LEFT) {
122     playerX -= 10;
123   } else if (keyCode == RIGHT) {
124     playerX += 10;
125   }
126 
127   playerX = constrain(playerX, 0, width);
128 }
129 
130 void body(int x, int y) {
131   rectMode(CENTER);
132   noStroke();
133   float scaleFactor = 0.5;
134   int imgWidth = (int)(img.width * scaleFactor);
135   int imgHeight = (int)(img.height * scaleFactor);
136   image(img, x - imgWidth / 2, y - imgHeight / 2, imgWidth, imgHeight);
137 }
138 
```

Code

```
139 void move() {
140   globalX = globalX + speed;
141 }
142 
143 void bounce() {
144   if ((globalX > width) || (globalX < 0)) {
145     speed = speed * -1;
146   }
147 }
148 
149 void showGameOver() {
150   background(0);
151   fill(255);
152   textSize(32);
153   textAlign(CENTER, CENTER);
154   text("Game Over", width / 2, height / 2 - 40);
155   text("Score: " + score, width / 2, height / 2);
156 
157   rectMode(CENTER);
158   fill(100, 100, 250);
159   rect(width / 2, height / 2 + 60, 200, 60);
160 
161   fill(255);
162   text("Restart", width / 2, height / 2 + 60);
163 }
```

Code

```
165 void drawGun(int x, int y, int targetX, int targetY) {
166   float angle = atan2(targetY - y, targetX - x);
167   pushMatrix();
168   translate(x, y);
169   rotate(angle);
170   stroke(0);
171   strokeWeight(10);
172   line(0, 0, 50, 0);
173   popMatrix();
174 }
175 
176 class Projectile {
177   PVector position;
178   PVector velocity;
179   int colorIndex;
180 
181   Projectile(PVector pos, PVector vel) {
182     position = pos;
183     velocity = vel.mult(5);
184     colorIndex = 0;
185   }
186 
```

Code

```
187   void update() {
188     position.add(velocity);
189   }
190
191   void display() {
192     colorMode(HSB, 360, 100, 100);
193     fill(colorIndex, 100, 100);
194     ellipse(position.x, position.y, 10, 10);
195     colorIndex = (colorIndex + 10) % 360;
196   }
197 }
```

ปัญหาที่พบ

Thank you