

桌上冰球



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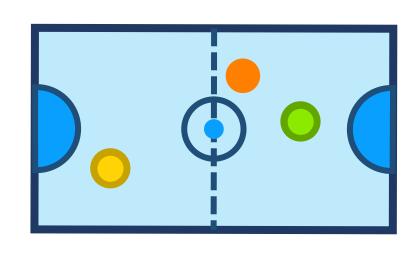


PART 01 遊戲概要

遊戲概要

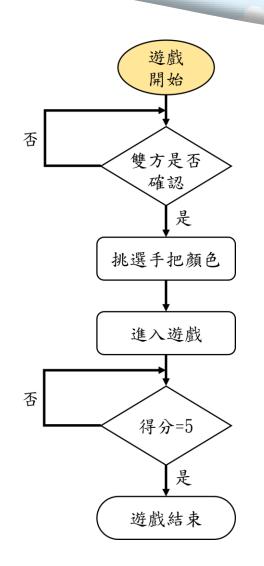
這是一款兩人對戰的遊戲,玩家需要操控自己的搖桿,把冰球推進對方球門就可以得分,最先獲得5分的人就可以取得勝利,在遊戲中可以感受到冰球比賽的激烈氣氛。遊戲畫面簡潔、清晰、逼真,讓玩家可以更沉浸於遊戲之中,享受遊戲帶來的樂趣。







PART 02 遊戲介紹



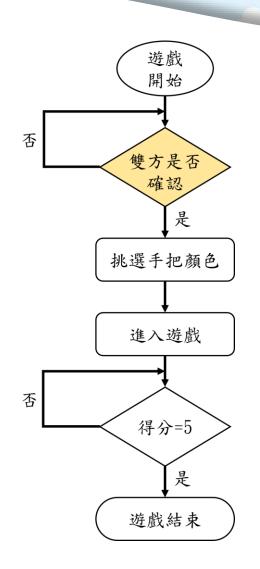
(I) Ji

桌上冰球

遊戲介紹:

- 1. 玩家操作搖桿來控制手把
- 2. 把球打到對方球門即可得一分
- 3. 當一方得到5分,遊戲結束
- 4. 遊戲中可按暫停及重新開始

開始遊戲



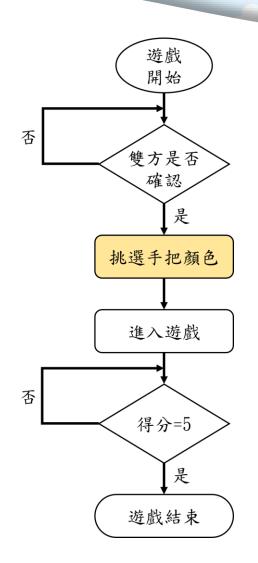
桌上冰球

遊戲介紹:

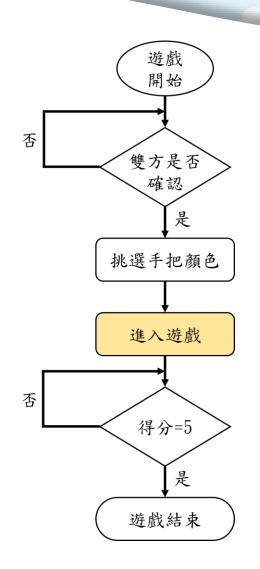
- 1. 玩家操作搖桿來控制手把
- 2. 把球打到對方球門即可得一分
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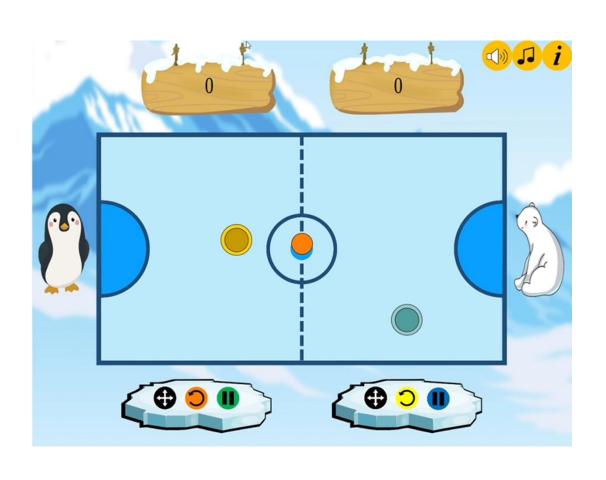


