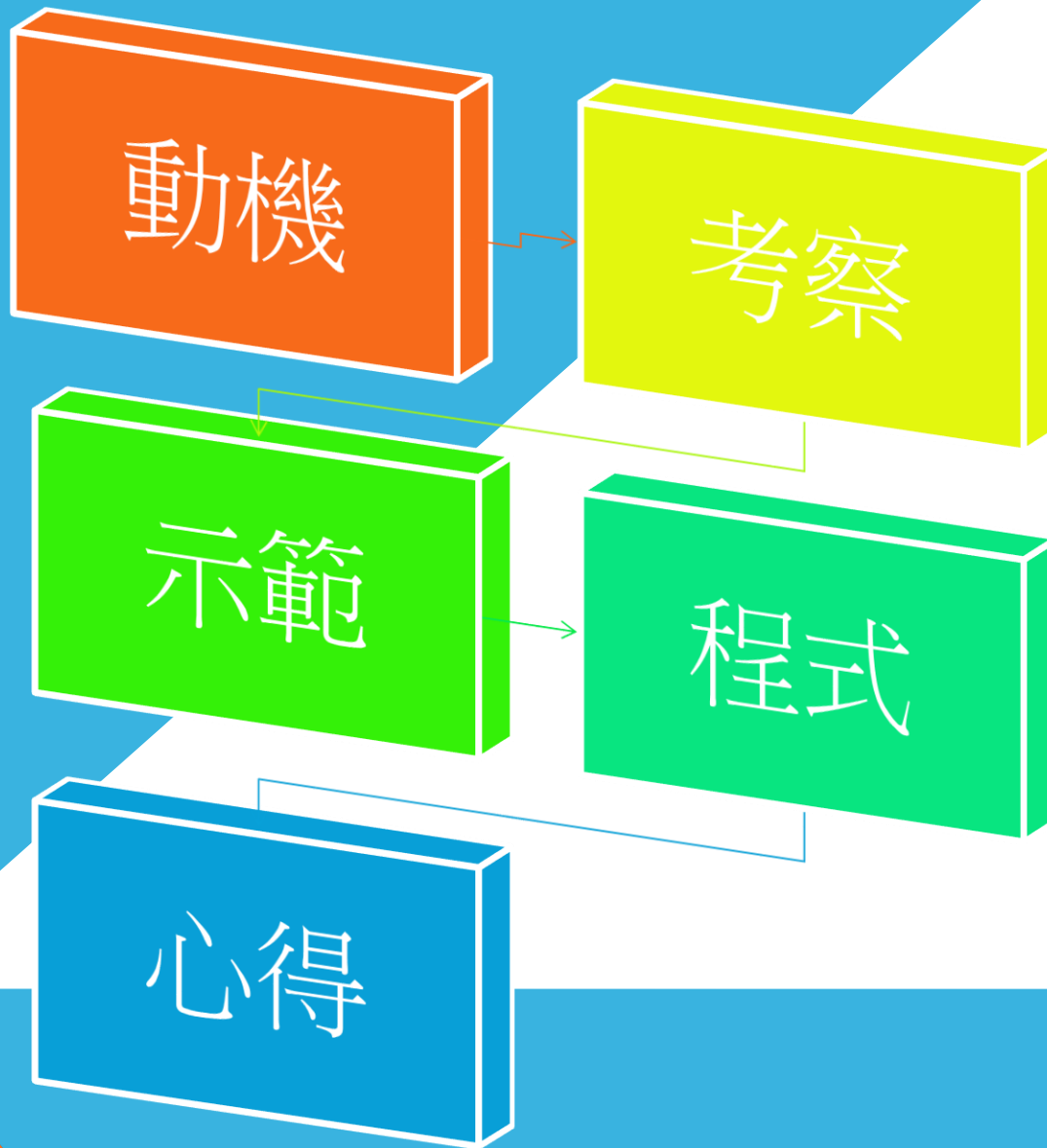


# 智能棒棒棒



大綱





動機

# 肩部關節傷害-現代人的通病

成因：不良姿勢

症狀：肌肉痠痛、肌腱

發炎、活動遲鈍

治療方式：姿勢調整、

復健、電療

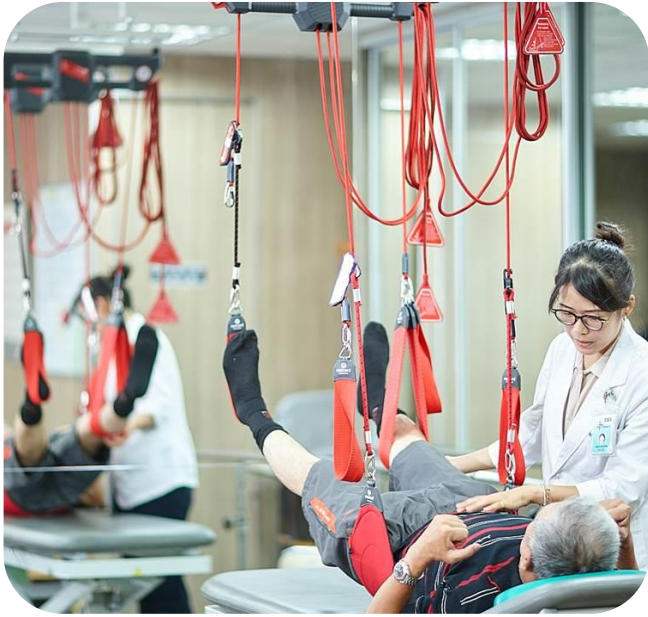




考察



## 對照



### 以往的復健

- 單一化
- 細緻度不足



### 智能棒復健

- 數據化
- 變化較多



示範



程式



# PYTHON

```
class Player(pygame.sprite.Sprite):
    """
    Spawn a player
    """
    def __init__(self):
        pygame.sprite.Sprite.__init__(self)
        self.movex = 0
        self.movey = 0
        self.frame = 0
        self.score = 0
        self.health = 10
        self.images = []
        for i in range(1, 13):
            img = pygame.image.load(os.path.join('heroSprites', 'hero00'+str(i)+''.png')).convert()
            ALPHA = (0, 0, 0)
            img.convert_alpha()
            img.set_colorkey(ALPHA)
            self.images.append(img)
            self.image = self.images[0]
            self.rect = self.image.get_rect()

    def control(self, x, y):
        """
        control player movement
        """
        self.movex += x
        self.movey += y

    def update(self, stats):
        """
        Update sprite position
        """

        self.rect.x = self.rect.x + self.movex
        self.rect.y = self.rect.y + self.movey

        # moving left
        if self.movex < 0:
            self.frame += 1
            if self.frame > 3*ani:
                self.frame = 0
            self.image = pygame.transform.flip(self.images[self.frame // ani], True, False)

        # moving right
```

```
print(self.health)

class Enemy(pygame.sprite.Sprite):
    """
    Spawn an enemy
    """
    def __init__(self, x, y, img):
        pygame.sprite.Sprite.__init__(self)
        self.image = pygame.image.load(os.path.join('demonSprites', img))
        self.image.convert_alpha()
        self.image.set_colorkey(ALPHA)
        self.rect = self.image.get_rect()
        self.rect.x = x
        self.rect.y = y
        self.counter = 0

    def move(self):
