

## Preparation Questions

Major Tasks -----> Display score, Collision Detection between the dots, Display Game Over, handling player input

Q1 What pygame function can we use to find out how much time has elapsed since the game started?

`pygame.time.Clock()`

Q2 Under what condition does the game end?

Q3 Refer to prepoke\_v1.py. Describe the steps for drawing text on the window's surface.

`if clicked_close == TRUE`

Q4 We need to draw a text box (source) of width  $a$  and height  $b$  at the bottom left corner of a  $w \times h$  window surface (target). Compute the  $x, y$  target location of the window surface.

`0, h-b`

Q5 Consider two dots with radii  $r1$  and  $r2$ . Write the mathematical formula and the corresponding Python statement that would compute the distance  $d$  between the centers of the two dots given the coordinates of the center of dot1 are  $x1, y1$  and the coordinates of the center of dot2 are  $x2, y2$ .

`distance_x = x1 - x2  
distance_y = y1 - y2  
distance = sqrt(distance_x ** 2 + distance_y ** 2)`

Q6 Consider two dots with radii  $r1$  and  $r2$ . Assume we have the distance  $d$  between the centers of the 2 dots. Write the boolean expression that can be used to detect if the dots have intersected with each other.

`if d < r1 + r2`

Q7 What happens to the dots when the player clicks inside the window?

`move to new random locations`

Q8 Check pygame documentation to find the name of the event type that we will be handling in this version. Write the name of the event type.

`MOUSEBUTTONDOWN`