



서강대학교
SOGANG UNIVERSITY

Final project : Animal shooting Game

Art & Technology
20191044 김건형

CONTENTS

1. Idea, Concept, Style

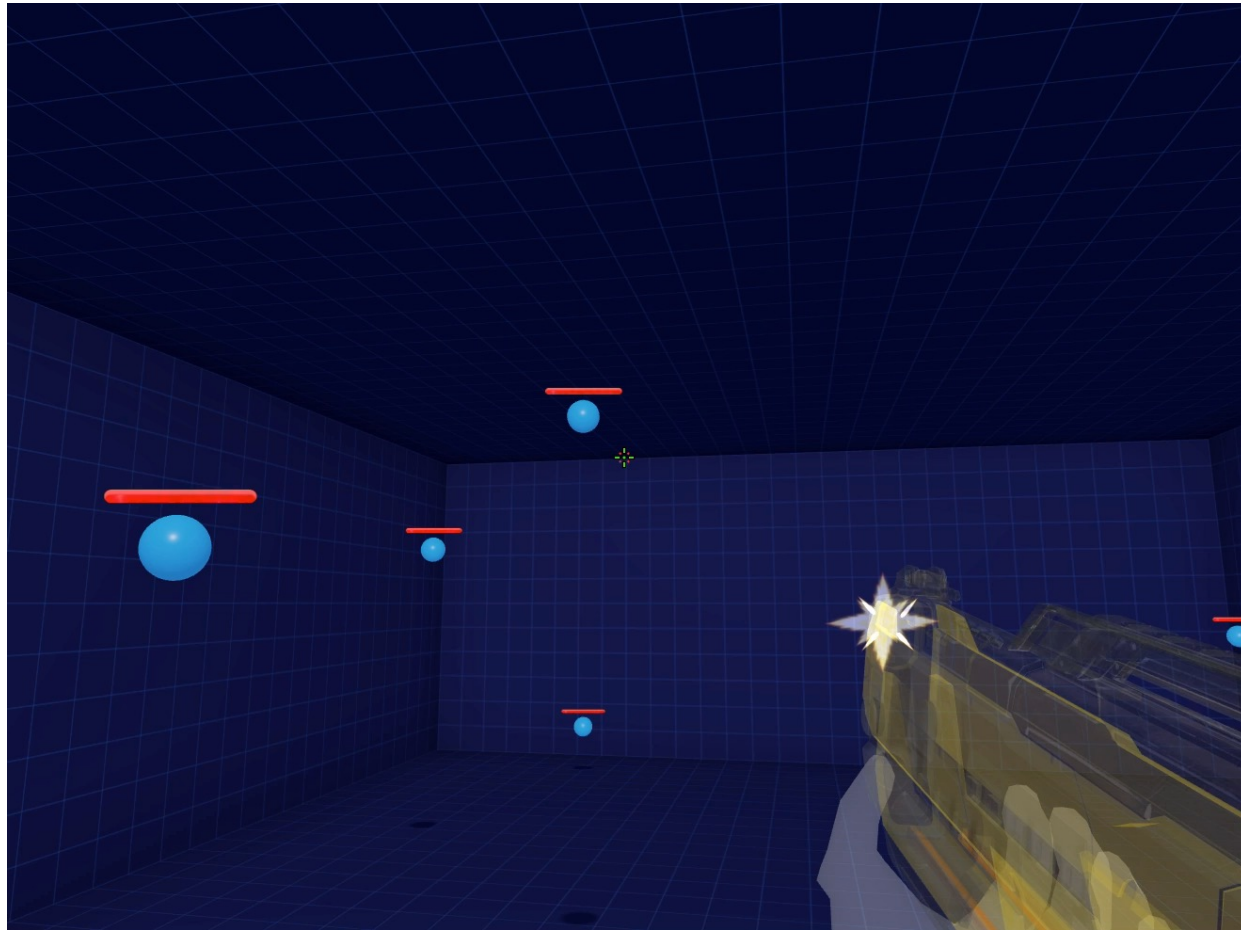
2. Flow of the game

3. Details

Idea

01

