



# Build Your Own Pong Game!

Learn how to animate, use classes, and create a playable game.



# Stage 1: Set Up the Game Window & Canvas

- Use ``tk.Tk()`` to create your window
- Use ``Canvas()`` to draw your screen
- Add the canvas to the window using ``.pack()``

- Code snippet:

```
```python
window = tk.Tk()
canvas = tk.Canvas(window, width=600, height=400,
bg="black")
canvas.pack()
```
```



# Stage 2: Create Ball and Paddle Classes

- Define a class `Ball` to handle ball logic
- Define a class `Paddle` to handle paddle movement
- Use `\_\_init\_\_()` to create shapes and track state
- Add a `move()` method for both

Example:

```
```python
self.id = canvas.create_oval(...)
self.canvas.move(self.id, self.x, self.y)
```
```



# Stage 3: Animate and Detect Collisions

- Use ``after()`` to create a game loop
- Use ``.coords()`` to get object positions
- Bounce when hitting walls or the paddle

Code pattern:

```
```python
def game_loop():
    ball.move()
    paddle.move()
    window.after(20, game_loop)
```
```



## Stage 4: Paddle Control and Game Over

- Move paddle left/right with key bindings
- End game if the ball touches the bottom
- Optionally display 'Game Over' using `canvas.create_text()`

```
```python
canvas.bind_all("<Left>", move_left)
canvas.bind_all("<Right>", move_right)
```
```



# Bonus Challenges

- Add a score counter using a `Label`
- Speed up the ball after each bounce
- Add a Restart button
- Try a 2-player mode with a second paddle!

Be creative and make it your own!