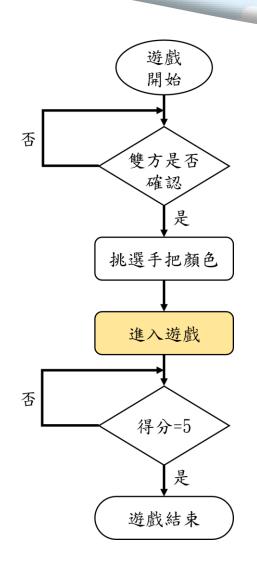
開始遊戲



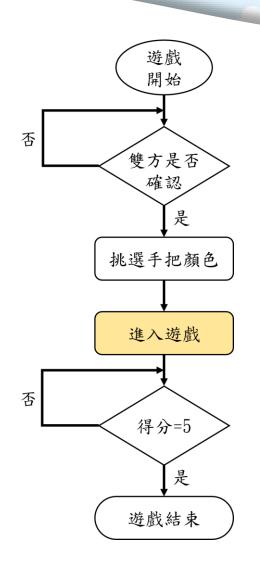




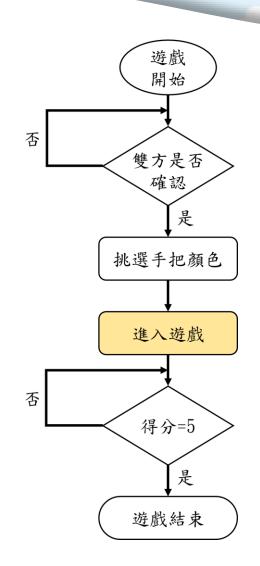


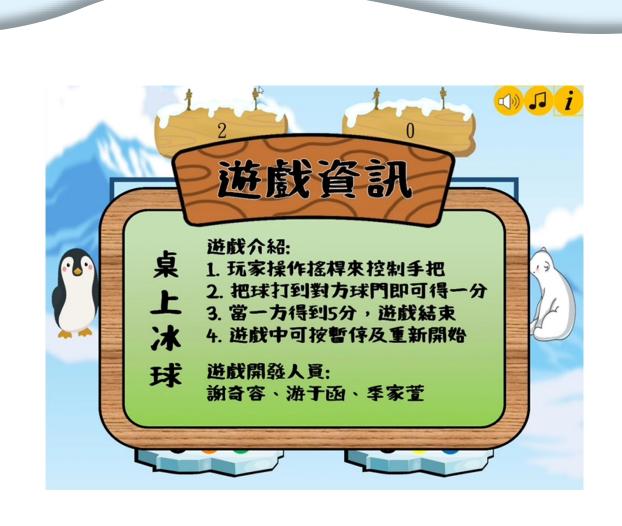


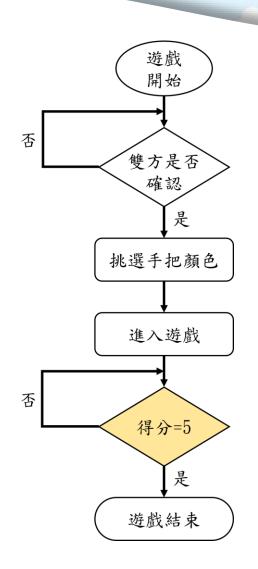


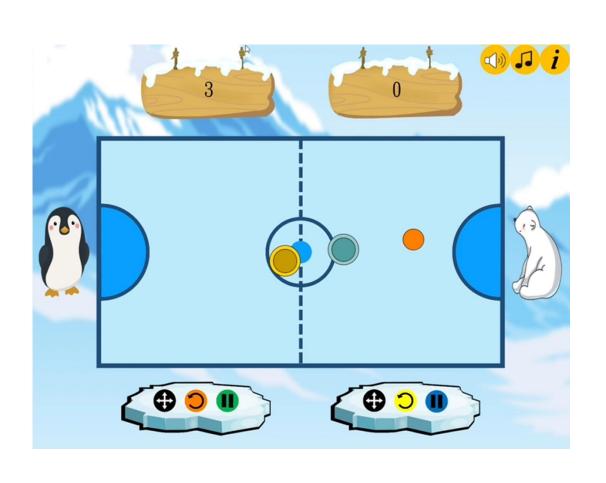


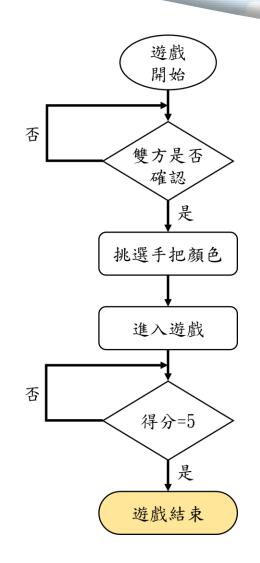










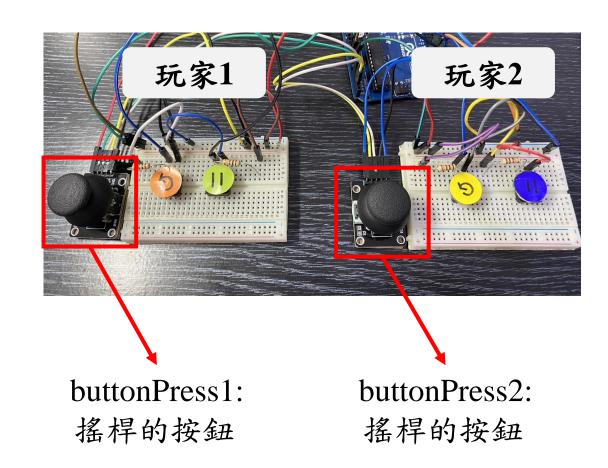






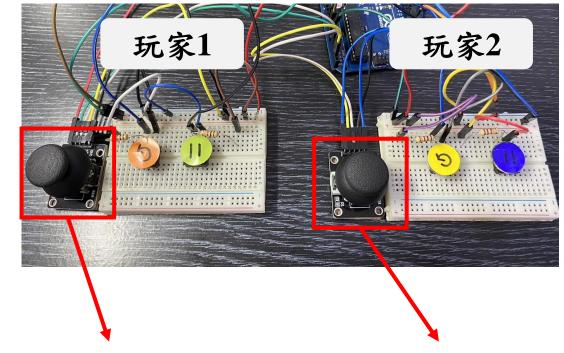
程式碼—arduino確認鍵讀取

```
if (buttonPress1 == LOW)
    Serial.print(1,DEC);
else if(buttonPress2 == LOW)
    Serial.print(2,DEC);
else
    Serial.print("");
Serial.print(",");
```



程式碼—arduino搖桿讀取

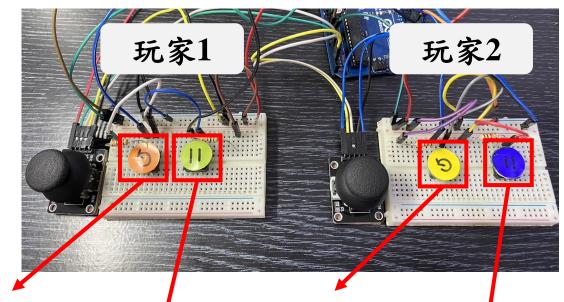
```
Serial.print(x1 ,DEC);
