```
 1 import math
 2 import random
 3
 4 import pygame
 5 from pygame import mixer
 6
 7 # Intialize the pygame
 8 pygame.init()
 9
10 # create the screen
11 screen = pygame.display.set_mode((800, 600))
12
13
14 # Background
15 background = pygame.image.load('background (1).png')
16
17
18 # Sound
19 mixer.music.load('251284__djgriffin__135-ravey-game-
   loop-6.wav')
20 mixer.music.play(-1)
21
22 # Caption and Icon
23 pygame.display.set_caption("Chick Invader")
24 icon = pygame.image.load('chick (1).png')
25 pygame.display.set_icon(icon)
26
27 # Player
28 playerImg = pygame.image.load('man.png')
29 playerX = 370
30 playerY = 480
31 playerX_change = 0
32
33 # Enemy
34 enemyImg = []
35 enemyX = []
36 enemyY = []
37 enemyX_change = []
38 enemyY_change = []
39 num_of_enemies = 6
40
```

```
41 for i in range(num_of_enemies):
42     enemyImg.append(pygame.image.load('fox (1).png'))
43     enemyX.append(random.randint(0, 736))
44     enemyY.append(random.randint(50, 150))
45     enemyX_change.append(4)
46     enemyY_change.append(40)
47
48 # Bullet
49
50 # Ready - You can't see the bullet on the screen
51 # Fire - The bullet is currently moving
52
53 bulletImg = pygame.image.load('water-balloons.png')
54 bulletX = 0
55 bulletY = 480
56 bulletX_change = 0
57 bulletY_change = 10
58 bullet_state = "ready"
59
60 # Score
61
62 score_value = 0
63 font = pygame.font.Font('freesansbold.ttf', 32)
64
65 textX = 10
66 testY = 10
67
68 # Game Over
69 over_font = pygame.font.Font('freesansbold.ttf', 64)
70
71
72 def show_score(x, y):
73     score = font.render("Score : " + str(score_value
   ), True, (255, 255, 255))
74     screen.blit(score, (x, y))
75
76
77 def game_over_text():
78     over_text = over_font.render("GAME OVER", True, (
   255, 255, 255))
79     screen.blit(over_text, (200, 250))
```

```
 80
 81
 82 def player(x, y):
 83     screen.blit(playerImg, (x, y))
 84
 85
 86 def enemy(x, y, i):
 87     screen.blit(enemyImg[i], (x, y))
 88
 89
 90
 91
 92 def fire_bullet(x, y):
 93     global bullet_state
 94     bullet_state = "fire"
 95     screen.blit(bulletImg, (x + 16, y + 10))
 96
 97
 98 def isCollision(enemyX, enemyY, bulletX, bulletY):
 99     distance = math.sqrt(math.pow(enemyX - bulletX,
    2) + (math.pow(enemyY - bulletY, 2)))
100     if distance < 27:
101         return True
102     else:
103         return False
104
105
106 # Game Loop
107 running = True
108 while running:
109     # Background Image
110     screen.blit(background, (0, 0))
111
112     # RGB = Red, Green, Blue
113     screen.fill((0, 150, 0))
114     for event in pygame.event.get():
115         if event.type == pygame.QUIT:
116             running = False
117
118         # if keystroke is pressed check whether its
    right or left
```

```
119         if event.type == pygame.KEYDOWN:
120             if event.key == pygame.K_LEFT:
121                 playerX_change = -5
122             if event.key == pygame.K_RIGHT:
123                 playerX_change = 5
124             if event.key == pygame.K_SPACE:
125                 if bullet_state is "ready":
126                     bulletSound = mixer.Sound("
    93569_steveygos93_waterballoon.wav")
127                     bulletSound.play()
128                     # Get the current x cordinate of
     the spaceship
129                     bulletX = playerX
130                     fire_bullet(bulletX, bulletY)
131 
132         if event.type == pygame.KEYUP:
133             if event.key == pygame.K_LEFT or event.
    key == pygame.K_RIGHT:
134                 playerX_change = 0
135 
136     # 5 = 5 + -0.1 -> 5 = 5 - 0.1
137     # 5 = 5 + 0.1
138 
139     playerX += playerX_change
140     if playerX <= 0:
141         playerX = 0
142     elif playerX >= 736:
143         playerX = 736
144 
145     # Enemy Movement
146     for i in range(num_of_enemies):
147 
148         # Game Over
149         if enemyY[i] > 440:
150             for j in range(num_of_enemies):
151                 enemyY[j] = 2000
152             game_over_text()
153             break
154 
155         enemyX[i] += enemyX_change[i]
156         if enemyX[i] <= 0:
```

```
157             enemyX_change[i] = 4
158             enemyY[i] += enemyY_change[i]
159         elif enemyX[i] >= 736:
160             enemyX_change[i] = -4
161             enemyY[i] += enemyY_change[i]
162 
163         # Collision
164         collision = isCollision(enemyX[i], enemyY[i
    ], bulletX, bulletY)
165         if collision:
166             explosionSound = mixer.Sound("explosion.
    wav")
167             explosionSound.play()
168             bulletY = 480
169             bullet_state = "ready"
170             score_value += 1
171             enemyX[i] = random.randint(0, 736)
172             enemyY[i] = random.randint(50, 150)
173 
174         enemy(enemyX[i], enemyY[i], i)
175 
176     # Bullet Movement
177     if bulletY <= 0:
178         bulletY = 480
179         bullet_state = "ready"
180 
181     if bullet_state is "fire":
182         fire_bullet(bulletX, bulletY)
183         bulletY -= bulletY_change
184 
185     player(playerX, playerY)
186     show_score(textX, testY)
187     pygame.display.update()
```