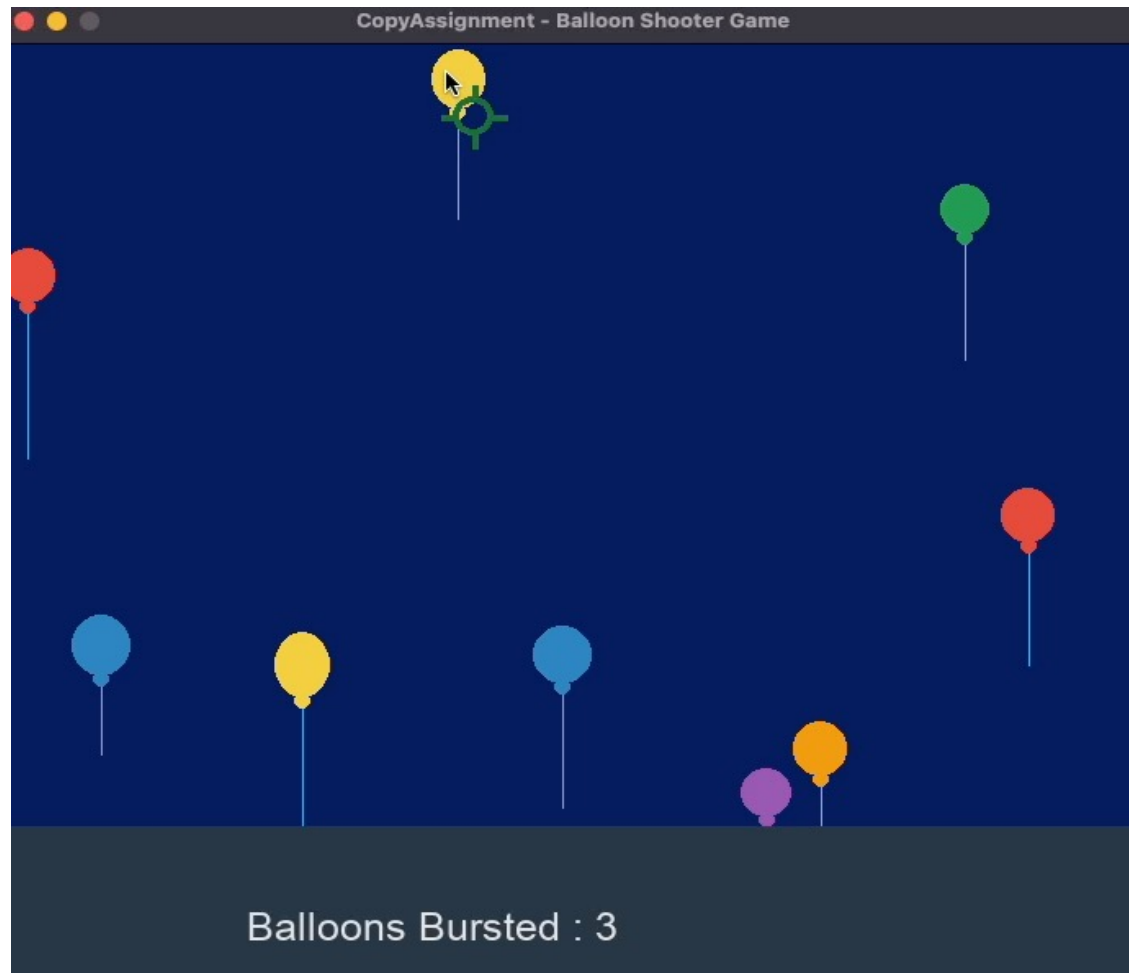
Aiming game



Idea

02

Clinking game



Concept

03

Shooting game + Animal



Game Start

Life : 3 



If click on an animal, you earn a score.

else if click on a bomb, you lose a life.



