

## Exercise: Final Project | CMU CS Academy

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1 app.stepsPerSecond = 60
2 app.oneSecond = 0
3 app.dx = 2.55
4 app.dy = 3
5 app.gravity = 2
6 app.left = False
7 app.right = False
8 app.up = False
9 app.score = Label(0, 20, 20, size = 16)
10
11 platforms = Group()
12 player = Group(Circle(200,200,25, fill = 'gold'), Oval(190,190,10,15), Oval(210,190,10,
13 15))
14 clouds = Group()
15 startBackground = Rect(0, 0, 400, 400, fill = 'lightSalmon', border = 'lightSalmon', bo
16 rderWidth = 4, visible = True)
17 splashText = Label('avoid the platforms', 200, 150, fill = 'white', bold = True, size =
18 42)
19 outtaHere = Label('press space to go up', 200, 300, fill = 'white', bold = True, size =
20 24)
21 outtaHere2 = Label('mouse to move', 200, 325, fill = 'white', bold = True, size = 24)
22
23 def onKeyPress(key):
24     startBackground.visible = False
25     splashText.visible = False
26     outtaHere.visible = False
27     outtaHere2.visible = False
28
29     if (key == 'space'):
30         app.up = True
31
32 def makePlatform(x,y):
33     platforms.add(Line(x, y, x + 70, y, lineWidth = 6), Circle(x, y, 3), Circle(x + 70,
34 y, 3))
35
36 def youLose():
37     app.dx = 0
38     app.dy = 0
39     app.gravity = 0
40     app.stepsPerSecond = 0
41     Rect(0,165, 400, 70, fill = 'red', opacity = 50)
42     Label('You Lose!', 200, 200, size = 32, bold=True, fill='black')
43
44 def onStep():
45     app.oneSecond += 1
46     if (app.oneSecond >= 60 and startBackground.visible == False):
47         app.oneSecond = 0
48         makePlatform(randrange(0,330), 40)
49
50     if(startBackground.visible == False):
51         player.centerY += app.gravity
52         if(app.left == True):
53             player.centerX -= app.dx

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50     if(app.right == True):
51         player.centerX += app.dx
52     if(app.up == True):
53         player.centerY -= app.dy
54     platforms.centerY += app.dy
55
56     if (player.left > 400):
57         player.right = 0
58     if (player.right < 0):
59         player.left = 400
60     if (player.top > 400):
61         youLose()
62     if (player.bottom < 0):
63         youLose()
64
65     for platform in platforms:
66         if (player.hitsShape(platform)):
67             youLose()
68         if (platform.top > 400):
69             platforms.remove(platform)
70
71     if (startBackground.visible == False):
72         app.score.value += 1
73
74 def onKeyRelease(key):
75     app.up = False
76
77 def onMouseMove(mouseX,mouseY):
78     if(mouseX > player.centerX):
79         app.right = True
80         app.left = False
81     if (mouseX < player.centerX):
82         app.right = False
83         app.left = True
```