

PyGame Flappy Bird Tutorial - Part 5

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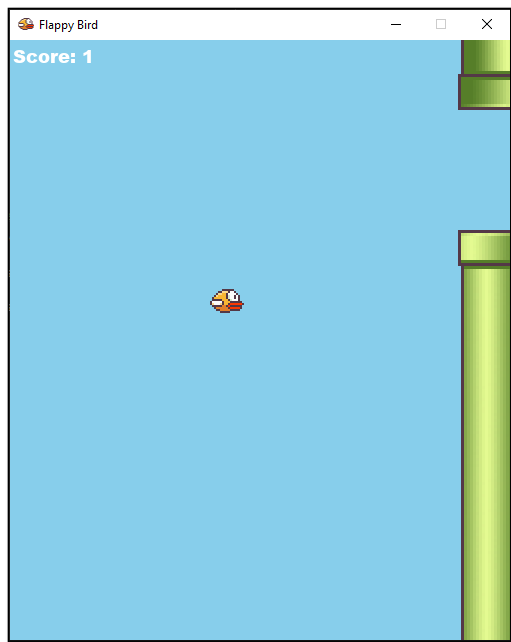
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Time required: 30 minutes

Preview of the Game

Here's a sneak peak of the game that we are going to work on.

[Flappy Bird Demo Video](#)



Reset the Pipes

We only get one set of pipes. Let's reset the pipes to have more pipes traveling across.

Save **flappy_bird_4.py** as **flappy_bird_5.py**

Let's add a **reset_pipes** method.

```
87 # ----- RESET PIPES -----#
88 def reset_pipes(self):
89     """Reset pipes every time they leave the screen"""
90     # Pick a random height for the bottom of the top pipe
91     self.pipe_upper_rect.bottom = randint(
92         50, # Set minimum random number to 50
93         config.HEIGHT // 2 # Set maximum to half the surface height
94     )
95
96     # Set lower pipe top to upper pipe bottom plus pipe gap
97     self.pipe_lower_rect.top = self.pipe_upper_rect.bottom \
98         + self.pipe_gap_size
99
100     # Set initial X off screen to right
101     self.pipe_upper_rect.left = config.WIDTH
102     self.pipe_lower_rect.left = config.WIDTH
```

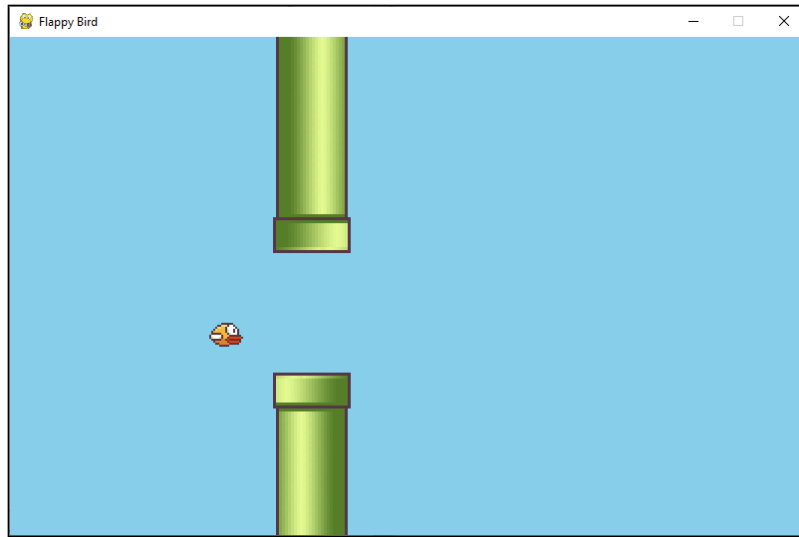
Call `reset_pipes` from the game loop.

```

117 # ----- GAME LOOP -----#
118 def game_loop(self):
119     """Infinite game loop"""
120     while True:
121         self.check_events()
122         # Simulate gravity by moving the bird down
123         # unless the UP key is pressed
124         # Reset gravity to 3 each time through the loop
125         gravity = 3
126
127         # Get list of keys being pressed
128         key_input = pygame.key.get_pressed()
129
130         # If up cursor pressed, move up 5 pixels
131         if key_input[pygame.K_UP]:
132             # Decrease gravity, the bird flies up
133             gravity -= 5
134
135         # ----- MOVE SPRITES -----#
136         # Move the bird by adding gravity value to y location
137         self.bird_rect.y = self.bird_rect.y + gravity
138
139         # Move pipe images from right to left
140         self.pipe_upper_rect.left = self.pipe_upper_rect.left \
141             - self.pipe_move
142         self.pipe_lower_rect.left = self.pipe_lower_rect.left \
143             - self.pipe_move
144
145         # If the pipes are off the screen, reset them
146         if self.pipe_upper_rect.right < 0:
147             self.reset_pipes()

```

Example run:



You can fly your bird up and down and through the pipes. The pipes keep coming!

There are a few issues. The bird can fall off the screen or fly up to the sun. There aren't any collisions or score keeping.

Coming right up!

Assignment Submission

1. Attach all tutorials and assignments.
2. Attach screenshots showing the successful operation of each tutorial program.
3. Submit in Blackboard.