Serial.print(",");
Serial.print(y1,DEC);
Serial.print(",");
Serial.print(x2 ,DEC);
Serial.print(",");
Serial.print(y2,DEC);
Serial.print(",");
```



x1:搖桿的x軸座標 y1:搖桿的y軸座標 x2:搖桿的x軸座標 y2:搖桿的y軸座標

程式碼—arduino功能鍵讀取

```
if (b1 == false ) {
    Serial.print(1, DEC);
else if (b2 == false ) {
    Serial.print(2,DEC);
 else if (b3 == false ) {
    Serial.print(3,DEC);
 else if (b4 == false ) {
    Serial.print(4, DEC);
 else
   Serial.print("");
```



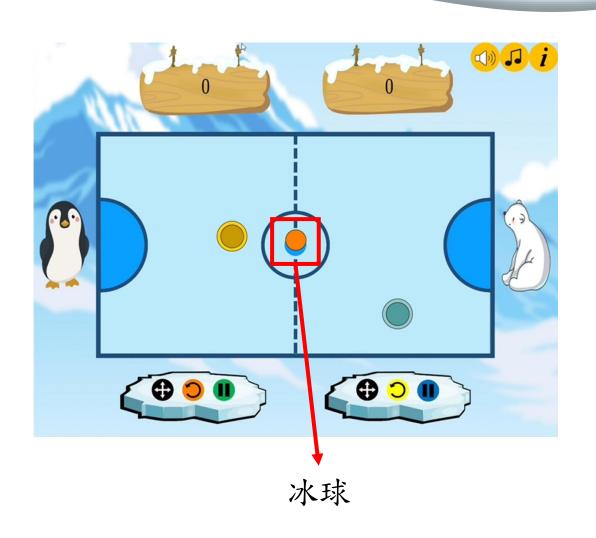
bl:重新開始的按鈕

b3:重新開始的按鈕

b2:遊戲暫停的按鈕 b4:遊戲暫停的按鈕

● 程式碼—冰球的移動

```
void move(){
  xPosition += xSpeed;
  yPosition += ySpeed;
  xSpeed *= 0.993;
  ySpeed *= 0.993;
}
```



