

Algorithm for Moving Shapes in Pygame

Step 1:

Initialize the Pygame library and create a window:

- Set up the display size (800x600 pixels).
- Assign a title to the window ("Moving Shapes").
- Initialize the game clock to control the frame rate.

Step 2:

Initialize variables:

- `x = 400` (initial x-coordinate of the circle)
- `y = 300` (initial y-coordinate of the circle)
- `speed = 5` (movement speed of the circle)
- `radius = 30` (radius of the circle)

Step 3:

Start the main game loop:

- Continuously check for events.
- If the quit event (`pygame.QUIT`) is detected, exit the loop.

Step 4:

Check for user input (arrow keys) to move the circle:

- If the `left` arrow key is pressed and the circle is not at the left boundary, move left.
- If the `right` arrow key is pressed and the circle is not at the right boundary, move right.
- If the `up` arrow key is pressed and the circle is not at the top boundary, move up.
- If the `down` arrow key is pressed and the circle is not at the bottom boundary, move down.

Step 5:

Update the screen:

- Fill the screen with a black background.
- Draw the circle at the new coordinates with the color blue.
- Refresh the display to show the updated position.

Step 6:

Regulate the frame rate using `clock.tick(60)` to maintain smooth movement.

Step 7:

Exit Pygame properly when the loop ends to free resources.