        """
        enemy movement
        """
        distance = 300
        speed = 2

        if self.counter >= 0 and self.counter <= distance:
            self.rect.y += speed
        elif self.counter >= distance and self.counter <= distance*2:
            self.rect.y = 0
        else:
            self.counter = 0

        self.counter += 1

class Data():
    def appear(position, x, y):
        if position == 1:
            enemy = Enemy(x, y, 'assets100V20225.png')
            enemy_list = pygame.sprite.Group()
            enemy_list.add(enemy)
        if position == 2:
            enemy = Enemy(x, y, 'azazel_finalMode10001.png')
            enemy_list = pygame.sprite.Group()

            enemy_list.add(enemy)
        return enemy_list
```

```

self.score = self.Score

class Scoreboard:

    def __init__(self, setting, screen, player):
        self.screen = screen
        self.screen_rect = screen.get_rect()
        self.player = player

        self.text_color = (200, 200, 200)
        self.font = pygame.font.SysFont("SimHei", 40)
        self.prep_score()

    def prep_score(self):
        self.score_image = self.font.render('score:'+ str(self.player.score), True, self.text_color)

        self.score_rect = self.score_image.get_rect()
        self.score_rect.right = self.screen_rect.right - 20
        self.score_rect.top = 20
        self.show_score()

    def show_score(self):
        self.screen.blit(self.score_image, self.score_rect)

...
Setup
...
setting = Settings()
backdrop = pygame.image.load(os.path.join('backdrop', 'backdrop.jpg'))
clock = pygame.time.Clock()
pygame.init()
backdropbox = world.get_rect()
main = True

player = Player() # spawn player
player.rect.x = 640 # go to x
player.rect.y = 400 # go to y
player_list = pygame.sprite.Group()
player_list.add(player)
steps = 10

enemy = Enemy(490, 0, 'azazel_finalMode10001.png')
enemy_list = pygame.sprite.Group()
enemy_list.add(enemy)

