

## 期末報告

班級、姓名、學號：電機一 B 王子文 11050048A

題目名稱：尋找幸運狗狗

程式設計理念敘述：

這是一款機率性的翻卡遊戲，測試當下的幸運程度，哭臉代表沒有遇到，狗狗代表幸運，狗狗越多越幸運，反之不幸運

**Python** 程式(附程式且需解釋程式)：

```
import pygame
import sys
from pygame.locals import *
import numpy as np

class Card(pygame.sprite.Sprite):
    def __init__(self, x, y, card_state):
        self.image = pygame.image.load('C://Users//black//Desktop//期末作業//14.jpg')
        self.image = pygame.transform.scale(self.image, (143, 138))
        width, height = self.image.get_size()
        self.rect = (x, y, width, height)
        self.card_state = card_state
    def update(self):

        if self.card_state == 2:
            self.image = pygame.image.load('C://Users//black//Desktop//期末作業//12.jpg')
            self.image = pygame.transform.scale(self.image, (143, 138))
        if self.card_state == 3:
            self.image = pygame.image.load('C://Users//black//Desktop//期末作業//13.jpg')
            self.image = pygame.transform.scale(self.image, (143, 138))
```

```
class Game:
```

```
    def __init__(self):
```

```
        pygame.init()
```

```
        self.screen = pygame.display.set_mode((900, 600))
```

```
        pygame.display.set_caption("尋找幸運狗狗")
```

```
        self.clock = pygame.time.Clock()
```

```
        self.card_nums = 6
```

```
        self.points = self.all_point()
```

```
        self.click_list = []
```

```
        self.win_list = list(np.random.randint(0, 3, 6))
```

```
    def set_bg(self):
```

```
        bg = pygame.image.load('C://Users//black//Desktop//期末作業//01.png')
```

```
        self.screen.blit(bg, (0, 0))
```

```
    def all_point(self):
```

```
        points = []
```

```
        for num in range(3 * 2):
```

```
            if num // 3 == 0:
```

```
                x = num * 300 + 40
```

```
                y = 45
```

```
            elif num // 3 == 1:
```

```
                x = (num - 3) * 300 + 40
```

```
                y = 305
```

```
            points.append((x, y))
```

```
        return points
```

```
    def set_card(self):
```

```
        for i, num in enumerate(self.points):
```

```
            x, y = num
```

```
            card_state = 1
```

```
            # 卡片是否被點選
```

```

        if i in self.click_list:
            card_state = 2
        if i in self.click_list and self.win_list[i] == 1:
            card_state = 3

        card = Card(x, y, card_state)
        card.update()
        self.screen.blit(card.image, card.rect)

    def run(self):

        while True:
            self.clock.tick(60)
            for event in pygame.event.get():
                if event.type == QUIT:
                    pygame.quit()
                    sys.exit()

                if event.type == MOUSEBUTTONDOWN:
                    mosx, mosy = event.pos
                    self.mouse_card(mosx, mosy)
            self.set_bg()
            self.set_card()

            pygame.display.update()

    def mouse_card(self, mosx, mosy):
        for i, (x, y) in enumerate(self.points):

            if (mosx >= x and mosx <= (x + 250)) and (mosy >= y and mosy <= (y +
250)):

                print("翻牌座標", i)
                self.click_list.append(i)

if __name__ == '__main__':
    g = Game()
    g.run()

