零基础学python

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策划

电脑游戏自1972年由威尔•克劳舍编写的一段简单的FORTRAN程序开始，已经历了数十年风风雨雨了。从最开始避开陷阱的简单地图，到今天即时战略、角色扮演、经营策略、休闲养成等各种类型的游戏；从2D 到3D，游戏无论在技术上还是画面上都以惊人的速度不断突破。游戏的娱乐性及其多样性是其最吸引人的地方。但由于现在能力有限，我们决定开发一个简单的小游戏。

受到颠球游戏的启发，我们打算做一个类似的接东西的小游戏。漫长的讨论下，我们敲定了故事背景发生在太空下。

分工

刘勇、张思嘉、曹昱

- 绘制图形
- 程序代码实现
- 测试
- 调试

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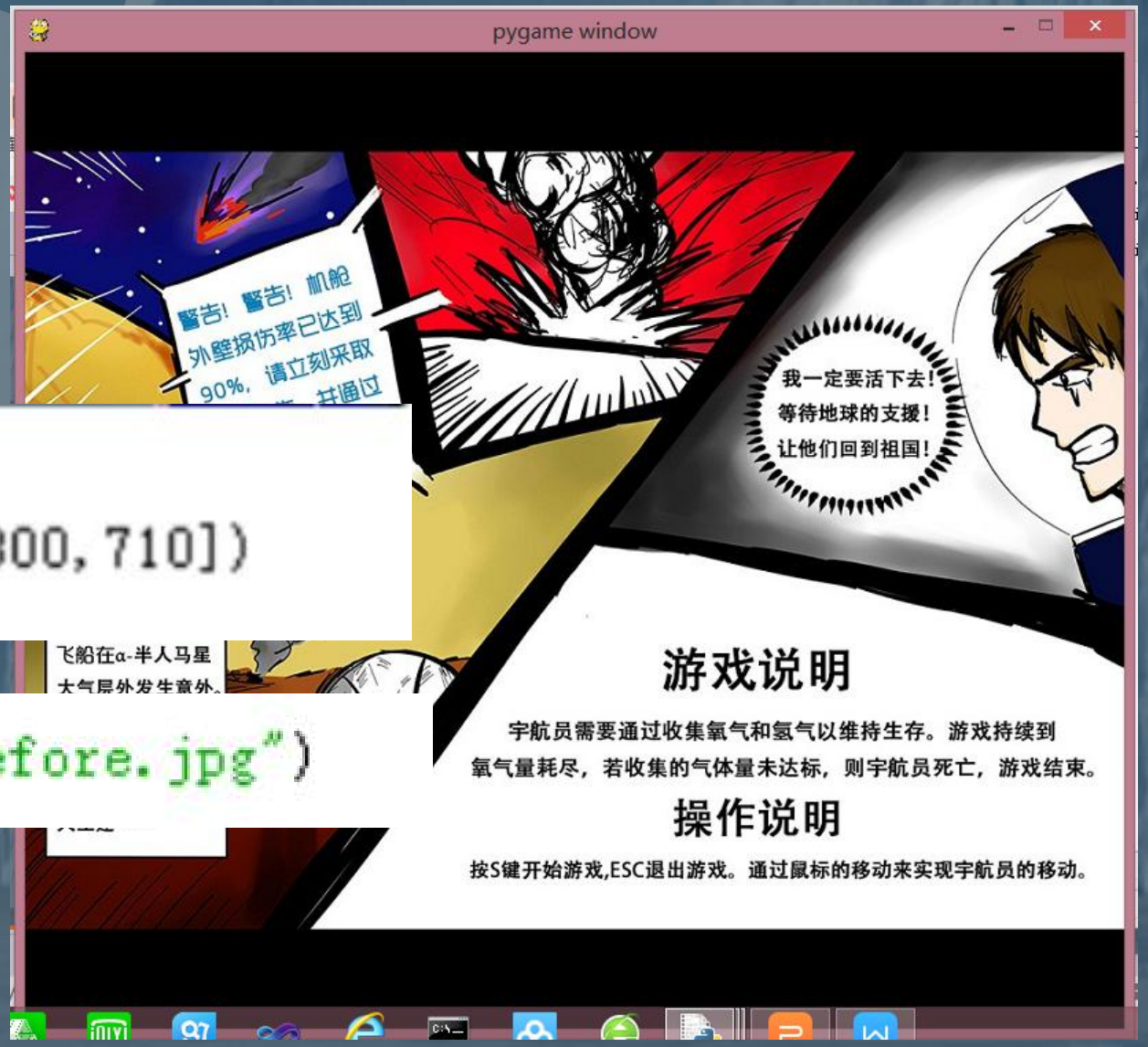
- 策划
- PPT制作