It's getting harder and harder.



X 100

```
# Class for image properties
class ImageRect:
    def __init__(self, image):
        self.image = image
        self.width, self.height = image.get_size()
        self.reset()

    def reset(self):
        self.angle = random.randint(0, 360)
        self.speed = 5
        self.x = random.randint(0, width - self.width)
        self.y = random.randint(0, height - self.height)

def is_on_image(image_rect, pos):
    return (
        image_rect.x <= pos[0] <= image_rect.x + image_rect.width and
        image_rect.y <= pos[1] <= image_rect.y + image_rect.height
    )
```

```
# Function to move the image
def move(image_rect):
    direct = random.choice([-1, 0, 1])

    if direct == -1:
        image_rect.angle += -10
    elif direct == 0:
        image_rect.angle += 0
    else:
        image_rect.angle += 10

    image_rect.y += image_rect.speed * sin(radians(image_rect.angle))
    image_rect.x += image_rect.speed * cos(radians(image_rect.angle))

    if (image_rect.x + image_rect.width > width) or (image_rect.x < 0):
        if image_rect.y > height / 5:
            image_rect.x -= image_rect.speed * cos(radians(image_rect.angle))
        else:
            respawn_image(image_rect)
    if image_rect.y + image_rect.height < 0 or image_rect.y > height + 30:
        respawn_image(image_rect)
```





```
# Initialize lives
lives = 3
# Draw lives in the upper left corner
heart_spacing = 5 # Adjust this value to control the spacing between hearts
for i in range(lives):
    screen.blit(heart_image, (10 + i * (heart_image.get_width() + heart_spacing), 10))
```





```
# Draw custom cursor
pos = pygame.mouse.get_pos()
r = 20
l = 15
color = (255, 0, 0) if any(is_on_image(image_rect, pos) for image_rect in [horse_rect, sheep_rect,
goat_rect]) else (0, 255, 0)

pygame.draw.ellipse(screen, color, (pos[0] - r / 2, pos[1] - r / 2, r, r), 4)
pygame.draw.line(screen, color, (pos[0], pos[1] - l / 2), (pos[0], pos[1] - l), 4)
pygame.draw.line(screen, color, (pos[0] + l / 2, pos[1]), (pos[0] + l, pos[1]), 4)
pygame.draw.line(screen, color, (pos[0], pos[1] + l / 2), (pos[0], pos[1] + l), 4)
pygame.draw.line(screen, color, (pos[0] - l / 2, pos[1]), (pos[0] - l, pos[1]), 4)
```

```
# Check for mouse click
mouse_x, mouse_y = pygame.mouse.get_pos()
mouse_click = pygame.mouse.get_pressed()

for image_rect, sound in zip(
    [horse_rect, sheep_rect, goat_rect],
    [s1_sound, s2_sound, s3_sound, s1_sound, s2_sound, s3_sound, s1_sound]
):
    if image_rect.x <= mouse_x <= image_rect.x + image_rect.width and \
        image_rect.y <= mouse_y <= image_rect.y + image_rect.height and mouse_click[0]:
        play_sound_and_respawn(image_rect, sound)
        score += 100

if bomb_rect.x <= mouse_x <= bomb_rect.x + bomb_rect.width and \
    bomb_rect.y <= mouse_y <= bomb_rect.y + bomb_rect.height and mouse_click[0]:
    handle_bomb_click(bomb_rect)

for image_rect in [horse_rect, sheep_rect, goat_rect]:
    move(image_rect)
    screen.blit(image_rect.image, (image_rect.x, image_rect.y))
```

총알 개수와 장전

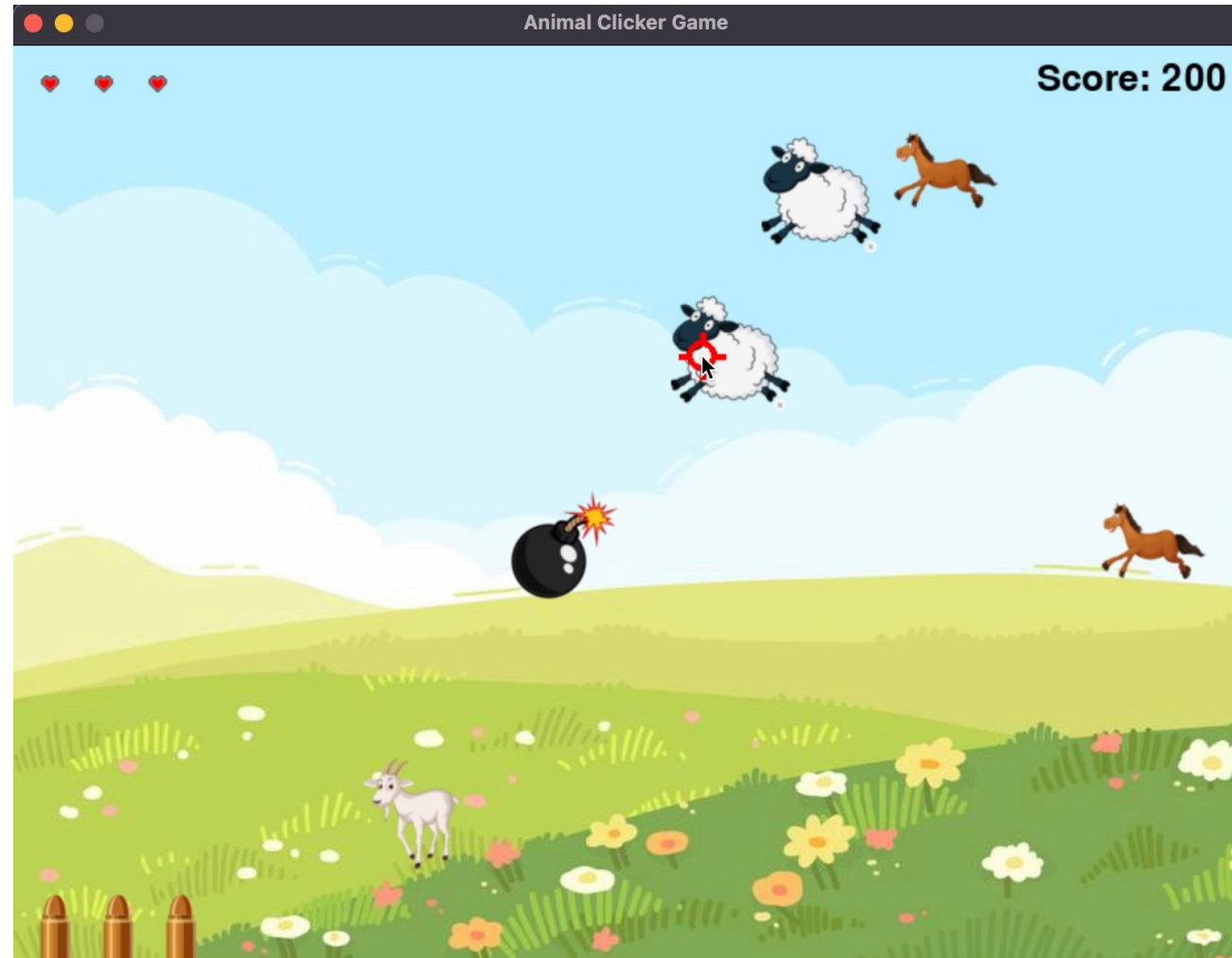
03

```
def draw_bullets():  
    for i in range(bullet_count):  
        screen.blit(bullet_image, (10 + i * (bullet_image.  
            get_width() + 5), height - 50))
```

```
def reload_bullets():  
    global bullet_count, reloading  
    reloading = True  
    bullet_count = 5  
    reload_sound.play()
```

```
# Fire bullet on mouse click  
if mouse_click[0]:  
    if fire_bullet():
```







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THANK YOU!