```

代碼解釋：

D:\python\期末作業\完成檔.py

完成檔.py X

```
1 import pygame
2 import sys
3 from pygame.locals import *
4 import numpy as np
5
6 class Card(pygame.sprite.Sprite):
7     def __init__(self, x, y, card_state):
8         self.image = pygame.image.load('D://python//期末作業//14.jpg')
9         self.image = pygame.transform.scale(self.image, (143, 138))
10        width, height = self.image.get_size()
11        self.rect = (x, y, width, height)
12        self.card_state = card_state
13    def update(self):
14
15        if self.card_state == 2:
16            self.image = pygame.image.load('D://python//期末作業//12.jpg')
17            self.image = pygame.transform.scale(self.image, (143, 138))
18        if self.card_state == 3:
19            self.image = pygame.image.load('D://python//期末作業//13.jpg')
20            self.image = pygame.transform.scale(self.image, (143, 138))
21
22
23
24
25 class Game:
26     def __init__(self):
27         pygame.init()
28         self.screen = pygame.display.set_mode((900, 600))
29         pygame.display.set_caption("尋找幸運狗狗")
30         self.clock = pygame.time.Clock()
31
32         self.card_nums = 6
33         self.points = self.all_point()
34         self.click_list = []
35         self.win_list = list(np.random.randint(0, 3, 6))
36
37     def set_bg(self):
38         bg = pygame.image.load('D://python//期末作業//01.png')
39
40         self.screen.blit(bg, (0, 0))
41
42     def all_point(self):
43         points = []
44
45         for num in range(3 * 2):
46             if num // 3 == 0:
47                 x = num * 300 + 40
48                 y = 45
49             elif num // 3 == 1:
50                 x = (num - 3) * 300 + 40
51                 y = 145
52             elif num // 3 == 2:
53                 x = (num - 6) * 300 + 40
54                 y = 245
```

31 mode

宣告變數

圖檔位置

圖在程式內大小

圖檔位置

圖檔位置

卡=2

卡=3 把卡換成代數在程式

圖在程式內大小

設定機率翻上

卡片矩陣

圖檔位置

口口口 有幾張卡和位置

卡片的座標

封裝座標計算

```

49         elif num // 3 == 1:
50             x = (num - 3) * 300 + 40
51             y = 305
52             points.append((x, y))
53     return points
54
55     def set_card(self):
56
57         for i, num in enumerate(self.points):
58             x, y = num
59             card_state = 1
60             # 卡片是否被點選
61             if i in self.click_list:
62                 card_state = 2
63             if i in self.click_list and self.win_list[i] == 1:
64                 card_state = 3
65
66             card = Card(x, y, card_state)
67             card.update()
68             self.screen.blit(card.image, card.rect)
69
70
71
72

```

卡片設定

卡片是否點選

```

72     def run(self):
73
74         while True:
75             self.clock.tick(60)
76             for event in pygame.event.get():
77                 if event.type == QUIT:
78                     pygame.quit()
79                     sys.exit()
80
81                 if event.type == MOUSEBUTTONDOWN:
82                     mosx, mosy = event.pos
83                     self.mouse_card(mosx, mosy)
84
85             self.set_bg()
86             self.set_card()
87
88             pygame.display.update()
89
90
91
92

```

啟動後再執行的操作

```

90     def mouse_card(self, mosx, mosy):
91         for i, (x, y) in enumerate(self.points):
92             if (mosx >= x and mosx <= (x + 250)) and (mosy >= y and mosy <= (y + 250)):
93                 print("翻牌座標", i)
94                 self.click_list.append(i)
95
96
97
98

```

點選

物件被點選位置

```

96
97
98
99     if __name__ == '__main__':
100         g = Game()
101         g.run()