项目功能实现

游戏开始的界面：

```
#screen
screen = pygame.display.set_mode([800,710])
```

```
start_image = pygame.image.load("before.jpg")
```



项目功能实现

游戏过程中的界面：


```
#background
background = pygame.Surface(screen.get_size())
bg_image = pygame.image.load("background.jpg")
background.blit(bg_image, [0,0])
```

项目功能实现

定义气体对象：

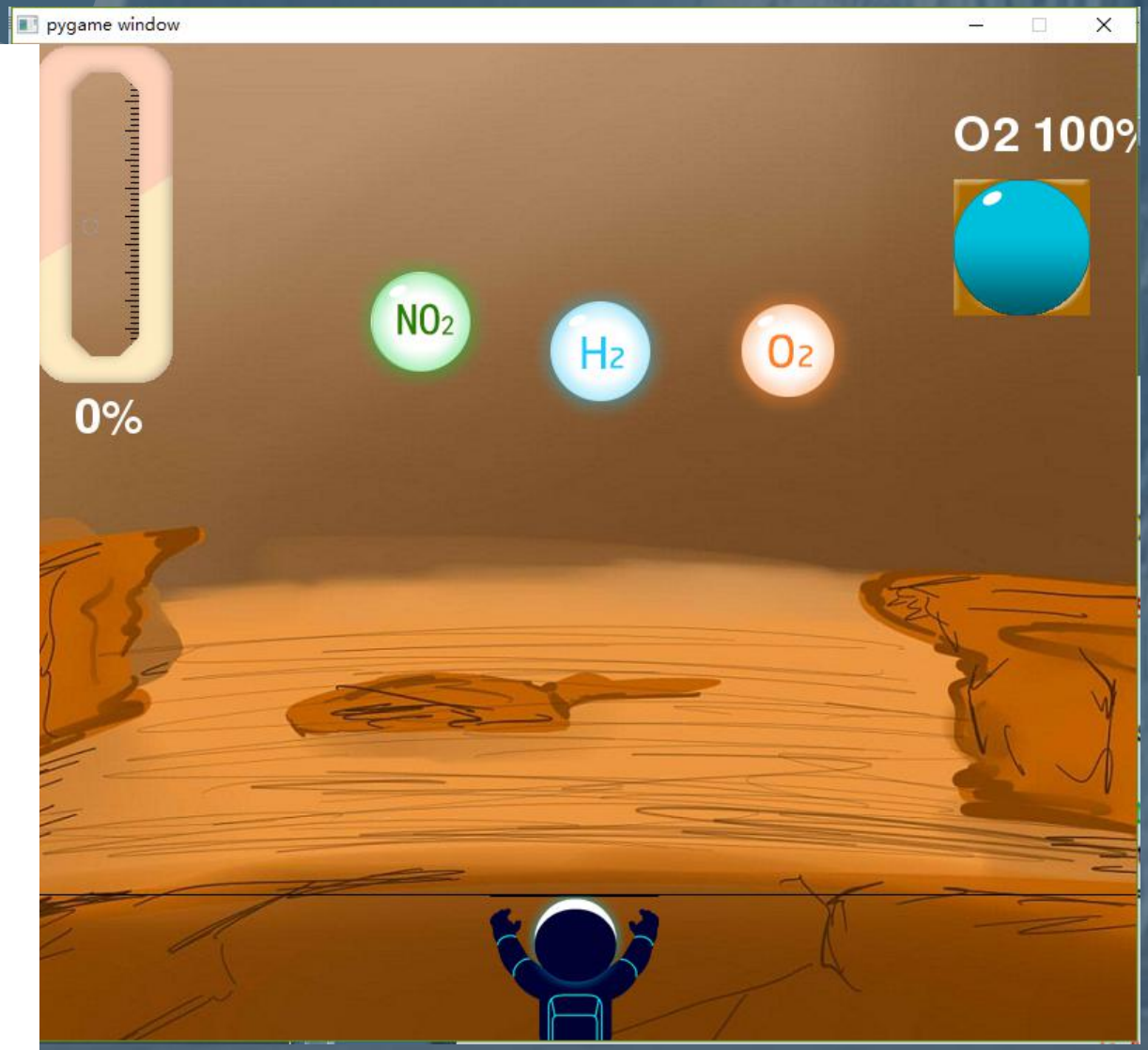
```
class Ball3(pygame.sprite.Sprite):

    def restart(self):
        self.rect.left = randint(0,540)
        self.rect.top = 0
        self.speed = [0,6]     #二氧化氮速度从这里改

    def __init__(self,speed,location):
        pygame.sprite.Sprite.__init__(self)

        self.image=pygame.image.load('No2.png')
        self.rect = self.image.get_rect()
        self.rect.left, self.rect.top = location
        self.speed = speed

    def move(self):
        if self.rect.top<510:     #二氧化氮碰撞位置从这里改
            newpos = self.rect.move(self.speed)
            self.rect = newpos
        else:
            self.restart()
```



