

6/12/25 OOP Python

Token Class

Instance vars

x, y (position)

dx, dy (change in pixels per frame)

side (circle but I draw as an ellipse)

color

Rain Application

many tokens falling



list of tokens to represent raindrops.

TokenFile - 1 file that only stores Token class

rain.py - application that uses Tokens.

A diagram showing two circles. The first circle has center (x_1, y_1) and radius r_1 . The second circle has center (x_2, y_2) and radius r_2 .

x_1, y_1
 $(4, 6)$

x_2, y_2
 $(20, 26)$

Dist

$$= \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

A diagram showing two overlapping circles. The first circle has center (x_1, y_1) and radius r_1 . The second circle has center (x_2, y_2) and radius r_2 . The distance between the centers is labeled as 20. The sum of the radii is labeled as 16.

if touch exactly distance btw centers is $r_1 + r_2$.

$(20, 26)$

$(4, 6)$ $(20, 6)$

$$\text{DIST SQ} = (x_2 - x_1)^2 + (y_2 - y_1)^2$$

$(r_1 + r_2)^2 \rightarrow \text{SQ or } r_1 + r_2$

$rgin = \{ \}$ $\swarrow$ tokens will be in here!