```

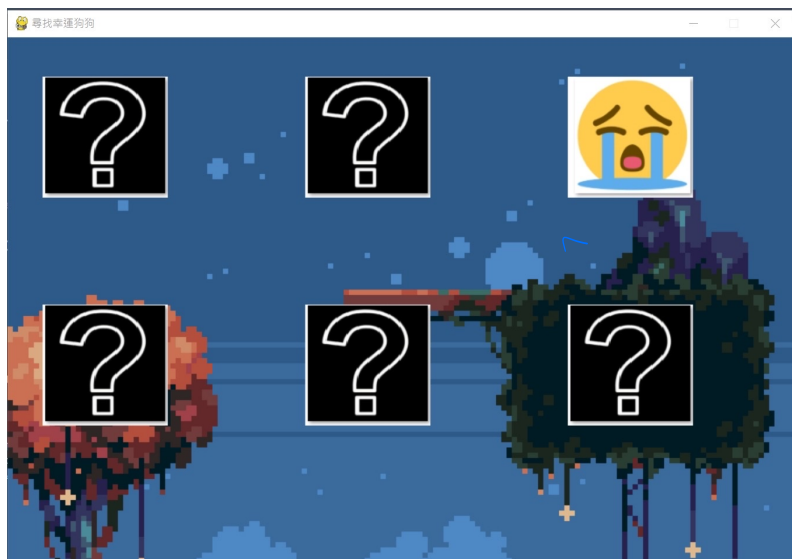
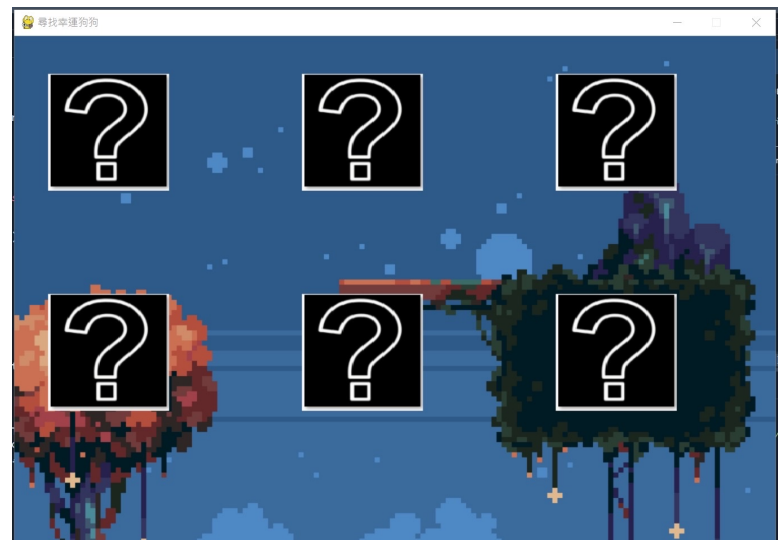
mode 值

→ 上面的程式

不執行防衝突  
讓行的不該執行

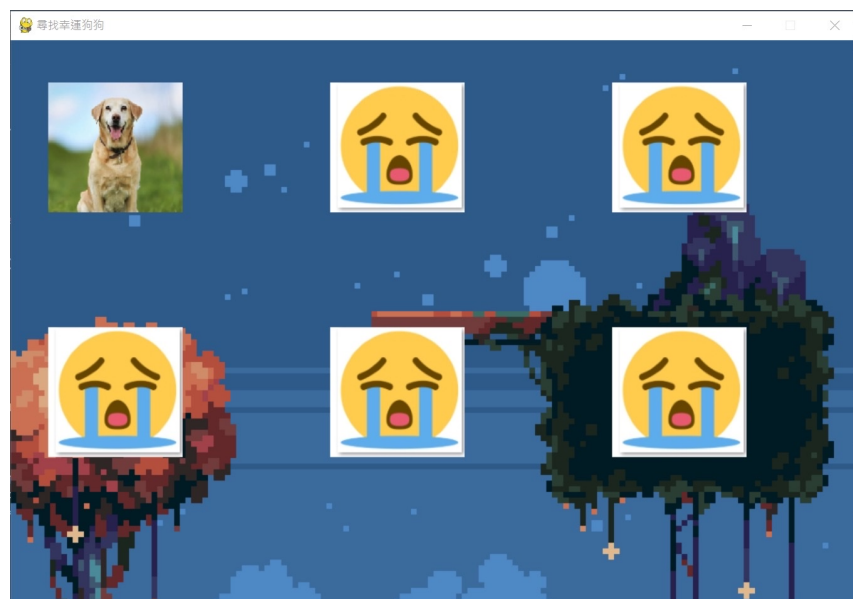
結果(截圖)：

Step 1



Step 2

Step 3



參考文獻：<https://www.gushiciku.cn/pl/a2M8/zh-tw>

成品影片撥放：[https://youtu.be/SSRG\\_2fJWW8](https://youtu.be/SSRG_2fJWW8)

製作報告者參考文獻資料而製作成此一報告的比例有多少(0~100%)：

45%

程式有4成相似語法  
但遊戲的玩法和元件完全不同  
包括介面也完全不同