```

```

self.score = self.Score

class Scoreboard:

    def __init__(self, setting, screen, player):
        self.screen = screen
        self.screen_rect = screen.get_rect()
        self.player = player

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```



圖表

數據

設定

圖表

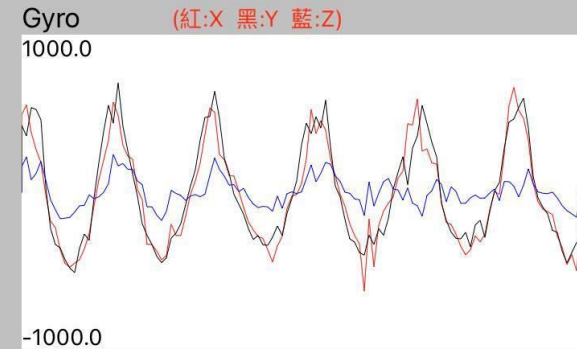
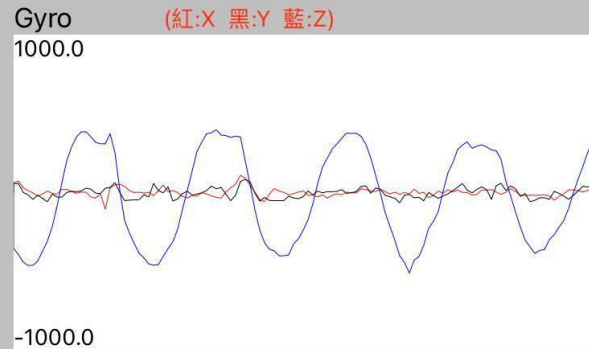
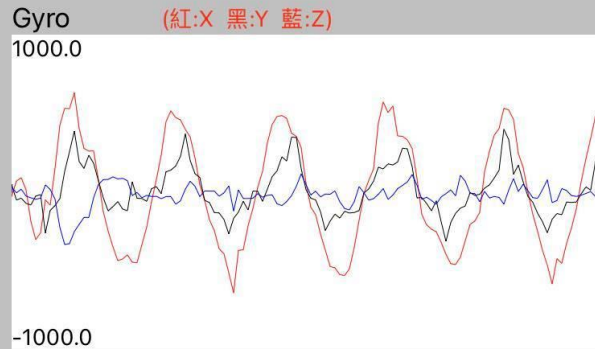
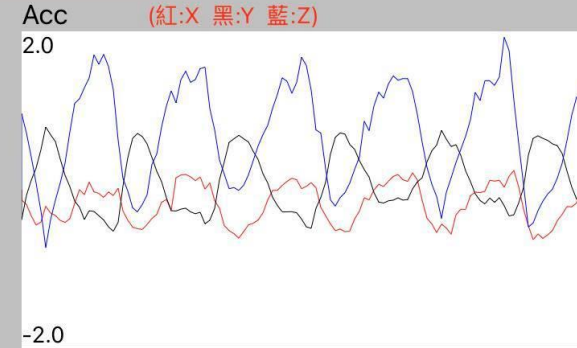
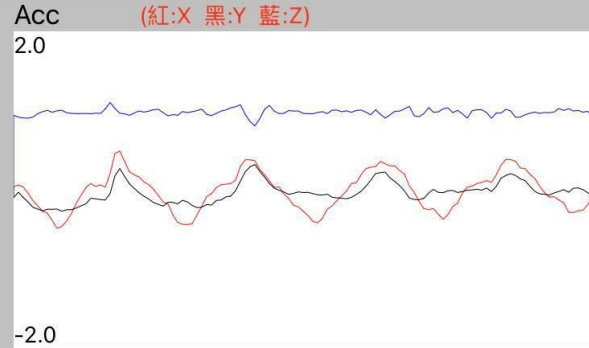
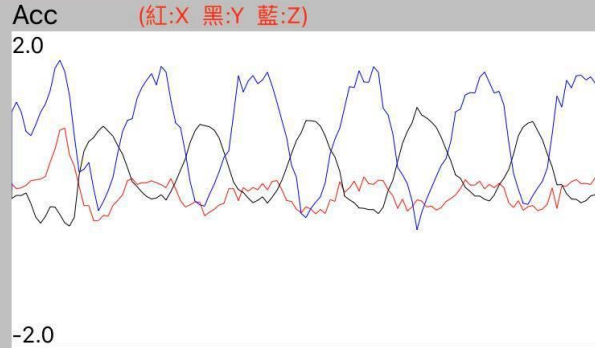
數據

設定

圖表

數據

設定



Mag (紅:X 黑:Y 藍:Z)

Stored Count : 0

Current Count : 0

Mag (紅:X 黑:Y 藍:Z)

Stored Count : 0

Current Count : 0

Mag (紅:X 黑:Y 藍:Z)

Stored Count : 0

Current Count : 0





心得

# 心得

這個輔助復健的遊戲看似簡陋、簡單，但在製作過程中遇到不少的困難，主要有以下幾點：

- ◆ 升學壓力
- ◆ 時間衝突
- ◆ 技術不足
- ◆ 軟體版本

最後，雖然作品本身品質因技術與時間上問題而不如預期，但在這過程中我們也學到很多經驗，希望能利用這次學到的經驗讓自己能更加進步。