

## Exercise: Final Project | CMU CS Academy

```

1 app.background='black'
2
3
4 laser = Group(
5     Rect(139, 333, 4, 13, fill='red'))
6
7 laser.visible=False
8
9 app.laserMove=False
10
11 blocks= Group()
12
13 game=Label('hm', 200, 275, fill='blue', size=5)
14 game.visible=False
15
16 for x in range(10, 351, 100):
17     for y in range(10, 200, 40):
18         blocks.add(Rect(x, y, 80, 30, fill='red'))
19
20
21
22
23
24 cow = Group(
25     Circle(102, 340, 8, fill='lightcoral'),
26     Rect(93, 313, 50, 30, fill='white'),
27     Oval(132, 302, 10, 15, fill='lightcoral', border='white', borderWidth=2.5, rotateAn
gle=-30),
28     Oval(143, 301, 10, 15, fill='lightcoral', border='white', borderWidth=2.5, rotateAn
gle=30),
29     Oval(140, 313, 25, 32, fill='white', border='black', borderWidth=2, rotateAngle=-15
),
30     Line(95.5, 340, 95.5, 360, lineWidth=5, fill='white'),
31     Line(135, 340, 135, 360, lineWidth=5, fill='white'),
32     Circle(102, 318, 15),
33     Circle(126, 329, 6),
34     Oval(142, 320, 16, 12, rotateAngle=-15, fill='lightcoral'),
35     Circle(139, 320, 1),
36     Circle(145, 320, 1),
37     Circle(134, 309, 2.9),),
38     Circle(145, 309, 2.9),
39     Line(95, 313, 80,342, fill=gradient('white', 'white', 'black', start='bottom'))
40 )
41
42 def onStep():
43     if(app.laserMove==True):
44         laser.centerY-=15
45         laser.visible=True
46     if(app.laserMove==False):
47         laser.visible=False
48     for block in blocks:
49         if (laser.hitsShape(block)):
50             laser.centerX=cow.centerX+13
51             laser.centerY=335

```

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52         blocks.remove(block)
53         app.laserMove=False
54     if (laser.centerY<0):
55         game.value='YOU LOSE!!'
56         game.visible=True
57         game.size=50
58         cow.rotateAngle += 10000000
59         cow.centerX = randrange(0, 400)
60         cow.centerY = randrange(0 , 400)
61     if (len(blocks.children)==0):
62         game.value='YOU WIN!!'
63         game.fill='gold'
64         game.centerY=200
65         game.size+=.5
66         game.visible=True
67         cow.rotateAngle += 10000000
68         cow.centerX = randrange(0, 400)
69         cow.centerY = randrange(0 , 400)
70
71
72
73
74 splashScreen=Group()
75 splashScreen.add(Label('Cow Shooter', 200, 80, size=40, fill='white' ))
76 splashScreen.add(Label('June 3, 2022', 200, 120, size=20, fill='white' ))
77 splashScreen.add(Label('@ 2022 Spencer Wiehe', 67, 390, fill='white'))
78 splashScreen.add(Label('Use the arrow keys to move the cow', 200, 250, size=18, fill='white'))
79 splashScreen.add(Label('Hit space to shoot your laser', 200, 265, size=18, fill='white'
80 ))
81 splashScreen.add(Label('Do not miss', 200, 280, size=18, fill='white'))
82 splashScreen.visible=True
83
84 def onKeyPress (key):
85     splashScreen.visible=False
86     cow.rotateAngle=180
87     cow.centerY=350
88     if (key == 'space'):
89         laser.centerX=cow.centerX+13
90         app.laserMove=True
91
92
93
94 def onKeyHold(key):
95     if ('right' in key):
96         cow.centerX+=5
97
98     if ('left' in key):
99         cow.centerX-=5
100
101     if (cow.centerX<35):
102         cow.centerX=35
103         laser.centerX=35+13
104     if (cow.centerX>377):
105         cow.centerX=377
106         laser.centerX=377+13

```