程式碼—碰撞

```
void collision(){ //碰撞
       float d1 = dist(player1. xPosition, player1. yPosition, puck. xPosition, puck. yPosition);
1260
       float d2 = dist(player2. xPosition, player2. yPosition, puck. xPosition, puck. yPosition);
1261
       if(puckShow <= 0){
1262
         if(d1 < (player1, outDiameter / 2 + puck, diameter / 2)){
1263
           int dx = player1. xPosition - puck. xPosition;
1264
           int dy = player1. yPosition - puck. yPosition;
1265
           puck. xSpeed = -dx * 0.4;
1266
           puck. ySpeed = -dy * 0.4;
1267
           collisionSound.play();
1268
1269
         if(d2 < (player2. outDiameter / 2 + puck. diameter / 2)){
1270
           int dx = player2. xPosition - puck. xPosition;
1271
           int dy = player2. yPosition - puck. yPosition;
1272
           puck. xSpeed = -dx * 0.4;
1273
           puck. ySpeed = -dy * 0.4;
1274
           collisionSound.play();
1275
1276
          if(puck, xPosition + puck, xSpeed > gameRight - puck, diameter/2 | | puck, xPosition + puck, xSpeed < gameLeft + puck, diameter/2){
1277
           puck. xSpeed = -puck. xSpeed;
1278
           collisionSound.play();
1279
1280
```

程式碼—碰撞

```
if(puck.yPosition + puck.ySpeed > gameBottom - puck.diameter/2 || puck.yPosition + puck.ySpeed < gameTop + puck.diameter/2){
1281
           puck. ySpeed = -puck. ySpeed;
1282
           collisionSound.play();
1283
1284
1285
       if(dist(puck.xPosition, puck.yPosition, doorLeft[0], doorLeft[1]) < doorDiameter){</pre>
1286
         score2 += 1;
1287
         scoreSound.play();
1288
         puck. xPosition = canvasWidth * 2 / 5;
1289
         puck. yPosition = canvasHeight / 2;
1290
         puck. xSpeed = 0;
1291
         puck. ySpeed = 0;
1292
         puckShow = 50;
1293
1294
```

● 程式碼—碰撞

```
if(score2 == 5){
1295
         page = 3;
1296
         winner = 1;
1297
         result1 = 0;
                                                                                                          if(score1 == 5){
                                                                                                  1313
1298
        result2 = 0;
1299
                                                                                                             page = 3;
                                                                                                  1314
        okl = false;
1300
                                                                                                             winner = 0;
                                                                                                  1315
        ok2 = false;
1301
                                                                                                            result1 = 0;
                                                                                                  1316
         puckShow = 0;
1302
                                                                                                            result2 = 0;
                                                                                                  1317
1303
       if(dist(puck. xPosition, puck. yPosition, doorRight[0], doorRight[1]) < doorDiameter){
1304
                                                                                                             okl = false;
                                                                                                  1318
         score1 += 1;
1305
                                                                                                  1319
                                                                                                             ok2 = false;
         scoreSound.play();
1306
                                                                                                             puckShow = 0;
                                                                                                  1320
         puck. xPosition = canvasWidth * 3 / 5;
1307
                                                                                                  1321
         puck.yPosition = canvasHeight / 2;
1308
         puck. xSpeed = 0;
1309
                                                                                                  1322
         puck. ySpeed = 0;
1310
         puckShow = 50;
1311
1312
```



謝奇容

Processing程式撰寫 遊戲整合 影片錄製、剪輯

Processing畫面設計 遊戲規則、音效設計 Word、PPT製作



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硬體採買、組裝 Arduino程式撰寫 Word製作



● Demo—processing版

實際Demo

Demo—p5.js版

操作方式

玩家1 玩家2 WASD 上下左右 暫停E 暫停ctrl 重來Q 重來shift 確認X 確認enter 網址:https://reurl.cc/7RALdy

QRCode:

