

c0b22113 / ProjExD_02

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🕒

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📧

<> Code

🕒 Issues 1

🔗 Pull requests

🎮 Actions

📁 Projects

📖 Wiki

🛡 Security

📈 Insights

⚙ Set

Commits

History for [ProjExD_02](#) / `dodge_bomb.py`

🕒 Commits on Oct 3, 2023

爆弾加速時の挙動修正 #1

c0b22113 committed 1 minute ago

📄

f6b8989

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<>

見栄え改善

c0b22113 committed 53 minutes ago

📄

b3279ef

🔗

<>

追加機能 3

c0b22113 committed 1 hour ago

📄

fe1469e

🔗

<>

追加機能 2

c0b22113 committed 1 hour ago

📄

b97cdad

🔗

<>

追加機能 1

c0b22113 committed 2 hours ago

📄

de114e3

🔗

<>

練習問題 4後半 5

c0b22113 committed 2 hours ago

📄

fca1b23

🔗

<>

練習問題 4前半

c0b22113 committed 3 hours ago

📄

1d8765c

🔗

<>

練習問題 3

c0b22113 committed 3 hours ago

📄

92e72d3

🔗

<>

練習問題 2

c0b22113 committed 3 hours ago

📄

af1f494

🔗

<>

練習問題 1

c0b22113 committed 3 hours ago

📄

dc8f6d1

🔗

<>

初期状態

c0b22113 committed 4 hours ago

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1f6f757

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🕒 End of commit history for this file

Newer

Older

https://github.com/c0b22113/ProjExD_02/commits/main/dodge_bomb.py

1/1

$\frac{1}{4}$

```
48     bd_img.set_colorkey((0, 0, 0))
49     pg.draw.circle(bd_img, (255, 0, 0), (10, 10), 10)
50     bd_rct = bd_img.get_rect()
51     x, y = random.randint(0, WIDTH), random.randint(0, HEIGHT)
52     bd_rct.center = (x, y)
53     return bd_img, bd_rct
54
55
56 def get_rotation_angle_and_flip(mv: tuple) -> tuple:
57     """
58     引数: 移動量 (mv)
59     戻り値: 回転角度, 反転フラグ
60     """
61     angles = {
62         (0, -5): (90, True),
63         (-5, -5): (-45, False),
64         (-5, 0): (0, False),
65         (-5, +5): (45, False),
66         (0, +5): (-90, True),
67         (+5, +5): (-45, True),
68         (+5, 0): (0, True),
69         (+5, -5): (45, True)
70     }
71     return angles.get(mv, (0, False))
72
73
74 def move_character(kk_rct, delta):
75     """
76     引数: こうかとんRect, キー入力に対応した移動量
77     戻り値: こうかとんの移動量, 回転角度, 反転フラグ
78     """
79     key_lst = pg.key.get_pressed()
80     sum_mv = [0, 0]
81     for key, mv in delta.items():
82         if key_lst[key]:
83             sum_mv[0] += mv[0]
84             sum_mv[1] += mv[1]
85
86     rotation_angle, flip = get_rotation_angle_and_flip(tuple(sum_mv))
87
88     kk_rct.move_ip(sum_mv[0], sum_mv[1])
89     if check_bound(kk_rct) != (True, True):
90         kk_rct.move_ip(-sum_mv[0], -sum_mv[1])
91
92     return sum_mv, rotation_angle, flip
93
94
95 def move_bomb(bd_rct, vx, vy):
96     """
97     引数: 爆弾Rect, 爆弾の移動量
98     戻り値: 爆弾の移動量
99     """
100     bd_rct.move_ip(vx, vy)
101     yoko, tate = check_bound(bd_rct)
102     if not yoko:
103         vx *= -1
104     if not tate:
105         vy *= -1
106     return vx, vy
107
108
109 def draw_images(screen, bg_img, kk_img, kk_rct, bd_img, bd_rct):
110     """
111     引数: スクリーン, 背景画像, こうかとん画像, こうかとんRect, 爆弾
```

```
112
113     screen.blit(bg_img, [0, 0])
114
115     kk_img_to_draw = kk_img
116     if flip:
117         kk_img_to_draw = pg.transform.flip(kk_img, True, False)
118     kk_img_to_draw = pg.transform.rotozoom(kk_img_to_draw, rota
119
120     screen.blit(kk_img_to_draw, kk_rct)
121     screen.blit(bd_img, bd_rct)
122
123
124     def increase_speed(vx, vy, speed_multiplier):
125         """
126         速度を増加させつつ、方向を保持
127
128         引数:
129         vx, vy: 現在のx方向およびy方向の速度
130         speed_multiplier: 速度を増加させる係数
131
132         戻り値:
133         vx, vy: x方向およびy方向の増加した速度
134         """
135         # 現在の速度の大きさを計算します。
136         speed = math.sqrt(vx**2 + vy**2)
137
138         # 現在の速度がゼロでない場合、正規化された方向を計算し、速度を更
139         if speed != 0:
140             dir_x, dir_y = vx/speed, vy/speed
141             vx = dir_x * speed * speed_multiplier
142             vy = dir_y * speed * speed_multiplier
143
144         return vx, vy
145
146
147     def main():
148         pg.display.set_caption("逃げろ！こうかとん")
149         screen = pg.display.set_mode((WIDTH, HEIGHT))
150
151         bg_img, kk_img = load_and_convert_images()
152
153         kk_rct = kk_img.get_rect()
154         kk_rct.center = (900, 400)
155
156         kk_img_hit = pg.image.load("ex02/fig/8.png") # 爆弾接触時のI
157         kk_img_hit = pg.transform.rotozoom(kk_img_hit, 0, 2.0)
158
159         bd_img, bd_rct = create_bomb()
160         vx, vy = +5, +5
161
162         clock = pg.time.Clock()
163         tmr = 0
164
165         initial_vx, initial_vy = +5, +5 # 初期速度を変数として定義
166         vx, vy = initial_vx, initial_vy # 初期速度を設定
167
168         clock = pg.time.Clock()
169         tmr = 0 # 時間経過をカウントする変数
170
171         while True:
172             for event in pg.event.get():
173                 if event.type == pg.QUIT:
174                     return
175
```

```
176         if kk_rct.colliderect(bd_rct):
177             draw_images(screen, bg_img, kk_img_hit, kk_rct, bd_img)
178             pg.display.update()
179             time.sleep(2) # 2秒間待ってから終了
180             print("GAME OVER")
181             return
182
183         if tmr > 0 and tmr % 600 == 0:
184             speed_multiplier = 1 + (tmr // 500) * 0.5 # 500フレームごとに速度が1.5倍になる
185             speed_multiplier = min(speed_multiplier, 10) # 速度が10倍を超えないように制限
186             vx, vy = increase_speed(vx, vy, speed_multiplier) # 速度を増やす
187
188
189         sum_mv, rotation_angle, flip = move_character(kk_rct, vx, vy)
190         vx, vy = move_bomb(bd_rct, vx, vy) # 爆弾の移動量を取得
191         draw_images(screen, bg_img, kk_img, kk_rct, bd_img, bd_img_hit)
192
193         pg.display.update()
194         tmr += 1
195         clock.tick(50)
196
197
198 if __name__ == "__main__":
199     pg.init()
200     main()
201     pg.quit()
202     sys.exit()
```

c0b22113 / ProjExD_02

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🕒 Actions

📁 Projects

📖 Wiki

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多分この部分で爆弾が変な動きになっていると思います。確信はないです。

#1 opened 17 minutes ago by C0b22089

💡 ProTip!

Exclude your own issues with `-author:c0b22113`.