气体的实例化

```
my_ball1 = Ball1([0,8],[randint(0,540),0])    #随机生成的速度和位置
my_ball2 = Ball2([0,8],[randint(0,540),0])
my_ball3 = Ball3([0,7],[randint(0,540),0])

# create my objects

goodball_group = pygame.sprite.Group()
niceball_group = pygame.sprite.Group()
niceball_group.add(my_ball1)
goodball_group.add(my_ball2)

badball_group = pygame.sprite.Group()
badball_group.add(my_ball3)
```

气体的加分机制

```
    if pygame.sprite.spritecollide(paddle, niceball_group, False):
            splat.play()
            score += 6
    if pygame.sprite.spritecollide(paddle, goodball_group, False):
            splat.play()
            score += 5
    if pygame.sprite.spritecollide(paddle, badball_group, False):
            splat.play()
            if score>=7:
                score -= 7
            else:
                score=0
```

接受板的类

```
class Paddle(pygame.sprite.Sprite):
        # initializer
        def __init__(self, location):
                # call super initializer
                pygame.sprite.Sprite.__init__(self)

                image_surface = pygame.surface.Surface([120, 2])  # 设定绘制表面
                image_surface.fill([0, 0, 0,0])

                self.image = image_surface.convert()  # 将绘制表面转换成图像(球拍)
                self.rect = self.image.get_rect()
                self.rect.left, self.rect.top = location
```

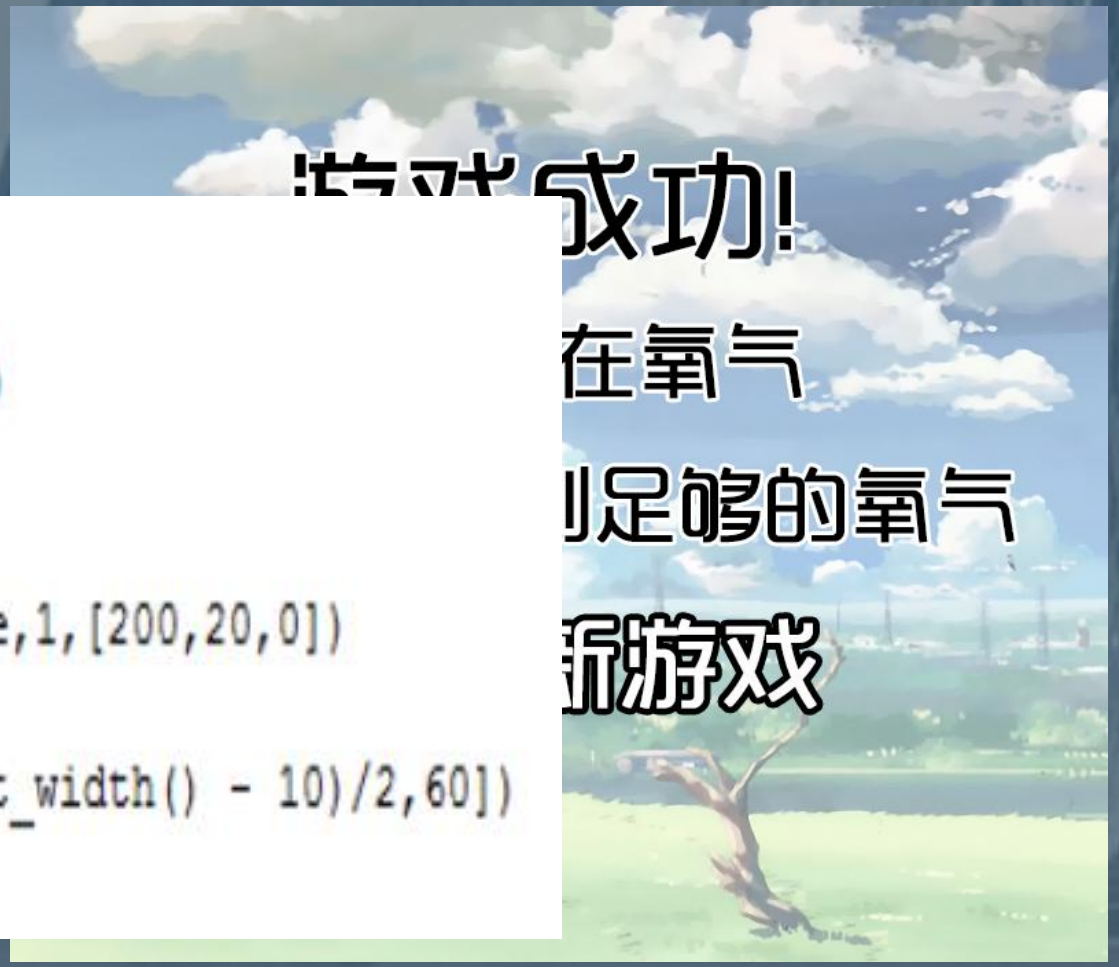
接受板的实例化

```
# create my paddle
paddle = Paddle([(800-120)/2, 710-104])
people = People([(800-120)/2, 710-103])
```

项目功能实现

游戏成功时的结束界面：

```
if seconds <= 0:
    if score >=100:
        sucess_image = pygame.image.load("success.jpg")
        screen.blit(sucess_image,[0,0])
        score_font = pygame.font.Font(None,50)
        score_text = score_font.render("SOCRE %d"%score,1,[200,20,0])
        width =screen.get_width()
        screen.blit(score_text,[(width - score_text.get_width() - 10)/2,60])
```



项目功能实现

游戏失败时的结束界面：

```
else:
    fail_image = pygame.image.load("fail.jpg")
    screen.blit(fail_image,[0,0])
    score_font = pygame.font.Font(None,50)
    score_text = score_font.render("SOCRE %d"%score,1,[200,20,0])
    width =screen.get_width()
    screen.blit(score_text,[(width - score_text.get_width() - 10)/2,60])

    pygame.display.flip()
    if event.type == pygame.KEYDOWN:
        if event.key == pygame.K_r:
            seconds = 20
            score = 0
        continue
```

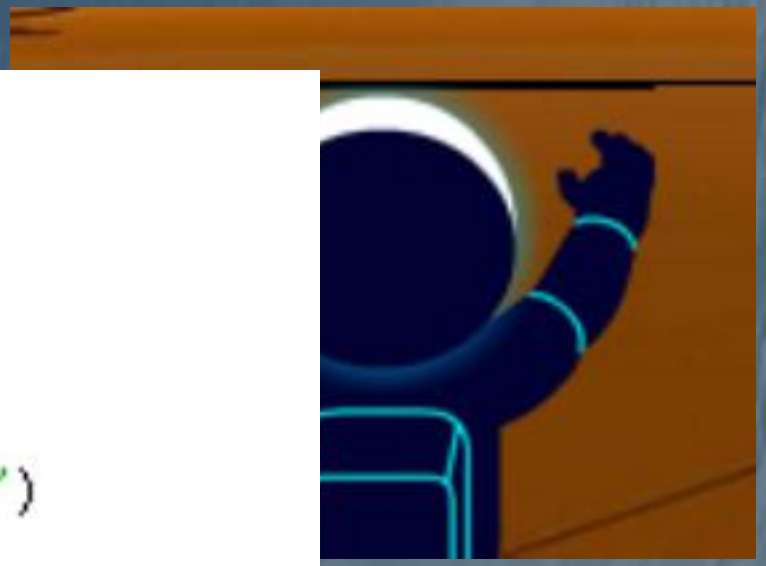
项目功能实现

“宇航员”的类的定义

```
class People(pygame.sprite.Sprite):

    #initializer
    def __init__(self,location):
        #call super initializer
        pygame.sprite.Sprite.__init__(self)

        self.image = pygame.image.load("peaple.png")
        self.rect = self.image.get_rect()
        self.rect.left,self.rect.top = location
```



项目功能实现

分数槽：

```
#lifeline
    lifes_rect = pygame.Rect(42,222,47,-score*2)
    if 0 < score and score <=100:
        if 0 < score and score <=30:
            pygame.draw.rect(screen,[255,score * 5 + 4,25],lifes_rect,0)
        if 30 < score and score <=60:
            pygame.draw.rect(screen,[255,165,25],lifes_rect,0)
        if 60 < score and score <=100:
            pygame.draw.rect(screen,[255,165 + (score-40)*1.5,25],lifes_rect,0)
    elif score >100:
        lifes_rect = pygame.Rect(42,222,47,-200)
        pygame.draw.rect(screen,[230,255,25],lifes_rect,0)
    lives_image = pygame.image.load("lives.png")
    screen.blit(lives_image,[17,2])
    pygame.draw.line(screen,[0,0,0,100],[0,710-104],[960,710-104],1)
#end
```

项目功能实现

氧气含量（倒计时）：

```
#set timer
pygame.time.set_timer(pygame.USEREVENT,1000)
```

```
#timer
    if 1 <= seconds and seconds <= 20:
        font = pygame.font.Font(None, 50)
        time_rect = pygame.Rect(800-130,193,97,-seconds*4.7)
        time_image = pygame.image.load("times.png")
        seconds_display = font.render("O2 "+str(seconds*5) +"%", 1, (255, 255, 255))
        display_pos =(800-130,49 )
        pygame.draw.rect(screen,[0,191,220],time_rect,0)
        screen.blit(seconds_display,display_pos)
        screen.blit(time_image,[800-130,97])
#end
```

项目功能实现

音效及音乐：

```
#voice
splat = pygame.mixer.Sound("splat.wav")
splat.set_volume(0.3)

pygame.mixer.music.load("ingg.mp3")
pygame.mixer.music.set_volume(0.3)
```

事件的设定

1、开局等待用户开始事件

```
def waitForPlayToPressKey():
    while True:
        for event in pygame.event.get():
            if event.type ==pygame.QUIT:
                pygame.quit()
                sys.exit()
            if event.type == pygame.KEYDOWN:
                if event.key == pygame.K_ESCAPE:
                    pygame.quit()
                    sys.exit()
                elif event.key == pygame.K_s:
                    return
```

2、重新游戏事件

```
if event.type == pygame.KEYDOWN:
    if event.key == pygame.K_r:
        seconds = 20
        score = 0
        continue
```


THANK
YOU